



Cross Border 9-1-1 Data Sharing: A Guide for PSAPs in the U.S. and Canada

**Recommendations and Best Practices
for Management of Emergencies
Requiring Coordination with Cellular Carriers**

National Public Safety Telecommunications Council
and
Canadian Interoperability Technology Interest Group

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Executive Summary

Callers needing emergency assistance frequently use cellular telephones to contact local public safety agencies for help. Recent statistics from the National Emergency Number Association (NENA) indicate that approximately 657,000 calls to 9-1-1 are received by Public Safety Answering Points (PSAPs) in the United States every day.¹ Seventy percent of these calls are initiated from wireless phones. Location uncertainty and dropped calls often require a PSAP to contact a wireless carrier for assistance. Carriers can use a variety of technology tools to locate callers who are connected to their networks. In other circumstances, customer account data, including the billing address, is needed to assist efforts in locating a person in an emergency.

Emergency calls placed near the international border are no exception. PSAPs in the U.S. and Canada frequently engage commercial carriers to provide needed assistance in resolving a crisis. However, wireless emergency calls in these areas can be increasingly problematic for PSAPs due to a number of technical and policy issues. A 9-1-1 call near the U.S. Canadian border may result in the wireless telephone signal reaching a tower in the country other than the one with jurisdiction for the incident. A mobile caller reporting a heart attack in the United States may reach a Canadian PSAP. In other cases, cellular calls reporting a house fire in Canada may be answered by a U.S. PSAP. These calls must be transferred or relayed to the correct jurisdiction in the other country before first responders can be dispatched.

Additionally, the caller's cellular phone may roam to a different wireless carrier network as the caller travels across the international border.² This can cause confusion when PSAPs need to access customer account and location data during an emergency. For example, a U.S. caller travels into Canada on vacation. They may have cellular service on the AT&T network, but their emergency call will be processed by a tower in Canada and delivered to the PSAP via a Canadian carrier (e.g., "Telus Mobility"). The 9-1-1 screen in the Canadian PSAP will not display "AT&T," but will instead display "Telus" as the carrier who processed the 9-1-1 call. Location information for this call would be recorded on the Telus network while customer account information would only be available from the AT&T network.

Another type of incident, which also impacts emergency calls along the border, involves situations in which the person in distress did not dial 9-1-1. The person in distress may have dialed a 10-digit number for the public safety agency to report the emergency or may have been transferred to the PSAP by another entity. In other cases, a third party will dial 9-1-1 to report an emergency at another location. Other emergencies may be reported to relatives and friends via social media applications including Facebook, Twitter, and Reddit. Those who receive the emergency message then need to summon assistance for someone who may be in another country. PSAPs need rapid access to the same location and customer account data for these calls as they would automatically receive if the caller had dialed 9-1-1.

¹ NENA, <https://www.nena.org/?page=911Statistics>

² This also occurs when a wireless customer transitions to any other carrier, such as when a national carrier customer roams onto a rural wireless carrier network.

Many of these scenarios may result in the need for a Canadian PSAP to access location data from a U.S. wireless carrier or a U.S. PSAP needing to obtain customer account information from a Canadian wireless carrier. These cross-border emergency data requests frequently result in confusion involving the applicability of agency policy, carrier procedures, and international law.

The unique and infrequent occurrence of the situations described in this report often create confusion between PSAPs and wireless carriers over what information can be released and to whom. While everyone is in agreement that cellular carriers can share data during a bona fide emergency involving a caller who dialed 9-1-1, there is less agreement on what information a carrier will share if the caller dialed the public safety agency's non-emergency line or if the person in distress never placed a call for help. While wireless carriers have specific policies that address data release, PSAPs may not be able to successfully articulate all of the elements of the emergency event. Wireless carriers are responsible for protecting the privacy of their customer data and need assurances that data is only released in situations where the data is considered essential to locating a person in immediate danger and that they are in compliance with the law. Federal laws regarding privacy and international data sharing are different in the U.S. than in Canada. Internal procedures used by PSAPs and cellular carriers in each country are also different.

