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

Telecom Decision CRTC 2007-13

Ottawa, 28 February 2007

Use of E9-1-1 information for the purpose of providing an enhanced community notification service

Reference: 8665-C12-200507212 and 8665-S62-200405888

In this Decision, the Commission determines that it is in the public interest to allow incumbent local exchange carriers to provide enhanced 9-1-1 information for a telephone-based community notification service, subject to limitations to its circumstances of use, with appropriate safeguards, notification requirements and other constraints.

Introduction

1. On 14 June 2004, the County of Strathcona, on behalf of itself, the City of Fort Saskatchewan, the Association of Municipalities of Ontario, the City of Brandon, the New Brunswick Department of Safety, Emergency Management Alberta, Emergency Management Ontario, the County of Essex and the City of Niagara Falls (collectively, the Municipalities), filed an application pursuant to Part VII of the *CRTC Telecommunications Rules of Procedure*. The Municipalities requested that a municipal, regional or other government authority responsible for the provision of critical emergency services (government authority) be permitted access to enhanced 9-1-1 (E9-1-1) database information for the purpose of providing telephony-based emergency public alerts.

2. The Municipalities indicated that the public safety benefits of existing telephony-based emergency public alerting services, or community notification services (CNS), were limited since they did not have access to a comprehensive source of contact information, such as the incumbent local exchange carriers' (ILECs) E9-1-1 databases.

3. The Municipalities indicated that a CNS that used E9-1-1 database information (enhanced CNS) would be more effective than existing CNS systems and would improve public safety.

4. The Municipalities indicated that the process to issue an enhanced CNS alert would generally include the following steps:

    1) a government authority would be advised of an emergency situation and the geographic area affected by the emergency;

    2) the government authority would then consider the circumstances and the criteria to determine whether the use of enhanced CNS was justified;

    3) if the use of enhanced CNS was justified, the government authority, or its authorized representative, would request that the ILEC provide the telephone numbers associated with the households within the geographic area affected by the emergency;

4) the ILEC would then extract the necessary information from its E9-1-1 databases and transfer that information to the CNS provider, which is the party responsible for issuing the telephone calls to the public;

5) meanwhile, the government authority would develop a pre-recorded message providing the necessary emergency response information and would transfer that information to the CNS provider; and

6) the CNS provider would input the E9-1-1 information supplied by the ILEC, along with the government authority's message, into its mass outbound call-out system and would proceed to issue telephony-based alerts to the public.

5. The Commission received comments from Bell Canada on behalf of itself, MTS Allstream Inc. (MTS Allstream) and Saskatchewan Telecommunications (SaskTel); TELUS Communications Inc., now TELUS Communications Company (TCC); and Aliant Telecom Inc., now Bell Aliant Regional Communications, Limited Partnership (Bell Aliant)[1] (collectively, the ILECs). The Commission also received comments from the Public Interest Advocacy Centre (PIAC) and the Office of the Privacy Commissioner of Canada (the Privacy Commissioner).

6. The ILECs indicated that they did not object to enhanced CNS, but noted that their E9-1-1 databases contained all ILEC customer records, in addition to those of certain competitive local exchange carriers (CLECs) and small ILECs (SILECs). The ILECs also noted that their E9-1-1 databases included confidential customer information that was not published in the telephone directory listings (the white pages) or listed in their directory assistance records. The ILECs indicated that there were a number of policy and operational issues that would need to be addressed prior to the service being offered.

7. PIAC and the Privacy Commissioner separately supported the principle of enhanced CNS, but expressed concerns regarding the privacy issues it raised. Accordingly, PIAC and the Privacy Commissioner proposed that the Commission initiate a broader public proceeding.

8. In *Access to information contained in the incumbent local exchange carriers' Emergency 9-1-1 databases for the purpose of providing a Community Notification Service*, Telecom Public Notice CRTC 2005-7, 22 June 2005 (Public Notice 2005-7), the Commission initiated a proceeding to determine whether allowing the use of E9-1-1 information for enhanced CNS would be in the public interest. The Commission also sought to determine under what circumstances the service should be provided, including the safeguards, notification measures and any operational requirements to be imposed on the ILECs[2] and CLECs.

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[1] On 7 July 2006, Bell Canada's regional wireline telecommunications operations in Ontario and Quebec were combined with, among other things, the wireline telecommunications operations of Aliant Telecom Inc., Société en commandite Télébec, and NorthernTel, Limited Partnership to form Bell Aliant.

[2] In Public Notice 2005-7, the term ILECs referred to the ILECs listed above plus Société en commandite Télébec. Throughout the remainder of this Decision, the Commission uses the term ILECs to refer to all of these companies.

Process

9. The Commission received submissions, reply comments and/or responses to interrogatories from the Municipalities; Bell Aliant; Bell Canada on behalf of itself, Société en commandite Télébec, and NorthernTel, Limited Partnership (collectively, Bell Canada et al.); MTS Allstream; SaskTel; TCC; Northwestel Inc. (Northwestel); PIAC; the Privacy Commissioner; l'Association des Compagnies de Téléphone du Québec (ACTQ); the Canadian Cable Telecommunications Association (CCTA);[3] and the City of Coquitlam, the Nova Scotia Emergency Measures Organization, the City of Toronto's Office of Emergency Management, the British Columbia Ministry of Public Safety and Solicitor General, various departments within the City and Township of Langley, the Ontario Ministry of Public Safety and Security, the North Shore Emergency Management Office, the Halifax Regional Municipality, and the Ontario 9-1-1 Advisory Board (collectively, the Emergency Management Service Groups).

10. The record of this proceeding closed with responses to interrogatories filed on 31 January 2006.

Background

11. Basic 9-1-1 service consists of routing 9-1-1 calls to a designated public safety answering point (PSAP), which is a specialized emergency call-answer centre for all 9-1-1 calls originating within a specific geographic area. E9-1-1 service includes all of the capabilities provided by basic 9-1-1 service, plus certain additional features and capabilities, including automatic location information (ALI) functionality.

12. ALI functionality ensures that a 9-1-1 caller's name, listed or unlisted telephone number, address, type of service and other pertinent information are transferred from an ILEC-maintained E9-1-1 database to the PSAP along with each incoming 9-1-1 call.

13. E9-1-1 databases contain ILEC, CLEC, and SILEC subscriber information. They also contain fixed, or non-nomadic, local voice over Internet Protocol (VoIP) service subscriber information, if the service provider knows the address from which the call is placed and has populated the E9-1-1 database with this address. E9-1-1 databases do not contain the information of subscribers using wireless service or certain other VoIP services as their primary exchange service.

Regulatory framework

14. The Commission notes that pursuant to section 47 of the *Telecommunications Act* (the Act), it must exercise its powers and perform its duties with a view to implementing the Canadian telecommunications policy objectives set out in section 7 of the Act. These objectives include:

    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;

[3] The Commission notes that the CCTA ceased to operate in February 2006.

…

h) to respond to the economic and social requirements of users of telecommunications services; and

i) to contribute to the protection of the privacy of persons.

15. In *Review of the general regulations of the federally regulated terrestrial telecommunications common carriers*, Telecom Decision CRTC 86-7, 26 March 1986 (Decision 86-7), the Commission set out confidentiality provisions that were designed to protect the confidentiality of customer information and directed that they be incorporated into the ILECs' Terms of Service. The Commission determined that unless disclosure was pursuant to a legal power, Canadian carriers could not disclose any customer information to any person other than the customer without the written consent of the customer, except for the customer's name, address and listed telephone number. The Commission also set out the circumstances when such consent was not required.[4]

16. In *AGT, NBTel and Newfoundland Tel – Amendments to the general regulations*, Telecom Decision CRTC 95-6, 27 April 1995, as amended by Telecom Decision CRTC 95-6-1, 16 May 1995, the Commission approved a modification to the confidentiality provisions for AGT (now part of TCC), which allowed for disclosure without written consent to public authorities in response to an emergency.[5]

17. In *Local competition*, Telecom Decision CRTC 97-8, 1 May 1997, the Commission established a regulatory framework that resulted in CLECs and resellers having to provide 9-1-1 service to their subscribers and ensured, to the extent technically feasible, that the appropriate end-user information was provided to the ILECs' ALI databases.

18. In *9-1-1 service – Rates for Wireless Service Providers, Centrex Customers and Multi-Line Customers/Manual Access to the Automatic Location Identification Database*, Telecom Decision CRTC 99-17, 29 October 1999 (Decision 99-17), the Commission noted that the ability to obtain information quickly could make a critical difference in emergency situations. Consequently, the Commission determined that it was in the public interest to permit manual access by the municipally-operated PSAPs to the ILEC's E9-1-1 database in certain limited circumstances and with appropriate safeguards.

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[4] The confidentiality exceptions were later amended by Telecom Order CRTC 86-593, 22 September 1986; by *Provision of subscribers' telecommunications service provider identification information to law enforcement agencies*, Order CRTC 2001-279, 30 March 2001; and *Provision of subscribers' telecommunications service provider identification to law enforcement agencies*, Telecom Decision CRTC 2002-21, 12 April 2002. Further amendments to the confidentiality exceptions came into effect pursuant to the Decisions referred to in paragraph 20 of this Decision.