These issues were illustrated during an emergency incident in late 2015 when the Canadian PSAP received a third-party call reporting that a U.S. citizen was about to commit suicide somewhere in their jurisdiction. The person in distress had not placed a call to 9-1-1 but had instead called a friend to report the intention. The Canadian PSAP sought assistance from a U.S. PSAP and also contacted wireless carriers in the U.S. and Canada. Unfortunately, they were unable to obtain customer account or location data on the subject's phone. Fortunately, other investigative methods were successful, and the citizen was found in time to affect a rescue. This incident became the genesis for this report.

This document was created to provide guidance to border area PSAPs in the U.S. and Canada on recommended best practices for the management of four types of emergency calls:

1. Roaming Caller Routed to Visiting Country PSAP

A person in distress has crossed the border and their cell phone has roamed onto a cellular network of the other country. They have dialed 9-1-1 to report an emergency in that country.

2. Local Caller Mis-Routed to Other Country PSAP

A person in distress in their home country has dialed 9-1-1, but their cell phone signal has roamed and their call is routed to a PSAP in the other country. They are reporting an emergency in their home country.

3. Third Party Caller

A third-party caller is reporting a person in distress who is not located in their home country.

4. Non-Emergency Request for Criminal Investigative Assistance

A public safety official requests cellular account information or location data to aid an ongoing investigation.

Each of these four scenarios requires a unique response by the PSAP. The first three scenarios represent emergency incidents in which there is an urgent need to locate the person in distress quickly. These scenarios represent an “exigent circumstance” and, as such, a PSAP should be able to rapidly access location data and customer account information.

The fourth scenario, involving requests for information related to an ongoing criminal investigation, is not an emergency event and does not qualify for expedited access to this data.³ In the U.S., wireless carriers must comply with the Committee on Foreign Investment in the United States (CFIUS) regulations⁴ that restrict the release of subscriber data to foreign entities in non-exigent circumstances.

Experience has demonstrated that when a PSAP directly contacts a wireless carrier in another country for information will likely not be successful in obtaining the data that they need. Canada has a system in place which requires that their PSAPs provide a password before receiving location or customer account data. Following the September 11 terrorist attacks in the United States, additional layers of procedure and process were implemented that govern what types of telephone meta data can be shared and with whom. A wireless carrier would logically be concerned when receiving a call from an international public safety agency seeking data that is typically only provided under court order from an appropriate jurisdiction. This is especially true if the agency is seeking location data on a cellular phone that did not dial 9-1-1.

Following extensive discussions with a variety of stakeholders, it was determined that all data requests to wireless carriers should be made through an authorized representative from a PSAP located in the same country as the carrier. A PSAP needing customer account or location data from a cellular carrier in another country should engage the assistance of a “sister PSAP” in that country which will use established protocols and relationships with their wireless carriers.

It is also important that PSAPs understand basic elements of cellular network operation and where location data may be captured and stored by a wireless carrier. In general, location data is captured by the network on which the cellular phone is affiliated, regardless of which carrier the citizen pays for service. In contrast, customer account data, including name and billing address, is always maintained by the “home” cellular carrier.⁵ Cellular carriers store location data in different places based on whether the phone dialed 9-1-1, dialed a 10-digit number, or is roaming onto their network. Location data may also be available for cellular phones that have not placed a call and are merely affiliated on the network. This

³ It should be noted that certain ongoing criminal investigative cases may uncover information which results in an exigent circumstance, where immediate access to location and/or account information is necessary to respond to an in-progress or imminent threat to public safety.

⁴ <https://www.treasury.gov/resource-center/international/Pages/Committee-on-Foreign-Investment-in-US.aspx>

⁵ Prepaid phone cards and other types of cellular service access typically do not capture any customer account information.

report identifies the various databases used by wireless carriers. Access to location data may be expedited if the PSAP can clearly articulate the unique network aspects of the cellular phone involved in the emergency.

Recommendations for the processing of each type of emergency call are included in this report. U.S. and Canadian PSAP guidance is listed separately to account for policy and procedure differences. While this report was created with input from many stakeholders, including the Federal Communications Commission, the U.S. Department of Justice, and multiple wireless carriers in the U.S. and Canada, it cannot be viewed as representing the policy of any cellular carrier.

It is recommended that PSAPs review these recommendations and develop appropriate internal procedures that are tailored to their specific circumstances. PSAPs are also encouraged to add these components to their training program in order to educate their personnel on cross border emergency call issues and options.