[5] The Commission later approved the same exception for the other ILECs in the following Orders: *TELUS Integrated Communications Inc. – General Tariff covering general terms and conditions and access services approved*, Order CRTC 2000-170, 6 March 2000; *Bell Canada – Terms of Service*, Telecom Order CRTC 2003-319, 7 August 2003; *MTS Communications Inc. – Terms of Service*, Telecom Order CRTC 2003-320, 7 August 2003; *Société en commandite Télébec – Terms of Service*, Telecom Order CRTC 2003-322, 7 August 2003; *Saskatchewan Telecommunications – Terms of Service*, Telecom Order CRTC 2003-360, 3 September 2003; and *Aliant Telecom Inc. – Terms of Service*, Telecom Order CRTC 2003-398, 1 October 2003.

19. In *Rates modified for province-wide 9-1-1 service*, Order CRTC 2000-630, 6 July 2000, the Commission did not consider it appropriate to allow non-PSAP emergency service operators manual access to the ILECs' ALI databases. The Commission determined that allowing emergency service operators other than the municipally-operated PSAPs manual access to the ALI databases would raise additional confidentiality and liability issues.

20. In *Confidentiality provisions of Canadian carriers*, Telecom Decision CRTC 2003-33, 30 May 2003, as amended by Telecom Decision CRTC 2003-33-1, dated 11 July 2003 (Decision 2003-33), the Commission denied an ILEC proposal to rely on implied consent for the disclosure of confidential customer information to affiliates. The Commission found that where consent was required, the appropriate type of consent for disclosure remained express consent.

21. In *Follow-up to Telecom Decision CRTC 2003-33 – Confidentiality provisions of Canadian carriers*, Telecom Decision CRTC 2004-27, 22 April 2004, the Commission directed all Canadian carriers, as a condition of providing telecommunications services, to include in their service contracts or other arrangements with resellers the requirement to abide by the confidentiality provisions established in Decision 86-7, as modified from time to time.

Overview of issues raised in this proceeding

22. All parties in this proceeding indicated that enhanced CNS could improve public safety and would generally be in the public interest, assuming that specific safeguards were imposed to protect privacy and that certain operational issues were addressed.

23. The Commission sets out its determinations regarding the key issues in this proceeding as follows:[6]

    Part A: The public interest in enhanced CNS;

    Part B: Limitations on the circumstances of use for enhanced CNS;

    Part C: Safeguards for enhanced CNS;

    Part D: Consent and notification requirements for enhanced CNS;

    Part E: Operational issues for enhanced CNS; and

    Part F: Other issues related to enhanced CNS.

[6] In *Emergency alert services*, Broadcasting Public Notice CRTC 2007-20, 28 February 2007, the Commission sets out its approach to the establishment of broadcasting emergency alert services. The Commission's approach is based on removing the regulatory barriers to the establishment of alert services, providing opportunity for all parties involved in the development of alert service to work cooperatively, and voluntary rather than mandatory carriage of such services by broadcasting distribution undertakings so that they can adopt an alert system that best suits their networks.

Part A: The public interest in enhanced CNS

24. In this section, the Commission considers whether using E9-1-1 information for enhanced CNS would be in the public interest.

Positions of parties

25. The Municipalities submitted that existing CNS systems were an important element of public safety plans in many Canadian communities and that when used in conjunction with other public alerting systems, such as broadcasting all-channel alerts or door-to-door canvassing, they could provide an effective emergency public alerting solution. The Municipalities noted that for existing CNS systems, telephone numbers and addresses were collected using publicly available information sources, such as information voluntarily provided by citizens or information contained in the white pages.

26. The Municipalities indicated, however, that publicly available information sources did not provide the accuracy or frequency of updates necessary for CNS systems to be effective. The Municipalities considered that the ILECs' E9-1-1 databases were the most comprehensive source of information, offered the accuracy and frequency of updates necessary to reach all wireline telephone subscribers within an identified geographic area, and would be the best source of information for use in a CNS system.

27. The Municipalities indicated that their active participation in national public alerting systems and their years of experience in dealing with emergency situations provided them with the expertise necessary to determine that enhanced CNS would improve public safety and was therefore in the public interest.

28. Various ILECs submitted that they had been involved with CNS systems where customer information was obtained from individuals or from publicly available sources. These ILECs indicated that the benefits of existing CNS systems were limited since publicly available information sources were neither comprehensive nor current. The ILECs generally concluded that existing CNS systems did not have access to a reliable source of subscriber records.

29. The ILECs indicated that their respective E9-1-1 databases were, at a minimum, updated daily with service addresses and telephone numbers and included, where appropriate, the records of CLEC and SILEC subscribers. On balance, the ILECs considered that the best database for wireline customer information to support CNS was the E9-1-1 database.

30. Certain ILECs questioned the effectiveness of telephony-based emergency alerts and whether there would be any incremental benefit of enhanced CNS, considering the other public alerting systems already in place or planned by various organizations.

31. PIAC submitted that enhanced CNS represented a favourable development for public safety that should be encouraged by the Commission, although it would require safeguards to address the public's interest in safety and privacy matters.

32. The Privacy Commissioner submitted that its interest in enhanced CNS stemmed from its oversight responsibilities regarding the *Personal Information Protection and Electronic Documents Act* (PIPEDA).

33. The Privacy Commissioner was of the view that enhanced CNS raised privacy concerns that varied in type and severity. For example, the Privacy Commissioner suggested that while some individuals might consider a CNS alert to be intrusive, others might be concerned about the misuse of their personal information. The Privacy Commissioner indicated, however, that it supported enhanced CNS from a public safety perspective and that the service need not be contrary to federal privacy legislation, assuming that safeguards were established.

34. The ACTQ submitted that enhanced CNS could benefit public safety and that this should outweigh the privacy concerns of all subscribers. The ACTQ also submitted, however, that the confidentiality of customer information should not be unnecessarily compromised.

35. The CCTA indicated that disseminating information quickly and efficiently during an emergency could improve public safety and that CLECs were interested in developing a workable and consistent public alerting system. The CCTA indicated that an enhanced CNS system should be complementary to other public alerting initiatives currently underway and should be consistent with other requirements established by Industry Canada.

36. The Emergency Management Service Groups indicated that the Commission should support initiatives like enhanced CNS, since the service would improve public safety.

Commission's analysis and determinations

37. The Commission considers that a determination regarding whether the use of E9-1-1 information for enhanced CNS is in the public interest requires an assessment of the appropriate balance between the social and economic requirements of users of telecommunications services and the protection of their privacy, as articulated in the objectives set out in subsections 7(a), (h), and (i) of the Act.

38. The Commission notes that where E9-1-1 service is available, the ILECs' E9-1-1 databases contain the contact information of wireline subscribers of ILECs and CLECs, and, in some cases, of SILECs. The Commission also notes that the ILECs' E9-1-1 databases contain the contact information of both listed and unlisted[7] subscribers.

39. The Commission considers that the ILECs' E9-1-1 databases are the most complete source of contact information available for enhanced CNS and that they are significantly more comprehensive than any other available information sources. The Commission also considers that CNS systems making use of E9-1-1 contact information would provide broader coverage for emergency alerts, enhancing the public safety effect of those messages.

40. The Commission further notes that the information contained in the ILECs' E9-1-1 databases is updated daily, at a minimum, ensuring that additions, moves or changes remain current. The Commission considers that the frequency of these updates would help make the delivery of emergency alerts more accurate.

[7] This includes subscribers of non-published and non-listed services.

41. While the Commission considers that enhanced CNS would offer public safety benefits, it also notes that enhanced CNS raises relevant privacy concerns that require mitigation. For example, the Commission considers that subscribers, such as unlisted subscribers, who have intentionally limited the distribution of their information may not agree to the disclosure of their confidential information. The Commission also considers that other subscribers may have concerns regarding the misuse or vulnerability of enhanced CNS systems and the potential for inappropriate disclosure of their information if it is not properly safeguarded.

42. The Commission considers that the ability to quickly obtain the most comprehensive and up-to-date information to issue emergency alerts could improve public safety and make a crucial difference in an emergency. The Commission considers that, on balance, it would be in the public interest to permit the disclosure of limited customer information under specific circumstances, with appropriate safeguards and subject to notification requirements in order to address privacy concerns.

43. In light of the above, the Commission determines that enhanced CNS is in the public interest, but that this service should be subject to limited circumstances of use, safeguards, notification and consent requirements, and other measures that will be identified later in this Decision.

Part B: Limitations on the circumstances of use for enhanced CNS

44. In this section, the Commission considers matters related to limitations regarding the following: information accessed through E9-1-1 databases, who can employ enhanced CNS, authorized administrators, the definition of emergency, and use in order to avoid or minimize danger. The Commission also considers confidential information disclosure rules.

Positions of parties

45. All parties to this proceeding recommended that only the minimum necessary information from E9-1-1 databases be provided for enhanced CNS. Parties were generally of the view that this information would only consist of the telephone number and the associated address.

46. The Municipalities submitted that only a government authority, or its designated official, would be qualified to identify the severity of an emergency and whether the use of enhanced CNS was justified. The Municipalities suggested that the authority to issue enhanced CNS alerts should stem from municipal bylaws or provincial, territorial or federal legislation that designated responsibility for emergency public safety in a specific territory.