1. Statement of Problem

Every day, approximately 657,000 calls are received by U.S. public safety agencies via the 9-1-1 network.⁶ Seventy percent of these calls are initiated from wireless phones. Cellular telephone ownership has continued to increase in the United States and Canada. A 2017 Pew Research Study⁷ found that 95 percent of Americans now own a cell phone and that 77 percent of all devices are smartphones. Similar adoption rates are found in Canada where 73 percent of Canadians use a smart phone.⁸ This information correlates with other statistical measures that the percentage of emergency calls placed from wireless devices will continue to increase over time.

Emergency incidents frequently occur near the border between the U.S. and Canada. The implementation of wireless cellular technology along the international border is complex and requires a network of towers and cellular antennae which are tuned to provide coverage within the specific geographic footprint of a given country. However, wireless signals from cellular telephones may reach unintended locations where they could be received by a more distant cell tower or received by another wireless carrier's network.

It is not uncommon that a 9-1-1 call placed near the international border may result in the wireless telephone signal reaching the cellular tower that is located in another country. The practice of "roaming" allows cellular phones to operate on another carrier's network. Roaming agreements between U.S. and Canadian wireless operators allow customers of both countries to continue using their cellular telephones beyond the boundary of their local carrier's coverage area. In many cases, the customer's cellular phone

⁶ NENA, <https://www.nena.org/?page=911Statistics>

⁷ <http://www.pewinternet.org/fact-sheet/mobile/>

⁸ <https://www.cwta.ca/facts-figures/>

will roam as intended and allow them to place an emergency call while traveling in another country.⁹ In other cases, a customer's cell phone may inadvertently roam onto another country's cellular network even though the customer is still located within their own country. These roaming agreements also impact the routing of 9-1-1 calls and can cause confusion when PSAPs need to access customer account and location data during an emergency.

Unintended roaming creates significant problems for PSAPs along the international border. A mobile caller reporting a heart attack located in the Detroit area may reach a Canadian PSAP in Windsor. Likewise, cellular calls reporting a house fire in New Brunswick, Canada, may be answered by a U.S. PSAP in the State of Maine. These calls must be transferred or relayed to the correct jurisdiction in the other country before law enforcement, fire, or EMS services may be dispatched. 9-1-1 call transfers between the U.S. and Canada PSAPs are typically routed through 10-digit telephone lines and therefore do not arrive with any Automatic Number Identification (ANI) or Automatic Location Information (ALI) data. This lack of data adds to the need for quick access to wireless carrier location and account information.

The caller's cellular phone may also roam correctly and connect to new wireless carrier network as they cross the border and enter another country. For example, a U.S. caller may have cellular service on the AT&T network. The caller travels into Canada on vacation and dials 9-1-1 to report an emergency. Their cellular call may reach a tower in Canada where it would be processed by Telus Mobility (a Canadian wireless carrier) and delivered to a Canadian PSAP. Even while roaming, the 9-1-1 call should be delivered to the most appropriate PSAP based on geography or local/regional/provincial policy. However, the 9-1-1 screen in the Canadian PSAP will display "Telus" as the wireless carrier instead of "AT&T" (the customer's contracted carrier). Location information for this call would be recorded on the Canadian carrier's network (Telus) while customer account information would only be available from the customer's "home" network provider (AT&T). The Canadian PSAP would have no awareness that this emergency call was placed by an AT&T customer and would therefore not know which wireless carrier to contact if they needed customer account information.

Another type of incident, which also impacts emergency calls along the border, involves situations in which the person in distress did not dial 9-1-1. The person in distress may have dialed a 10-digit number for the public safety agency to report the emergency or may have been transferred to the PSAP by another entity. In other cases, a third party will dial 9-1-1 to report an emergency at another location. Other emergencies may be reported to relatives and friends via social media applications including Facebook, Twitter, and Reddit. Those who receive the emergency message then need to summon assistance for someone who may be in another country. PSAPs need rapid access to the same location and customer account data for these calls as they would automatically receive if the caller had dialed 9-1-1.

⁹ It should be noted that, while not addressed in this report, wireless customers also roam to other carriers within their own country, resulting in the same circumstances where location and account data is available from different resources.