47. The Municipalities indicated that an authorized administrator would be necessary to act as an intermediary between a government authority and an ILEC. The Municipalities suggested that an authorized administrator would be the representative of a government authority who was responsible for emergency public safety systems and was subject to the government authority's policies, procedures and regulations governing personal security clearances.

48. The Municipalities submitted that the use of enhanced CNS should only take place in the event of an actual emergency that represented an imminent danger that could be avoided or minimized by public alerting. The Municipalities provided examples of situations that, in their view,

would meet the criteria of an emergency, including toxic material release, flash floods, explosions, and severe weather situations such as tornadoes. The Municipalities indicated that they would support a definition of emergency that was consistent with PIPEDA.

49. Bell Canada et al. and TCC submitted that the specific situations giving rise to the use of enhanced CNS would vary across jurisdictions and that it should not be the responsibility of the ILECs to determine whether a situation warranted the use of enhanced CNS. The ILECs considered that the determination of an emergency should be made by a single coordinated authority that was responsible for emergency management situations.

50. SaskTel was of the view that the authorized administrator, acting on behalf of a government authority and responsible for interfacing with the ILEC, should be identified. Bell Canada et al. suggested that the organizations that managed the PSAPs for municipal 9-1-1 services would be the appropriate authorized administrators, since they aligned well with the existing emergency response infrastructure in areas where E9-1-1 service was available.

51. The ILECs generally submitted that there should be a clear definition of the term "emergency" for enhanced CNS, which should also be consistent with the definition of emergency used in PIPEDA.

52. PIAC submitted that only an appropriate government authority should be permitted to use enhanced CNS. PIAC also submitted that a government authority should clearly identify which specific officials had been delegated the permission to trigger an enhanced CNS alert.

53. PIAC submitted that the Commission should define the situations in which enhanced CNS could be used, and not leave the definition of emergency to be determined by government authorities. PIAC suggested that if the Commission did not define the term emergency, government authorities might abuse enhanced CNS by using alerts in situations that did not constitute emergencies, which would inconvenience and disrupt the privacy of consumers.

54. While PIAC expressed concerns regarding an expansive definition of emergency, it submitted that the Commission's definition of emergency should include significant property damage since the latter virtually always involved a threat to life or health. Accordingly, PIAC proposed that the definition of emergency for enhanced CNS include events that were real or imminent, that required prompt and exceptional action, and for which a response was necessary to avoid or minimize a threat to life, serious health consequences or significant damage to property.

55. The Privacy Commissioner submitted that an appropriate government authority should be responsible for identifying the need for, and use of, enhanced CNS.

56. The Privacy Commissioner indicated that the Commission's definition of emergency should be limited to situations that threatened the life, health or security of an individual, in order to be consistent with PIPEDA.[8] This definition of emergency was also supported by the ACTQ.

[8] Paragraphs 7(2)(b) and 7(3)(e) of PIPEDA refer to "an emergency that threatens the life, health or security of an individual."

57. The Privacy Commissioner proposed that the Commission's definition of emergency should also include a reference to the immediacy of the threat and that the disclosure of confidential information was necessary in emergency situations to prevent or to mitigate harm.

58. The CCTA indicated that the Commission should clarify who was authorized to issue an enhanced CNS alert, and under what circumstances they might do so.

Commission's analysis and determinations

Limitation of information accessed through E9-1-1 databases

59. The Commission notes that E9-1-1 databases contain customer information that includes telephone numbers and associated addresses, and that all parties generally considered it appropriate to limit the customer information used for enhanced CNS to those two elements.

60. The Commission considers that limiting the amount of information accessed through E9-1-1 databases would reduce privacy concerns and that telephone numbers and associated addresses would be the only information necessary to issue effective enhanced CNS alerts. Accordingly, the Commission determines that it is appropriate to limit the information accessed through E9-1-1 databases for enhanced CNS to telephone numbers and associated addresses.

Limitation to public authorities

61. The Commission notes that most parties were of the view that only the appropriate government authorities, or their authorized agents, should employ enhanced CNS.

62. The Commission considers that a government authority, in the context of enhanced CNS, is a public entity with a specific mandate for public safety within a given geographic area, and that its authority stems from municipal bylaws or provincial, territorial or federal legislation (public authority).

63. The Commission determines that public authorities should be the only parties authorized to request that an ILEC provide enhanced CNS information, in light of their mandate and expertise regarding public safety. The Commission also determines that the decision to implement enhanced CNS in a given area would be at the discretion of the public authority.

64. The Commission does not consider it appropriate, however, to narrowly define the term "public authority" for enhanced CNS purposes, since the structure of emergency service groups and the responsibility for public safety vary by region. The Commission considers that public authorities within overlapping geographic areas should coordinate their enhanced CNS implementation with their respective ILECs and with each other.

65. The Commission considers that for enhanced CNS alerts, the public authority's responsibility would be to identify the geographic area affected by an emergency, determine whether the use of an enhanced CNS alert was justified, initiate the request for E9-1-1 information, and develop the message to be delivered through the enhanced CNS system. The Commission determines that the public authority's mandate and the description of its responsibilities for enhanced CNS should be included in the customer contracts and agreements between ILECs and public authorities.

Limitation to authorized administrators

66. The Commission notes that Bell Canada et al. proposed that only PSAPs be permitted to act as the authorized administrator for enhanced CNS. Bell Canada et al. also proposed that the PSAPs serve as the interface between the public authority and the ILEC, and that they be responsible for requesting E9-1-1 information in response to an emergency identified by the public authority.

67. The Commission considers that limiting authorized administrators to PSAPs would reduce privacy concerns, since PSAP agents already meet the security requirements necessary for dealing with 9-1-1 information. The Commission also considers that this delegation of authority would align well with existing emergency response infrastructures.

68. Accordingly, the Commission determines that the role of authorized administrator for enhanced CNS should be limited to PSAPs operated by municipalities or other public authorities responsible for the provision of emergency services.

Limitation to the definition of emergency

69. The Commission notes that most parties considered that the definition of emergency for enhanced CNS purposes should be made clear and that several parties supported a definition of emergency that was consistent with PIPEDA. In addition, the Commission notes that several parties proposed that the definition of emergency include a reference to the immediacy of the threat.

70. The Commission considers that the use of enhanced CNS should be limited to imminent emergency situations. In addition, the Commission considers that further circumscribing the definition of emergency would limit the use of enhanced CNS to its intended purpose and would prevent the service from being used for non-critical events.

71. The Commission notes that there may be threats to property that do not pose an immediate threat to an individual's life, health or security. The Commission considers that the overuse of enhanced CNS may result in a desensitization of subscribers to such alerts. As such, the Commission considers it inappropriate to include a specific reference to property as part of its definition of emergency.

72. Accordingly, the Commission defines emergency for enhanced CNS as "an imminent or unfolding danger that threatens the life, health or security of an individual." The Commission considers that this definition of emergency is at least as restrictive as the one found in PIPEDA.

Limitation of use in order to avoid or minimize danger

73. The Commission notes that the Municipalities and the Privacy Commissioner proposed that enhanced CNS only be used in circumstances where the use or disclosure of customer information is necessary to avoid or minimize danger. The Commission considers that limiting the use of enhanced CNS to such circumstances would further reduce privacy and overuse concerns.

74. Accordingly, the Commission determines that the use of enhanced CNS should be limited to emergencies where, in the public authority's opinion, disclosure of customer information is necessary to avoid or minimize danger.

Confidential information disclosure rules

75. The Commission notes that an emergency exception currently exists pursuant to the ILECs' Terms of Service, such that the disclosure of confidential information without express consent is permitted to "…a public authority or agent of a public authority, if in the reasonable judgment of [the ILEC], it appears that there is imminent danger to life or property which could be avoided or minimized by disclosure of information."

76. In light of the restrictive definition of emergency adopted above and the limitation of use in order to avoid or minimize danger, the Commission considers that an additional exception to the Terms of Service or a modification to the existing emergency exception is required in order to properly reflect the disclosure of E9-1-1 information for enhanced CNS.

77. The Commission notes that no parties addressed the issue of whether modifying the existing exception would be appropriate or what the consequence of any modification might be. As a result, the Commission considers that it would be premature to modify the current emergency exception pursuant to the ILECs' Terms of Service to include a reference to enhanced CNS.

78. Accordingly, the Commission directs the ILECs, Northwestel, the CLECs and the SILECs (collectively, local exchange carriers (LECs)) to file for approval, as required, at least 90 days prior to the implementation of enhanced CNS, modifications to their Terms of Service, tariffs, customer contracts, agreements and other arrangements, to include the following exception (indicated in bold) to the disclosure rules regarding confidential customer information:

> Unless a customer provides express consent or disclosure pursuant to a legal power, all information kept by the company regarding the customer, other than the customer's name, address and listed telephone number, is confidential and may not be disclosed by the company to anyone other than:
>
> …
>
> - **a public authority or agent of a public authority, for emergency public alerting purposes, if a public authority has determined that there is an imminent or unfolding danger that threatens the life, health or security of an individual and that the danger could be avoided or minimized by disclosure of information.**

79. The Commission considers that the LECs may find it appropriate to merge or replace the existing emergency disclosure exception with the emergency exception developed for enhanced CNS. The Commission considers that if the LECs deem it appropriate to do so, they should file proposed tariff pages, where appropriate and with supporting rationale, at least 90 days prior to implementation of enhanced CNS.