In many of the above-referenced scenarios a PSAP in one country will need to access location data and account data from two different wireless carriers. These cross-border emergency data requests frequently result in confusion involving the applicability of agency policy, carrier procedures, and international law.

One example which illustrates the complexity and time urgency of these calls occurred in October of 2015. The Windsor, Ontario, Police Department PSAP received a third-party call reporting that a U.S. citizen was about to commit suicide somewhere in their jurisdiction. The calling party knew the cell phone number of the person in distress but did not know the location. The person in distress had not placed a call to 9-1-1 but had instead called a friend to report the intention. In many instances, agency policy prevents a PSAP from contacting a suicidal caller until appropriate resources are in place. The PSAP staff initiated a series of phone calls in an attempt to obtain location and account information that would help them locate this individual. The PSAP did not know which U.S. cellular carrier the person was using. Despite multiple attempts by the PSAP staff, they were unable to obtain customer account or location data on the subject's phone. The Canadian wireless carrier did not have any information because the caller had not dialed 9-1-1. Calls to several U.S. carriers revealed that they would not have location data on a phone operating outside their networks. The U.S. carriers also advised that even if they had the location data, they could not share it with a "foreign government." Fortunately, other investigative methods were successful, and the citizen was found in time to affect a rescue. In other cases, PSAPS have been advised that the critically needed information is "not available" or there is confusion over which carrier has location data vs. which carrier has customer account information.

Finally, it should be noted that as both countries transition to Next Generation 9-1-1 (NG911) the exchange of data between PSAPs is expected to be enhanced.

2. Emergency Incident Scenarios

PSAPs deal with a large number of incidents in which the location of the emergency is not clearly known. A variety of tools exist in most PSAPs to help reconcile information provided by the caller, including the use of 9-1-1 mapping technology and other databases like agency CAD systems which help identify the street address of a particular business or landmark.

In certain cases, assistance must be obtained from the wireless carrier before an emergency response can be generated. Wireless carriers can provide location data collected during a caller's 9-1-1 event, can provide cell tower location data for a phone connected to their network, and can provide customer account information including subscriber name and billing address.

Rapid access to this information can mean the difference between successful resolution of an emergency or loss of life due the inability of first responders to reach the scene. Customer account information can be especially important for public safety agencies. Having access to the subscriber's identity enables other investigative tools that can help identify potential locations where help is needed. In other cases, public safety agencies have dispatched units to the customer's billing address to interview family members or business associates on the possible location of the person in distress.

While many emergency requests reach PSAPs with valid location data via the 9-1-1 network, there are a significant number of situations in which location data is not available. These include:

- 9-1-1 calls which arrive with only Phase 1 location data or no location data.
- 9-1-1 calls from persons reporting an emergency at a third-party location.
- Calls to PSAPs on non-emergency lines from family members and friends reporting an emergency on behalf of someone at a third-party location.
- Emergency calls placed by wireless phones which are received by the PSAP on non-emergency access lines.

In many of these cases, urgently needed location data can only be obtained from the wireless carrier. Emergency situations which did not originate with a call to 9-1-1 are nonetheless life-threatening events that require rapid response by public safety agencies. Likewise, emergency events near the international border should also result in the rapid and efficient dissemination of urgently needed information to PSAPs.

This report details three types of cross border emergency calls in which a PSAP will need assistance from a wireless carrier. It also defines a fourth type of cross border event which does not qualify for rapid access to customer account and location information.

1. Roaming Caller Routed to Visiting Country PSAP.

A person in distress has entered the other country (and roamed onto a cellular network in that country) and dials 9-1-1 to report an emergency in that country. Example: A U.S. citizen travels into Canada and dials 9-1-1 to report an emergency in Canada and reaches a Canadian PSAP.

2. Local Caller Mis-Routed to Other Country PSAP.

A person in distress near the international border dials 9-1-1 but their cell phone has incorrectly roamed onto the cellular network of the other country. Their 9-1-1 call reaches a PSAP across the border in the other country. They are reporting an emergency in their home country. Example: A Canadian citizen is traveling in Canada near the international border with the U.S. The citizen calls 9-1-1 to report an emergency in Canada, but their 9-1-1 call is routed to a U.S. PSAP.

3. Third Party Caller.

A third-party caller is reporting a person in distress who has likely roamed into the other country. Example: Canadian citizens dial 9-1-1 to report that their father just called them to say he was having chest pains and the call went dead. Their father was traveling from the U.S. into Canada and his location is unknown.

4. Non-Emergency Request for Criminal Investigative Assistance.

A public safety official requests cellular account information or location data to aid an ongoing investigation. Example: A police detective calls the PSAP to request cellular location data on a suspect who is reportedly traveling in Canada.

3. Wireless Carrier Network Design

It is important that personnel staffing PSAPs understand basic elements of wireless carrier network design.

Most wireless carriers fall into one of two categories: Wireless Network Operators and Mobile Virtual Network Operators. Wireless Network Operators (e.g., Wireless Carriers) own and operate the network and infrastructure to support their operations. Mobile Virtual Network Operators (MVNOs) are typically resellers of service and lease capacity from one or more wireless carriers.

Wireless carriers in the U.S. include: AT&T, Verizon Wireless, T-Mobile/MetroPCS, Sprint, and U.S. Cellular.

Wireless carriers in Canada include Bell Mobility, Rogers Communications, Telus Communications, Shaw Communications, RuralCom Corporation, Videotron (Quebec and Ottawa), SaskTel (Saskatchewan), Eastlink (Atlantic Canada), and Tbaytel (Thunder Bay).

Mobile Virtual Network Operators typically offer pre-paid service accounts. In many cases, no customer account records are maintained. MVNO operators in the U.S.¹⁰ include Boost Mobile, Consumer Cellular, and Cricket Wireless. MVNO operators in Canada¹¹ include 7-Eleven Speak Out Wireless, DCI Wireless, Execulink Mobility, KORE Wireless, and PC Mobile.

In most cases, a cellular customer has a contract with a wireless carrier who has access to their location data and the customer's account information. A phone call to the citizen's carrier will provide access to most of the information that may be needed by a PSAP.

In other cases, a cellular customer "roams" onto a wireless network that is different from the carrier whom they pay for service. Roaming allows customers to continue receiving service as they move from place to place. Almost all wireless carriers have roaming agreements with other cellular network providers. In some cases, a customer may be traveling to an area where their local service provider does not have coverage. A roaming agreement allows their phone to "connect" to another wireless carrier so they may place phone calls and use wireless services. In other cases, a customer may be traveling into another country and they will leave their "home" wireless carrier network and "connect" (roam) onto the network of a wireless carrier in the country they are entering.

Each wireless carrier typically has agreements with multiple roaming partners to provide service. An individual subscriber's phone will roam to a new network under a variety of conditions. These include availability of cellular towers, signal strength, and tower capacity. For example, an AT&T cellular customer may roam onto several different Canadian wireless carrier networks depending on their location and other

¹⁰ This list is an example of MVNO operators in the U.S.

¹¹ This is a partial list of MVNO operators in Canada.

factors. For instance, a PSAP cannot assume that an AT&T customer who has entered Canada is automatically connected to the Bell Canada system.

When a caller dials 9-1-1, the event data including the 9-1-1 location is captured by the wireless carrier. Carriers have different names for this database, including the “9-1-1 Log File.” The 9-1-1 ALI screen should display the name of the wireless carrier the customer uses.

When a caller dials 9-1-1 while roaming onto a different wireless network, the 9-1-1 event and location data is still captured. However, this data may be stored in a different database which has a different name. When the person in distress is roaming, the 9-1-1 ALI screen will display the identity of the wireless network operator whose tower received the call and routed it to the PSAP. The 9-1-1 ALI screen will not identify the name of the caller’s “home” wireless network operator.

Location data may also be needed from a customer’s cellular phone in the absence of a call to 9-1-1 call. The person in distress may have dialed the 10-digit telephone number for the public safety agency or they may not have placed a call for help. In these cases, location data for the phone is (obviously) not located in the wireless carrier’s 9-1-1 database. Location data for these types of incidents is typically limited to the address of the tower site to which the cellular phone is affiliated. This is also referred to as a “ping” in which the wireless carrier checks their network to see if the phone is registered (e.g., turned “on”) and onto which tower the phone has connected.