Part C: Safeguards for enhanced CNS

80. In this section, the Commission considers matters regarding safeguards associated with the following: limiting the parties involved, specific use and destruction of information, suspension or termination of service, reporting mechanisms, non-disclosure of information, and database enrichment. The Commission also considers additional safeguard measures.

Positions of parties

81. The Municipalities proposed that a set of guidelines be established to govern security and privacy protection processes for enhanced CNS. The Municipalities provided a draft of these guidelines and suggested that they serve as a basis for discussion between parties.

82. The Municipalities proposed that the CNS provider responsible for transmitting the enhanced CNS alerts should generate an auditing and systems review report. They indicated that the report should include, among other things, the date and time of the enhanced CNS alert, the reason for its activation, the name of the authorized administrator responsible, and a copy of the message that was transmitted to the public.

83. Bell Canada et al. proposed that access to E9-1-1 information be limited to necessary personnel only and that CNS information be used or disclosed pursuant to strict confidentiality provisions that restricted the use of E9-1-1 information for enhanced CNS purposes only.

84. The ILECs proposed that E9-1-1 information transmitted by the ILEC be deleted once an enhanced CNS alert was issued, in order to avoid any further dissemination.

85. Bell Canada et al. proposed that an ILEC be permitted to suspend or terminate the provision of information from its E9-1-1 database for enhanced CNS if the Commission found that the service was being misused by the government authority or used in a manner that was inconsistent with the safeguards or other established policies.

86. Bell Canada et al. proposed that CNS providers report their use of the service to ensure that the service operated within its limited circumstances of use.

87. Bell Aliant proposed that government authorities, authorized administrators and CNS providers not be permitted to share E9-1-1 information obtained pursuant to an enhanced CNS alert with any other party. MTS Allstream proposed that any party that had access to E9-1-1 information be required to sign a non-disclosure agreement with the ILEC.

88. PIAC proposed that:

- the government authority, authorized administrator, ILEC and CNS provider develop disclosure and accountability rules for enhanced CNS and make this information available to the public;
- security measures be imposed on CNS providers, including physical, organizational, and technological measures designed to reduce the risk of unauthorized access;

- CNS providers register with the Commission in order to coordinate implementation of the service and to facilitate investigations of data breaches;

- the Commission establish a method of auditing compliance with the enhanced CNS safeguards and other established policies, as well as enforcement mechanisms;

- negligence or misuse of an enhanced CNS trigger severe penalties;

- parties having access to E9-1-1 information be required to sign confidentiality agreements with the ILECs; and

- CNS information not be enriched with additional personal information, such as the specific health problems of individuals, since this would raise additional privacy concerns.

89. The Privacy Commissioner proposed that:

- government authorities designate a limited number of individuals with permission to access E9-1-1 information;

- the contracts between government authorities, authorized administrators, ILECs and CNS providers specify that E9-1-1 information disclosed by the ILECs can only be used for enhanced CNS purposes;

- access by parties to E9-1-1 information be limited with respect to enhanced CNS use, and only for the amount of time necessary to issue the alert;

- CNS providers not be permitted to retain E9-1-1 information longer than necessary;

- non-ILEC CNS providers be required to delete or destroy E9-1-1 information after the emergency situation had ended; and

- CNS information not be enriched with additional personal information, such as household composition or disability information, since doing so would raise broader privacy concerns.

Commission's analysis and determinations

90. The Commission notes that it has often emphasized the importance of protecting confidential customer information. The Commission considers that establishing the appropriate safeguards for enhanced CNS will serve to protect the privacy of telecommunications services users while continuing to meet the social and economic objectives of the Act.

91. The Commission notes that in Decision 99-17, it established safeguards for manual access to the E9-1-1 database that were included in the contractual relationships between municipalities and the ILECs. The Commission determined that manual access to E9-1-1 databases should only be allowed for those municipalities that specifically requested it and were willing to accept the attendant safeguards and sanctions.

92. The Commission notes that in the current proceeding, parties proposed safeguards for enhanced CNS that were similar to those established for manual access to the E9-1-1 database in Decision 99-17. The Commission considers that while both manual access to the E9-1-1 database and enhanced CNS involve the transfer of confidential information between an ILEC and a PSAP for the purpose of responding to an emergency, there is a need to adapt and build upon the safeguards established in Decision 99-17 in order to address the specific privacy concerns raised by enhanced CNS.

93. The Commission considers that the safeguards for enhanced CNS should serve to minimize privacy concerns, increase the accountability of parties involved in the operation of the service, and impede to the least extent possible the deployment of enhanced CNS. In doing so, the Commission considers that enhanced CNS safeguards would strike an appropriate balance between facilitating public safety and protecting personal privacy.

Limiting the parties involved

94. The Commission notes that, as determined previously in this Decision, only public authorities may request enhanced CNS, and only PSAPs operated by municipalities or other public authorities responsible for the provision of emergency services are permitted to operate as authorized administrators. The Commission considers that this will reduce the number of parties with access to E9-1-1 information. The Commission notes, however, that CNS providers may also have access to E9-1-1 information. In the Commission's view, as the number of parties and individuals involved in enhanced CNS increases, so does the possibility of a privacy breach.

95. Accordingly, the Commission determines that the safeguards for enhanced CNS should specify that the public authority must designate to the ILEC, and limit to the extent reasonable, the authorized individuals who will be permitted access to E9-1-1 information.

Specific use and destruction of information

96. The Commission considers that parties involved in enhanced CNS delivery may contemplate retaining E9-1-1 information obtained pursuant to an enhanced CNS alert for subsequent use. The Commission also considers that an important benefit of using E9-1-1 information is that it is updated regularly and that reusing it for subsequent alerts would reduce the effectiveness of enhanced CNS because some of the information would be out of date.

97. The Commission also considers that parties may contemplate retaining E9-1-1 information for purposes unrelated to public alerting. In the Commission's view, use of E9-1-1 information for purposes unrelated to public alerting would raise significant privacy concerns and, therefore, it would be appropriate to limit the use of information to the specific emergency alert that necessitated the disclosure.

98. The Commission therefore considers that it would be appropriate for parties to destroy E9-1-1 information obtained pursuant to an enhanced CNS alert to ensure that it is not reused, or used for other purposes.

99. Accordingly, the Commission determines that the safeguards for enhanced CNS should include the following provisions:

    (a) the public authority, authorized administrators and CNS providers must agree contractually that E9-1-1 information provided by the ILEC may only be used in response to the specific enhanced CNS alert that required the use or disclosure of such information; and

    (b) E9-1-1 information provided by the ILEC must be deleted or destroyed by the public authority, authorized administrator and CNS provider once notification related to a specific emergency has been completed.

Suspension or termination of service

100. The Commission considers that the possibility of suspension or termination of enhanced CNS in the event of misuse of the service would encourage adherence to the established safeguards and conditions of use.

101. The Commission considers, however, that it would be inappropriate for the ILECs to bear responsibility for determining whether the provision of E9-1-1 information for enhanced CNS should be terminated in the event of misuse, due to the detrimental effect that such a decision could have on public safety. The Commission considers that any decision to suspend or terminate enhanced CNS due to misuse of the service should remain with the Commission.

102. Accordingly, the Commission determines that the safeguards for enhanced CNS should include a provision that states that ILECs are required to suspend or terminate the use or disclosure of information from their E9-1-1 databases to the public authority, authorized administrators and CNS providers in the event that the Commission finds that the enhanced CNS is being misused or used in a manner that is inconsistent with the Commission's safeguards and that suspension or termination of enhanced CNS is in the public interest.

Reporting mechanisms

103. The Commission considers that the filing of regular enhanced CNS reports will help it monitor the parties involved in enhanced CNS, in order to verify adherence to the established safeguards and conditions of use. The Commission considers that since the public authority is responsible for initiating enhanced CNS and will have a contractual relationship with all parties involved, the public authority should be responsible for generating and maintaining enhanced CNS reports. The Commission considers that enhanced CNS reports should provide sufficient information to allow the Commission to investigate issues arising from a breach of safeguards.

104. Accordingly, the Commission determines that the safeguards for enhanced CNS should include a provision that indicates that the public authority is responsible for submitting to the ILEC an annual enhanced CNS report. The report must, at a minimum, include for each use of the service:

(a) the date of the enhanced CNS alert;

(b) the start and end times of the enhanced CNS alert;

(c) the reason for the enhanced CNS activation and the area affected;

(d) the identity of the public authority, the authorized administrator, the CNS provider and the ILEC involved in the initiation and operation of the enhanced CNS; and

(e) a written copy of the message that was transmitted to the public.

Non-disclosure of information

105. The Commission considers that the disclosure of E9-1-1 information obtained in response to a particular enhanced CNS alert to any party not involved in the provision of enhanced CNS would raise serious privacy concerns and be contrary to the purpose of the service. The Commission considers that having parties involved in the provision of enhanced CNS sign non-disclosure agreements would address these privacy concerns.

106. Accordingly, the Commission determines that the safeguards for enhanced CNS should include a provision that indicates that the public authority, authorized administrators and CNS providers must sign non-disclosure agreements with the ILEC and may not disclose E9-1-1 information obtained pursuant to an enhanced CNS alert to any other party without Commission consent.