In some cases, the wireless carrier can identify the “Tower Face” or “sector” which is communicating with the phone. Most wireless carrier tower sites have three antenna panels, or “faces.” Each antenna panel covers about one third of the geographic area managed by that tower site, called a “sector.” If the wireless carrier can identify the cell tower “sector” to the PSAP, they must also provide information on which area the sector covers (e.g., the southern and southwestern portions of the coverage area). This data may help a PSAP narrow down the geographic footprint of a search area.

If the cellular caller is connected to their home network, this tower location data will be available in the carrier’s location registry database. These databases have different names among the various wireless carriers. If the cellular caller is roaming onto another network, this tower location data will be stored in a different database. This database has different names among the various carriers and may be known as the “Visitor Location Registry” or “VLR” database. It is important to note that location data may be stored in different databases based on whether the caller is connected to their home network.

While location data should be available from any cell phone that is connected to a wireless carrier network, there are many instances in which customer account information may not be available. These include the following cases:

- The call is placed from a Non-Service Initialized (NSI) handset.
- The call is placed from a cellular phone managed by a Mobile Virtual Network Operators (MVNO) which has no customer records.

As noted in Section 2 of this report, access to customer account information may be essential in resolving an emergency case. A PSAP must know the identity of the “home” wireless network operator that the person in distress is using and must know the cellular telephone number that the person in distress is using. This can be complicated if the emergency involves a cellular phone that has roamed onto a different carrier’s network. If the incident involved a 9-1-1 call, the ALI screen will display the caller’s cellular telephone number and the name of the wireless carrier which processed the roaming call. That wireless carrier should be able to assist the PSAP in identifying the caller’s home wireless carrier. If the emergency incident did not involve a 9-1-1 call, most wireless carriers have access to databases which would help identify the home carrier network.¹²

In some cases, the PSAP may use online tools to identify which wireless carrier is associated with the caller’s cellular telephone number. There are a number of free online search tools,¹³ which will examine the area code and prefix of the phone number and then match that information to a range of telephone numbers associated with a given carrier. It should be noted that there is no official government or industry list of these numbers available to the PSAPs. The information received from the public database on the Internet may be incorrect. For example, if an AT&T cellular customer switches their service to Verizon Wireless but keeps their AT&T telephone number, most online databases will still identify AT&T as the carrier responsible for that cellular number. For these reasons, PSAPs are strongly encouraged to contact a wireless carrier for assistance in matching a cell phone number to the customer’s assigned carrier.

There are unique differences in how 9-1-1 calls are transferred from a PSAP in the U.S. to a PSAP in Canada and vice versa. In almost all cases, a 9-1-1 call transfer to a PSAP in another country will exit the 9-1-1 system and be routed over a traditional telephone line. The 9-1-1 call will arrive at the other PSAP with no ALI or ALI data and will probably ring in on a 10-digit telephone line.¹⁴ This occurs even though the operator in the PSAP originating the transfer will press a button that appears identical to a button they would use to transfer a 9-1-1 call to another local agency (which would transfer the ANI and ALI data). It is important that the PSAP transferring an emergency call to a PSAP across the border remains on the line and offers the ALI and ANI data that is present on their screen.

4. Legal and Policy Framework

There are a number of legal and policy issues that directly impact the ability of a PSAP to access information needed to resolve an emergency incident. These include laws that govern the use of 9-1-1 data that manage privacy expectations, and that control the sharing of data between international organizations. Policy and procedure used by wireless carriers is based on legal interpretations that balance

¹² Wireless carriers in the U.S. have access to the Number Portability Administration Center (NPAC) which displays real time data on the association between each phone number and a carrier.

¹³ There are many Internet search tools and this report is not recommending or endorsing any specific product or service. One example of a free Internet search tool is: <http://www.411.com/phone>.

¹⁴ Some PSAPs maintain special “internal emergency” telephone lines for inter-agency coordination and/or the receipt of calls from alarm monitoring companies.

customer privacy, risk management, and the carrier's obligation to assist public safety agencies in an emergency.

The U.S. enacted major changes in the way the government collected and stored information from wireless carriers following the September 11 terrorist attacks. Allegations of government surveillance programs has angered citizens in the U.S. and Canada and caused wireless carriers to be significantly more vigilant about the release of sensitive data involving their customer's location and account data.

The most common situation for PSAPs is one in which the citizen in distress is the calling party who placed a 9-1-1 call. These calls represent a clear-cut situation to wireless carriers because the citizen has waived their right to privacy by activating the 9-1-1 system¹⁵ and it is reasonable to expect the carrier to assist the PSAP in managing this emergency.

Requests from PSAPs become less clear when the caller in distress dialed the PSAP directly, or was assisted by an operator, or was transferred from another agency. In these cases, location data is not stored in the wireless carrier's 9-1-1 event database and the carrier must use additional scrutiny to determine that the request is for an actual emergency event.

Third-party requests involve a calling party who is remote from the person in distress but is speaking on their behalf to report an emergency. Requests from the PSAP to a wireless carrier for location and account data involving third-party calls are especially problematic for the wireless carrier. In these instances, the carrier's customer did not request help and did not waive their right to privacy. In some cases, the urgency of the situation is determined by the PSAP after talking with a person who is not at the emergency scene.

Cellular carriers must follow applicable law as well as strict internal procedures for processing these requests. The improper release of customer account or location data may subject the carrier to liability or enforcement action. The U.S. and Canada have different laws regulating the availability of 9-1-1 data, location data, and general privacy protections. Each wireless carrier may have a different set of internal procedures on how these requests are managed, which may inject additional complexity and delay when responding to a request from a PSAP.

In summary, there is quite a bit of variability in how emergency calls are received and how wireless carriers may react to a request from a PSAP under normal, domestic conditions. When an emergency call involves a PSAP in one country processing a roaming 9-1-1 call and a wireless carrier in another country, more layers of complexity and uncertainty are added. Neither Canada nor the U.S. have specific regulations that provide direction to wireless carriers on the exchange of 9-1-1 call and location data to PSAPs of the other country.

¹⁵ In the U.S. and Canada, similar laws exist which state that a 9-1-1 call results in a waiver of a person's right to privacy in most cases.

In the U.S., each state regulates the protected nature of 9-1-1 call data and delineates when it can be shared and with who. In Canada, these issues are managed at the provincial level.

Two key themes emerged following discussions with stakeholders involved at the PSAP, regulatory, and carrier level. Attention to these issues should result in a faster and more successful resolution of the PSAP's request for data.

PSAPs need to clearly articulate key pieces of information to a wireless carrier when making their request for location and/or customer account information.

- That the request is coming from a PSAP.
- That the request is based on a time urgent emergency situation.
- Whether or not a 9-1-1 call was placed from the cell phone.
- Whether or not the cell phone is believed to be roaming.

This information notifies the carrier that the request for data is based on an emergency situation and tells the carrier where the requested information may be on their network (e.g., in their local network databases or in a separate roaming database). In certain cases, the wireless carrier's 9-1-1 Help Desk may need to transfer you to their corporate security department to manage an emergency request for data that does not involve a 9-1-1 call. Problems have arisen when PSAPs contact a wireless carrier and identify themselves as a law enforcement agency instead of a PSAP. For example, a call from the "Jonestown PSAP" will immediately convey to the wireless carrier that the request is coming from a 9-1-1 Center. However, a call coming from the "Jonestown Police Department" (who operates the PSAP) may cause a wireless carrier to believe that the request is not coming from a PSAP, does not involve a 9-1-1 call, and should be managed through a formal legal process.

PSAPs should establish a relationship with a "partner PSAP" in the other country that will work with them to obtain urgently needed information from wireless carriers in that country.

It has been determined that the best approach to obtain cross border emergency data is for a PSAP to use a "partner PSAP" operating in the same country as the wireless carrier who possesses the needed information. The use of a partner PSAP will engage a public safety agency that has an existing relationship with the wireless carrier and that knows the legal, regulatory, and policy environment of that country.

PSAPs along the U.S. Canadian border should create these partner PSAP arrangements in advance of an emergency situation. In some cases, a partner PSAP may require written confirmation of the emergency before they will act on the request. It is important to determine the easiest and most effective way to transmit this request. PSAPs may agree to use NLETS¹⁶/CPIC,¹⁷ email, or FAX communications.

¹⁶ The U.S. National Law Enforcement Telecommunications Systems provides direct teletype data messaging between U.S. and Canadian police agencies.

¹⁷ The Canadian Police Information Centre manages law enforcement databases and provides data messaging to the U.S. through an interface to NLETS.