Database enrichment

107. The Commission considers that enriching E9-1-1 information with additional personal information would increase privacy concerns, which could require additional safeguards, depending on the nature of the information. In light of these privacy concerns, the Commission considers it inappropriate to allow the enrichment of E9-1-1 information with additional personal information.

108. The Commission considers, however, that there may be a requirement to associate telephone numbers with geographic information other than addresses, such as map coordinates, in order to improve the delivery of enhanced CNS alerts. As such, the Commission considers it appropriate to enrich E9-1-1 information with supplemental geographic information for the sole purpose of improving enhanced CNS delivery, without the need for additional safeguards.

109. Accordingly, the Commission determines that the safeguards for enhanced CNS should include a provision that indicates that E9-1-1 information supplied by the ILEC may not be enriched with additional personal information. The safeguards should also indicate that E9-1-1 information may be enriched with supplemental geographic information for the purpose of improving enhanced CNS delivery.

Additional measures

110. The Commission considers that the customer contracts, agreements and other enhanced CNS arrangements between the public authorities, authorized administrators, CNS providers and the ILECs should reflect the identified safeguards.

111. In addition to these safeguards, the Commission considers that the establishment of a set of standard guidelines, security procedures, processes and practices would further strengthen the confidentiality of information and reduce privacy concerns.

112. The Commission considers that the CRTC Interconnection Steering Committee (CISC) is the best forum to assist parties in establishing common security, privacy and accountability standards for enhanced CNS.

113. The Commission considers that parties involved in operating enhanced CNS systems should review the Municipalities' draft guidelines with a view to establishing common standards. The Commission considers that any common security, privacy and accountability standards should be established prior to the implementation of enhanced CNS and should be made available to the public where appropriate.

114. The Commission requests that CISC establish a set of standard guidelines, security procedures, processes and practices for enhanced CNS. The Commission also requests that CISC submit to the Commission, within 12 months of the date of this Decision, a report identifying proposed security, privacy and accountability standards; any issues with establishing such standards; the viable solutions for any issues; and any recommendations with supporting rationale to improve the security, privacy and accountability of enhanced CNS.

115. The Commission considers that the use of enhanced CNS should only be permitted for the public authorities that have signed agreements with the ILECs that incorporate the identified safeguards and conditions of use.

116. The Commission directs the ILECs to provide E9-1-1 information for enhanced CNS purposes, where the required conditions have been met and in accordance with the identified safeguards. The required conditions are set out throughout this Decision.

Part D: Consent and notification requirements for enhanced CNS

117. In this section, the Commission considers the issues of prior notification and express consent versus implied consent.

Positions of parties

118. The Municipalities indicated that no subscriber consent should be required for enhanced CNS, since the government authority has an obligation to ensure public safety.

119. Nonetheless, the Municipalities proposed that government authorities notify their citizens prior to deploying enhanced CNS. The Municipalities indicated that where CNS systems already existed, government authorities had notified citizens through such mediums as flyers, local papers and town hall meetings.

120. The Municipalities proposed that the government authority's notification include information such as:

- the nature of enhanced CNS, including the fact that telephone information would be used to issue alerts;
- the process to deliver enhanced CNS alerts;
- the circumstances of enhanced CNS use;
- the information that would generally be included in the alert;
- government authority contact information; and
- when the service would be operational.

121. Bell Canada et al. and SaskTel indicated that the Commission should ensure that the provision of enhanced CNS complied with PIPEDA requirements.

122. The ILECs generally proposed relying on implied consent for enhanced CNS. In addition, some ILECs indicated that express prior customer consent would be inappropriate for enhanced CNS, since the service was in the public interest and it would be impractical to obtain such consent.

123. The ILECs indicated that while customer notification would be appropriate for enhanced CNS, it would be inappropriate for the ILECs to bear responsibility for any such notification. Several ILECs proposed that the government authority be responsible for customer notification.

124. The ILECs proposed to modify their tariffs for unlisted number service and the confidentiality provisions in their Terms of Service in order to provide sufficient ILEC customer notification.

125. The ILECs expressed various concerns regarding any imposed ILEC customer notification requirement, including administrative burdens associated with identifying LEC subscribers and unlisted subscribers. The ILECs indicated that any imposed customer notification requirement would be costly to implement and might affect the financial viability of enhanced CNS. In addition, some ILECs indicated that their standard communication methods, such as billing inserts, might not be the most efficient way to distribute information to subscribers.

126. PIAC submitted that the Commission should set higher privacy standards for the protection of confidential customer information than those required under PIPEDA.

127. PIAC considered that enhanced CNS infringed on the privacy of all consumers, since the purpose for which E9-1-1 database information was originally collected did not include enhanced CNS. While PIAC considered that a post-disclosure notification process would be extremely cumbersome and impractical for enhanced CNS, it was of the view that all customers should receive a prior notification.

128. PIAC proposed that the ILECs provide detailed prior notification to both listed and unlisted subscribers about enhanced CNS prior to service implementation. PIAC proposed that such prior notification serve to inform subscribers about the possible use and disclosure of E9-1-1 information, the purpose of enhanced CNS, and the legal authority of the government authority and the ILEC to operate the service.

129. PIAC considered that the ILECs' methods of subscriber communication, such as billing inserts, would be an effective vehicle to deliver prior notification. In addition, it proposed that ILECs and government authorities make available the implementation details of enhanced CNS systems on their web pages, in hard copy, and in alternative formats.

130. PIAC submitted that while the Commission might fashion its own consent and notification regime for enhanced CNS, the principle of customer control over confidential information should be a high priority.

131. The Privacy Commissioner submitted that privacy should not be viewed as an impediment to public safety. The Privacy Commissioner indicated, however, that whenever personal information was used for purposes other than those for which it was initially collected, privacy concerns arose.

132. The Privacy Commissioner submitted that while it preferred an enhanced CNS regime that required obtaining consent for the use or disclosure of personal information, prior consent would not be practicable for enhanced CNS since a significant period of time would likely pass before the information was used or disclosed, rendering questionable whether the consent obtained was meaningful and valid. The Privacy Commissioner indicated, therefore, that obtaining prior consent might not be appropriate for enhanced CNS.

133. The Privacy Commissioner indicated that PIPEDA specified when the use or disclosure of personal information was permitted without the knowledge and consent of the individual. It also indicated that in circumstances where use and disclosure were permitted, PIPEDA specified whether or not there was a need for individual notification.

134. The Privacy Commissioner submitted that in situations where the ILEC operated as the CNS provider for enhanced CNS, there would be no notification requirements pursuant to PIPEDA. The Privacy Commissioner indicated, however, that in situations where a non-ILEC operated as the CNS provider, the ILECs would be required to provide direct written notification to unlisted subscribers after each enhanced CNS alert was issued.

135. The Privacy Commissioner submitted that other sections of PIPEDA would apply to parties involved in enhanced CNS, regardless of who operated as the CNS provider. The Privacy Commissioner indicated, for example, that the ILECs were required to identify the purposes for which information was collected and to be open about their policies and practices regarding the management of personal information.

136. The Privacy Commissioner proposed that all LECs inform both existing and new customers that their personal information would be used for enhanced CNS and that they identify the legal authority that permitted its use or disclosure. The Privacy Commissioner also proposed that government authorities notify their citizens about the implementation of enhanced CNS.

137. The CCTA submitted that the Commission's decision regarding enhanced CNS should be harmonized with PIPEDA.

138. None of the parties supported a subscriber opt-out process for enhanced CNS, and the Privacy Commissioner indicated that allowing such a process would defeat the purpose of the service.

Commission's analysis and determinations

139. The Commission notes that several parties sought the establishment of enhanced CNS consent and notification procedures that would be consistent with PIPEDA and would promote compliance with PIPEDA obligations. The Commission also notes that its jurisdiction in the matter of privacy stems not from PIPEDA, but from the Act, and that in fulfilling the objectives of and in exercising its discretionary powers pursuant to the Act, the Commission may apply different standards than those contemplated by PIPEDA.

140. The Commission considers that establishing the appropriate type of consent and notification procedures for enhanced CNS requires a careful balance between the interests in public safety and in privacy. The Commission also considers that the issue of customer consent and notification is fundamental to the establishment of enhanced CNS.

Express consent versus implied consent

141. The Commission notes that PIPEDA distinguishes between the requirements for express and implied consent, depending on the particular use or disclosure of information being contemplated. The Commission considers that either form of consent could be contemplated for enhanced CNS.

142. The Commission notes that no party considered that obtaining express prior consent would be practical or appropriate for enhanced CNS and that there was no consensus regarding an appropriate form of customer consent for enhanced CNS. The Commission considers that obtaining express consent before the use or disclosure of information for enhanced CNS would be onerous, time consuming, and inconsistent with a pressing emergency. As such, the Commission does not consider prior express consent to be appropriate for enhanced CNS.

143. The Commission notes that PIPEDA permits the use or disclosure of personal information for purposes such as enhanced CNS without the knowledge and consent of the individual, but that a post-disclosure notification requirement to unlisted subscribers could apply to ILECs in situations where a non-ILEC operates as the CNS provider.

144. In the Commission's view, a post-disclosure notification regime would raise several implementation concerns, such as requiring ILECs to identify listed and unlisted subscribers, including those of its competitors. The Commission also considers that under such a regime, ILECs would need to send billing inserts after each enhanced CNS alert, which would add complexity and costs to the alerting process.

145. The Commission considers that while such a regime may not be required when the ILEC operates as the CNS provider, it would act as a disincentive and hinder the competitiveness of non-ILEC CNS providers. Therefore, the Commission considers that establishing a post-disclosure notification regime would impede the deployment of enhanced CNS to the detriment of public safety and, as a result, does not consider it appropriate to require one.

146. The Commission considers that, in the event of an emergency alert regarding an imminent threat to life, health or security, it would be reasonable to assume that both listed and unlisted subscribers would wish to be included in the alerting process. Given this, in addition to the public safety benefit of the service, the Commission considers that it may be reasonable to rely upon implied consent for the use or disclosure of confidential information associated with enhanced CNS.

147. The Commission notes that in Decision 2003-33, it considered implied consent to be inappropriate for the disclosure of confidential information by an ILEC to an affiliated company for business purposes. The Commission considered that the ILECs had not demonstrated that their interest in lowering the threshold from express to implied consent for those purposes outweighed the interests of customers in retaining control over their confidential information.

148. The Commission considers, however, that the commercial purpose of the disclosure identified in Decision 2003-33 is different from the public interest purpose identified for enhanced CNS. The Commission considers that since reliance on implied consent would facilitate the deployment of enhanced CNS for public safety purposes, and since reliance on express consent would impose significant barriers to its deployment, implied consent is justified in this case.

149. The Commission considers, however, that in order to justify the use and disclosure of confidential information for enhanced CNS on the basis of implied consent, a prior notification requirement should be imposed.

150. Accordingly, the Commission determines that a regime that relies upon prior notification and implied consent is appropriate for enhanced CNS.

151. The Commission notes that the ability of subscribers to request that their contact information not be used for enhanced CNS – or to opt out of enhanced CNS – is directly linked with the issue of subscriber consent. The Commission notes, however, that none of the parties supported an opt-out process for enhanced CNS. The Commission also notes that primary exchange service subscribers are not able to opt out of 9-1-1 service for public safety purposes. Similarly, the Commission does not consider an opt-out process for subscribers to be appropriate for enhanced CNS.

Prior notification

152. The Commission considers that prior notification to listed and unlisted subscribers before the implementation of enhanced CNS would inform them about the service and provide the basis of an informed and implied consent. The Commission considers that a billing insert is the appropriate method to provide prior notification to subscribers. The Commission also considers that all LEC subscribers should receive this notification, given that the confidentiality provisions apply to all LECs.

153. Accordingly, the Commission directs all LECs to provide billing inserts to their respective subscribers whose information is included in E9-1-1 databases, advising them of an impending deployment of enhanced CNS in their service area. The Commission determines that this notification should be provided three months before the service becomes operational.

154. The Commission determines that the billing inserts for enhanced CNS must contain the following:

- an overview of enhanced CNS;
- notice that telephone numbers and addresses of listed and unlisted subscribers may be used or disclosed for the service;
- the identity of the public authority implementing the service;
- an overview of the circumstances justifying the use of the service;
- the limitations of the service, such as the exclusion of wireless and nomadic VoIP numbers from enhanced CNS alerts;
- the timing of the enhanced CNS implementation; and
- the public authority's contact information.

155. The Commission considers that LECs should coordinate with the public authority in order to develop the information for the billing insert. The Commission also considers that since it is the public authority's decision to implement enhanced CNS as a public safety measure, it would not be appropriate for LECs to bear the costs associated with the prior notification requirement. Accordingly, the Commission determines that the public authority implementing enhanced CNS should bear the costs associated with the billing inserts issued by LECs.

156. The Commission directs the LECs to modify their tariffs for unlisted number service, where appropriate and when enhanced CNS is deployed, in order to reflect the emergency exception to the confidentiality provisions for enhanced CNS.

157. The Commission notes that public authorities have generally undertaken a customer notification regime for previous CNS implementations. The Commission considers that imposing a prior notification requirement upon public authorities would be an appropriate measure to further enhance the prior knowledge and implied consent regime.

158. Accordingly, the Commission determines that public authorities are required to provide notification to citizens prior to the deployment of enhanced CNS that would include, at a minimum, the same information contained in the LECs' billing insert notifications. The Commission considers that public authorities may determine the appropriate communication methods at their disposal to provide the required prior notification.

159. The Commission also determines that the use of enhanced CNS should only be allowed for those public authorities that have signed agreements with the ILECs, accepting the notification requirements identified.

Part E: Operational issues for enhanced CNS

160. In this section, the Commission considers matters related to ILEC versus non-ILEC CNS providers, the provision of E9-1-1 information for enhanced CNS, operational requirements for enhanced CNS, and requests for CISC to address other operational issues.

Positions of parties

161. The Municipalities submitted that they were only interested in pursuing a CNS model where the ILEC operated as the CNS provider and that they would not be interested in non-ILEC CNS provider models.

162. The Municipalities also submitted that the ILECs should be required to develop geographic information systems (GIS) that would enable a government authority to request telephone numbers based on a geographic query, such as map coordinates, rather than addresses. The Municipalities further submitted that the ILECs should be required to develop an integrated voice response (IVR) capability, in order to deliver enhanced CNS alerts.

163. The Municipalities indicated that any operational requirements beyond those identified above might raise additional costs and could impede the deployment of enhanced CNS systems.

164. Bell Canada et al. submitted that not all ILECs would be capable of delivering enhanced CNS in the manner envisioned by the Municipalities. The ILECs generally suggested that the Commission adopt a pragmatic approach to enhanced CNS systems in which various operational models would be permitted, but not necessarily imposed.

165. Most ILECs indicated that the technical hurdles associated with operating as a CNS provider were too great and that they would not be interested in taking on this role. The ILECs generally indicated that public alerting solutions and technologies were part of a competitive market and that ILECs should not be required to operate as CNS providers.

166. The ILECs identified several technical limitations to the Municipalities' operational proposals. They submitted, for example, that the ILECs' E9-1-1 databases did not possess GIS capability and that some ILECs might not be capable of providing customers' geographic information other than their addresses. Several ILECs indicated that their existing IVR infrastructure was not capable of initiating outgoing calls to the public switched telephone network (PSTN). The ILECs generally indicated that system upgrades, network augmentations and process changes required to support enhanced CNS could be substantial and costly.

167. The ILECs submitted that even in situations where the ILEC did not operate as the CNS provider, the provision of enhanced CNS alerts would still involve costs. Bell Canada et al. suggested that the costs associated with the provision of E9-1-1 information could include establishing system and database administration; developing and documenting methods, processes and procedures; and training those involved in enhanced CNS operation.

168. Northwestel noted that most of its serving territory did not have E9-1-1 service and that it had extreme technical limitations with respect to E9-1-1 databases, IVR systems and GIS development, such that enhanced CNS should not be contemplated for the North at this time.

169. The ILECs expressed concern regarding the impact of mass outbound calling resulting from enhanced CNS, indicating that it could cause network congestion and compromise the calling capability of customers, including the ability to initiate a 9-1-1 call. The ILECs indicated that the capability to support mass outbound calling would vary by ILEC due to varying technological and network constraints, and that measures or enhancements were necessary to minimize the risks to the network. The ILECs indicated that 9-1-1 calls should be given a higher priority than outbound enhanced CNS alerts.

170. MTS Allstream indicated that several elements could affect the network and an ILEC's ability to deliver enhanced CNS alerts, including the number and size of interconnections between the CNS provider and the ILEC switch, the call handling capability of the ILEC switch, and the rate of call generation. MTS Allstream indicated that limiting the rate of calls being generated, the number of trunks connected, and the length of the outgoing voice message might be required.

171. Bell Canada et al. indicated that enhanced CNS should be provisioned in order to allow for a fixed maximum number of concurrent CNS-initiated alerts through the network and per terminating central office. Bell Canada et al. indicated that although different with respect to call handling, network impacts from inbound mass calling applications should be taken into consideration when assessing network congestion probabilities for enhanced CNS. SaskTel indicated that the additional traffic produced by mass calling could be handled by limiting the number of calls entering the network.

172. The ILECs generally expressed concern that any additional burden imposed by enhanced CNS, such as GIS querying capability, possible indexing or additional accessing, would affect their E9-1-1 service by introducing additional loads on E9-1-1 databases. The ILECs indicated that the performance of their 9-1-1 systems was of paramount importance and that they did not support any proposals that would compromise emergency services.

173. The ILECs were generally of the view that a separate database would be required for enhanced CNS. They indicated that this stand-alone database would only need to contain the minimum information required for enhanced CNS and would safeguard the integrity and performance of E9-1-1 service. The ILECs indicated that a separate repository would also reduce several privacy concerns, since there would be no direct access to E9-1-1 databases.

174. Bell Canada et al. indicated that the ILECs could provide the information of all customers contained in their E9-1-1 databases, including those of CLEC and SILEC subscribers, and that centralizing enhanced CNS functions with the ILECs would be easier to administer. Bell Canada et al. indicated, however, that if the ILEC were to operate as the single point of contact for CLECs' and SILECs' customer information for enhanced CNS, then the ILEC should be compensated for the additional workload and costs associated with that responsibility.

175. Some ILECs indicated that information in E9-1-1 databases might include errors that would generally be identified only when a 9-1-1 call was made. These ILECs indicated that a methodology to address erroneous customer information should be considered as part of enhanced CNS.

176. Certain ILECs expressed concern about individuals who would not be included in E9-1-1 databases, even where E9-1-1 service was deployed, and who would therefore not be included in enhanced CNS alerts. They suggested wireless and certain VoIP customers as examples.

177. PIAC submitted that there should be no requirement for an ILEC to operate as a CNS provider. It suggested, however, that the Commission should limit the entities permitted to act as CNS providers to carriers that were directly under the Commission's jurisdiction.

178. PIAC expressed concern about how wireless subscribers could be included in enhanced CNS alerts and suggested that the Commission address the implementation of wireless enhanced CNS.

179. The Privacy Commissioner indicated that it was unable to provide specific comments on the operational issues raised by enhanced CNS, but submitted that any operational matters should take privacy concerns into consideration.

180. The ACTQ submitted that SILECs should rely on the ILECs for the provision of their customers' information, since it was already being maintained by the ILECs.

181. The Municipalities and the ILECs were generally of the view that the operational details of enhanced CNS implementation should be determined by the ILEC and the government authority. However, all parties agreed that prior to a full-scale deployment of enhanced CNS, a complete review of the possible technical and operational issues should be undertaken at an industry forum, and that CISC would be the appropriate place for such a review.

Commission's analysis and determinations

ILEC versus non-ILEC CNS providers

182. The Commission notes that for enhanced CNS, the CNS provider would be the party responsible for taking E9-1-1 information from the ILEC, receiving the emergency message provided by the public authority, and inputting the two components into a mass outbound call-out system in order to transmit the enhanced CNS alert.

183. The Commission notes that two general models have been proposed for enhanced CNS delivery: one with the ILEC operating as the CNS provider, and the other with the ILEC providing E9-1-1 information to a non-ILEC CNS provider.

184. The Commission notes that existing CNS systems operate with non-ILEC CNS providers and that the operation of these systems demonstrates that CNS provider solutions form part of a competitive market. The Commission considers that limiting the parties that could operate as CNS providers may unnecessarily hamper the development of improved CNS systems.

185. The Commission notes that while the Municipalities indicated that they would not consider a non-ILEC CNS provider model, the Commission is not convinced that the Municipalities represent every public authority that may be interested in deploying enhanced CNS. In fact, the Commission considers that public authorities may benefit if they have a competitive choice between ILEC and non-ILEC CNS providers.

186. The Commission considers that non-ILEC CNS providers would be limited to either the public authority itself, or to a third party contracted by the public authority, which would therefore reduce privacy concerns. The Commission also considers that the safeguards identified in this Decision would mitigate any additional privacy concerns associated with non-ILEC CNS providers.

187. Accordingly, the Commission determines that there should be no restriction as to who may operate as a CNS provider, as long as the parties involved abide by the necessary safeguards. Since there will be competitive choice for this role, the Commission does not consider it necessary to require ILECs to operate as CNS providers.

Providing E9-1-1 information for enhanced CNS

188. The Commission notes that E9-1-1 service is a prerequisite for enhanced CNS, but that E9-1-1 service is not imposed on municipalities. The Commission notes that ILECs must currently make 9-1-1 and E9-1-1 services available to municipalities that request those services, but that the decision and the costs associated with implementing the services are taken on by the municipalities. The Commission considers that enhanced CNS should operate in a similar fashion to 9-1-1 service and, therefore, that the decision and the costs associated with implementing enhanced CNS should be taken on by the public authority.

189. The Commission considers that the ILECs' E9-1-1 databases are monopoly-controlled, with no competitive alternative that is equally comprehensive and current. As such, the Commission considers that no market forces exist that would encourage the ILECs to provide E9-1-1 information for enhanced CNS.

190. The Commission considers that without a direct obligation to provide E9-1-1 information, implementation of enhanced CNS would be at the ILECs' discretion, contrary to the public interest. Accordingly, the Commission determines that the ILECs must provide E9-1-1 information for enhanced CNS purposes, where available and as requested by a public authority, subject to all applicable safeguards.

191. The Commission considers that ILECs should only be required to make available the underlying elements that are specific to the provision of E9-1-1 database information for enhanced CNS (the underlying elements). The Commission considers that these underlying elements may include the establishment of systems, methods, processes, procedures, documentation and training, in order to allow the ILEC to interface with the public authority, authorized administrator or CNS provider.

192. Due to the limited deployment of E9-1-1 service in certain areas of the ILECs' territories and throughout most of Northwestel's territory, the Commission considers that provision of E9-1-1 information for enhanced CNS purposes should only be required in areas where E9-1-1 service has been implemented. The Commission considers that if E9-1-1 service is established in an ILEC's or Northwestel's territory and the company is subject to an enhanced CNS request from a public authority within the E9-1-1 service area, then that company would be subject to the enhanced CNS conditions established in this Decision.

Operational requirements for enhanced CNS

193. The Commission notes that the ILECs highlighted several obstacles associated with the development of GIS and IVR capabilities for enhanced CNS delivery.

194. The Commission considers that imposing GIS or IVR capabilities could impede the deployment of enhanced CNS due to the technical limitations of certain ILECs. The Commission also considers that GIS and IVR systems are subject to competitive supply and that they should not be included with the underlying elements. As such, the Commission determines that neither GIS nor IVR capabilities would be mandatory for ILECs to provide enhanced CNS.

195. The Commission notes that the ILECs expressed concerns regarding the congestion effect that mass outbound enhanced CNS alerts could have on their networks and on emergency services.

196. The Commission considers that mass outbound enhanced CNS alerts could have serious consequences on all LECs' networks if enhanced CNS systems are not properly configured according to the LECs' operational capabilities. The Commission also considers that protecting access to reliable telephone service, including emergency services, would remain of the utmost importance subsequent to enhanced CNS implementation. The Commission considers, further, that enhanced CNS should be configured in such a way that it minimizes the negative impact on routine subscriber calling capabilities.

197. Accordingly, the Commission determines that when enhanced CNS is implemented, LECs must configure and impose the necessary conditions of service on parties involved in CNS provision to ensure that emergency services such as E9-1-1 service are not detrimentally affected by enhanced CNS alerts delivery. The Commission considers that LECs should impose operational measures, such as allowing a fixed number of calls through the PSTN and limiting the length of outgoing voice messages, in order to mitigate network congestion.

198. The Commission notes that the ILECs indicated that a separate repository of E9-1-1 database information should be created for enhanced CNS.

199. The Commission also notes that E9-1-1 databases were not conceived for enhanced CNS and considers that any additional strain resulting from the CNS service could adversely affect access to emergency services. The Commission considers that the use of enhanced CNS should not compromise other emergency services and that creating a separate database for enhanced CNS would help to mitigate this concern as well as privacy issues. In the Commission's view, the benefits of creating a separate repository of E9-1-1 database information for enhanced CNS outweigh the drawback of any additional costs.

200. Accordingly, the Commission determines that a separate repository of E9-1-1 information containing telephone numbers and associated addresses would be an underlying element and a compulsory component of enhanced CNS. The Commission also determines that the E9-1-1 CNS repository should remain within the control of the ILEC.

201. The Commission notes that while Bell Canada et al. considered it appropriate to centralize LEC responsibility for enhanced CNS within the ILEC, they also indicated that there might be additional operational issues and costs involved in this centralization function.

202. The Commission considers that centralizing enhanced CNS functions across the LECs would ensure a more effective and efficient delivery of enhanced CNS and would reduce operational costs for the service. The Commission also considers that the ILECs should be responsible for such centralization, in light of their existing responsibilities associated with E9-1-1 databases.

203. The Commission considers that the E9-1-1 CNS repository created for enhanced CNS should be centralized at the same level as the ILECs' E9-1-1 databases and that there would be no additional costs associated with the centralization of E9-1-1 information. The Commission considers, however, that there may be additional unforeseen operational costs associated with centralizing LEC functions for enhanced CNS. The Commission considers that since centralization functions form part of the underlying elements, any costs associated with this centralization function should be included in the cost of the service.

204. The Commission notes that amendments to various agreements between LECs may be required as a result of the above-mentioned centralization of LEC functions for enhanced CNS.

205. In light of the above, the Commission directs the ILECs and Northwestel to file proposed tariff pages for enhanced CNS provision, where the service will be available, following a request from a public authority.

Request for CISC to address other operational issues

206. The Commission notes that there was general consensus among the parties that technical and operational issues associated with enhanced CNS could be addressed by CISC.

207. The Commission considers that enhanced CNS implementation will require time, effort, financial investment and a cooperative approach. The Commission also considers that CISC provides an effective forum to analyze, evaluate and resolve specific issues related to enhanced CNS. Due to the complexity and potential customization of enhanced CNS, the Commission does not consider it appropriate to identify a specific date for CISC to resolve all CNS issues.

208. The Commission considers that parties should discuss enhanced CNS implementation as part of a CISC process. The Commission also considers that when examining the various enhanced CNS issues, CISC may benefit from the participation of Industry Canada, Public Safety and Emergency Preparedness Canada and other organizations involved in the development of Canadian public alerting systems.

209. The Commission notes that none of the parties identified the necessary underlying elements. The Commission also considers that technical standards will be required for the underlying elements, including the structure of the E9-1-1 CNS repository, the repository file output and the repository querying method. The Commission considers that it would be appropriate for CISC to address the identification of the underlying elements and the establishment of their technical standards.

210. The Commission notes that the parties did not agree upon any specific methods to address the network congestion issues raised by enhanced CNS. The Commission considers that it would be appropriate for CISC to address the impact of outbound enhanced CNS alerts on LECs' networks and the necessary measures to safeguard against degradation of emergency services.

211. The Commission notes that parties did not identify specific issues involving the centralization of enhanced CNS functions with the ILECs. The Commission considers that it would be appropriate for CISC to address, on behalf of CLECs and SILECs, any future operational issues that may arise as a result of ILEC-centralized enhanced CNS functions.

212. The Commission notes that the information contained in the ILECs' E9-1-1 databases might include errors that might only be identified at the time of an actual E9-1-1 call. The Commission considers that these errors could compromise the effectiveness of enhanced CNS alerts. As such, the Commission considers that it would be appropriate for CISC to address the issue of correcting erroneous customer information.

213. The Commission acknowledges the ILECs' concerns regarding customers who may not be included in the E9-1-1 database and who would not be covered by an enhanced CNS alert. The Commission notes that the deployment of enhanced CNS systems will be limited to areas where E9-1-1 service is already in place. The Commission also notes that E9-1-1 information provided by the ILECs will not contain all subscriber information within a given geographic area, especially information associated with subscribers using newer technologies such as wireless or nomadic VoIP.

214. The Commission notes that in *Conditions of service for wireless competitive local exchange carriers and for emergency services offered by wireless service providers*, Telecom Decision CRTC 2003-53, 12 August 2003, as amended by Telecom Decision CRTC 2003-53-1 dated 25 September 2003, and *Emergency service obligations for local VoIP service providers*, Telecom Decision CRTC 2005-21, 4 April 2005, the Commission recognized the technical and operational challenges associated with emergency services for wireless and nomadic VoIP customers, such as entering subscriber records into the E9-1-1 database.

215. The Commission notes that in the above-mentioned Decisions, it addressed the limitations to the information included in the E9-1-1 database by requesting that CISC develop appropriate solutions. Accordingly, the Commission considers that it would be appropriate for CISC to address the issue of whether, and how, wireless and nomadic VoIP subscribers could be included in enhanced CNS alerts.

216. The Commission notes that none of the parties addressed issues regarding the effectiveness of enhanced CNS for persons with disabilities, such as hearing-impaired subscribers who receive and relay their messages using a teletypewriter (TTY). Accordingly, the Commission considers that it would be appropriate for CISC to address technical issues associated with the delivery of enhanced CNS alerts to persons with disabilities.

217. Accordingly, the Commission requests that CISC develop operational solutions associated with enhanced CNS implementation issues, including those identified above. The Commission also requests that CISC submit to it within 12 months of the date of this Decision an initial report identifying operational issues and viable solutions, and any recommendations with supporting rationale that would improve enhanced CNS implementation.

Part F: Other issues related to enhanced CNS

218. In this section, the Commission considers matters related to cost recovery and limitation of liability.

Cost recovery

Positions of parties

219. The Municipalities submitted that enhanced CNS would be in the public interest and that they considered it to be an enhancement to 9-1-1 service. The Municipalities therefore proposed that the mark-ups applied to enhanced CNS costs be the same as those applied for 9-1-1 service. The Municipalities indicated that any mark-up above the one used for 9-1-1 service would be onerous for government authorities to pay and could affect the viability of enhanced CNS.

220. The ILECs submitted that CNS costs should be recovered from government authorities through one-time, recurring or per-call charges, as the ILEC deemed appropriate. The ILECs indicated that this approach would allow for the recovery of all costs causal to enhanced CNS by charging government authorities for CNS start-up and recurring costs, including those for all hardware, software and staffing requirements.

221. The ILECs suggested that enhanced CNS was a unique and distinctive service that would complement existing emergency services, rather than enhance or be similar to 9-1-1 services, and submitted that there should be no constraints on the mark-up applied to the service.

222. None of the ILECs supported recovering CNS costs through increased rates to telephone subscribers. Similarly, PIAC did not consider it appropriate to allow enhanced CNS cost recovery through increased telephone rates. In PIAC's view, enhanced CNS costs should be borne by the government authority and not individual telephone subscribers.

223. PIAC indicated that, regardless of the method used to recover costs, the ILECs should not be permitted to exceed cost recovery for enhanced CNS. PIAC suggested that enhanced CNS would be a service similar to 9-1-1 and that ILECs should not be permitted to profit from a service that was in the public interest.

Commission's analysis and determinations

224. The Commission notes that none of the parties proposed that the ILECs collect or bill on behalf of the public authority for implementing enhanced CNS.

225. The Commission is not prepared to allow the costs of enhanced CNS to be recovered from individual subscribers in the form of an additional charge or increased rates on monthly telephone bills. The Commission finds that CNS costs should be recovered by the ILEC from the public authority through an explicit tariff rate, indicating one-time, recurring or per-call charges, as agreed to by the parties.

226. Regarding the mark-up for the service, the Commission considers that allowing the ILECs complete discretion in enhanced CNS pricing could impede the deployment of the service. In the Commission's view, while there are significant differences between enhanced CNS and 9-1-1 service, both services fulfill a public safety objective that is in the public interest. The Commission considers, however, that certain aspects of enhanced CNS are subject to competitive supply, as is demonstrated by the operation of existing CNS systems.

227. The Commission considers that the key difference between existing and enhanced CNS systems is the inclusion of E9-1-1 information. The Commission also considers that only the ILECs are able to provide telephone numbers and associated addresses in the cost-efficient and comprehensive manner required for enhanced CNS. Accordingly, the Commission determines that the mark-up on costs related to the underlying elements such as the E9-1-1 CNS repository should be limited to a maximum of 10 percent, in line with the constraint imposed on 9-1-1 service.

228. However, the Commission considers that ILECs will actively compete with non-ILEC CNS providers in order to provide other enhanced CNS functions unrelated to the underlying elements and that market forces exist to protect the interests of users. Accordingly, the Commission determines that the mark-up on costs associated with other enhanced CNS functions, such as GIS or IVR, should not be restricted.

Limitation of liability

Positions of parties

229. The ILECs proposed limitations to their liability resulting from network congestion caused by enhanced CNS. The ILECs also proposed to limit their liability regarding enhanced CNS implementation decisions made by the government authority or authorized administrator. The ILECs further proposed that they not be held liable for errors or omissions regarding customer information. Finally, the ILECs proposed that government authorities or authorized administrators bear responsibility for claims arising from unauthorized use of enhanced CNS.

230. PIAC submitted that the ILECs should not be held liable for congestion of normal traffic or for disclosing customer information for enhanced CNS. PIAC suggested, however, that the ILECs' limitation of liability should not be extended to complete immunity from lawsuits based on inadequate provisioning of the network to handle enhanced CNS alert loads. PIAC indicated that ILECs should be responsible for inadequate preparation for, or prioritization of, enhanced CNS alerts, and for failure to keep basic 9-1-1 and E9-1-1 functions prioritized over these alerts.

Commission's analysis and determinations

231. The Commission notes that in Decision 99-17, it considered it appropriate to indemnify the ILECs in the event of any claim by any third party against the ILECs arising out of any breach of the manual access agreement by the PSAP. The Commission also considered it appropriate to require the ILEC to indemnify the municipality in the event of a claim arising out of a breach of the agreement by the ILEC.

232. The Commission notes that the standard 9-1-1 agreements between ILECs and municipalities incorporate a limitation of liability provision and that one also exists in the ILECs' Terms of Service.

233. Notwithstanding the ILECs' obligations to impose operational measures to mitigate network congestion, the Commission considers that problems may occur during the delivery of enhanced CNS due to unpredictable subscriber calling patterns during emergency situations. Accordingly, the Commission determines that the ILECs should be held to the same standard of limited liability that applies to 9-1-1 service in their Terms of Service.

234. The Commission considers that when providing E9-1-1 information for enhanced CNS, the ILEC's decision-making role is limited. Accordingly, the Commission determines that the ILECs should not be held liable for implementation decisions made by other parties.

235. The Commission considers that errors in customer information may exist for enhanced CNS, as they may with 9-1-1 service, and determines that the ILECs should be subject to the same limitation of liability provisions established in their Terms of Service for directory errors and omissions.

236. In the Commission's view, the limitation of liability for breaches of agreement should be the same for enhanced CNS as for manual access to the E9-1-1 database. Accordingly, the Commission considers that it is appropriate to indemnify the ILECs in the event of a claim by a third party against the ILECs arising out of any breach of an enhanced CNS agreement by the public authority. The Commission also considers it appropriate to require the ILEC to indemnify the public authority in the event of a claim arising out of a breach of the agreement by the ILEC.

237. Finally, the Commission considers that in instances where an ILEC performs other enhanced CNS functions, the apportionment of specific liability issues should be determined by normal commercial arrangement between the public authority and the ILEC.

238. The Commission directs the ILECs, SILECs and Northwestel to include, where appropriate, these limitation of liability provisions in their tariffs, customer contracts and agreements.

Secretary General