The law in both countries is less clear on the obligation of a wireless carrier to provide location data and/or customer account information for emergency and urgent situations that did not initiate with a 9-1-1 call. This includes the third-party emergency calls described in this report, as well as calls placed to PSAPs via direct dial numbers other than 9-1-1.

Summary of U.S. Regulations Regarding 9-1-1.

- 9-1-1 is regulated at the state level and not at the federal/national level.
- Each state has unique requirements governing confidentiality of 9-1-1 data and how data may be released.
- Federal restrictions on a wireless carrier's ability to pass 9-1-1 location, cellular tower location, and customer account data to a PSAP in another country during an emergency are unclear.

Summary of Canadian Regulations Regarding 9-1-1.

- General Tariff 1400 speaks to 9-1-1 calls (Bell Canada General Tariff, Item 1400 (4), (4b)).
- Canadian PSAPs must use an approved password to obtain information from a Canadian wireless carrier.
- Wireless carriers can release information (customer record data and current GPS data) to the PSAP.
 - Provincial regulations dictate whether the PSAP can share the information with other entities.
- Dialing 9-1-1 in Canada results in the caller giving up their right to privacy.
- For instances not involving a 9-1-1 call, the incident will have to be managed by the wireless carrier's corporate security department.
 - This includes requests for a location trace or subscriber information.
 - This will require the Canadian PSAP to provide a Humanitarian Letter or follow some other legal process.
 - Bell Mobility may be able to do a location trace on behalf of other Canadian carriers, including Rogers Wireless, but they would not have customer account data.
- Federal restrictions on a wireless carrier's ability to pass 9-1-1 location, cellular tower location, and customer account data to a PSAP in another country during an emergency are unclear.

5. Recommendations for U.S. PSAPS

This section provides recommendations to U.S. PSAPs on how to manage each of the four types of incidents in which customer account and/or location data may be needed.

A) Roaming 911 Caller Routed to Visiting Country PSAP

A Canadian caller using a Canadian carrier cell phone has traveled into the U.S. and roamed onto a U.S. carrier network. They dial 9-1-1 reporting an emergency in the U.S. and reach a U.S. PSAP. The U.S.

PSAP needs additional information in order to generate an emergency response.

A1: Follow PSAP Call Processing Procedure

1. Follow internal PSAP call processing procedures.

A2: Determine IDENTITY OF WIRELESS CARRIER

1. Verify call back number of cellular phone that is displayed on the 9-1-1 screen.
2. Ask the caller who their Canadian cellular carrier is.
3. If unable to determine who the carrier is (and if this information is needed), call the U.S. wireless carrier who delivered the 9-1-1 call to your PSAP. They will be able to assist you in determining which Canadian carrier is associated with the cell phone. You may also do a web search using the caller's cell phone against one of the NXX Exchange websites¹⁸. While this data can be unreliable it may provide a starting point for additional research.

A3: If you need LOCATION DATA

1. The 9-1-1 ALI screen should identify the U.S. carrier who delivered the 9-1-1 call to the PSAP.
2. The 9-1-1 screen should display location data for this call.
3. If location data is not displayed (e.g., this is a Wireless Phase 1 call) contact the U.S. carrier to request 9-1-1 Location Data, notifying them that the caller has roamed onto their network. Location data may be stored in different databases. For example, the "Visitor Location Registry database" may contain location data for roaming callers who did not dial 9-1-1, while the "9-1-1 System Log File" may contain location data for any phone that accessed the 9-1-1 network.

A4: If you need CUSTOMER ACCOUNT INFORMATION

1. Customer account information, including the name and billing address, is maintained by the Canadian cellular carrier.
2. If you do not know the identity of the caller's Canadian carrier, contact the U.S. carrier who delivered the 9-1-1 call to your PSAP and request their assistance in determining this information. You may also contact your Canadian partner PSAP to request assistance if the U.S. carrier cannot help you.
3. Contact your Canadian PSAP partner and request that they obtain this information for you. Provide the cellular phone number of the calling party. Provide the name of the Canadian cellular company who provides service to the involved cell phone.
4. Follow up your request with an NLETS/CPIC¹⁹ message, email, or FAX the Canadian PSAP to document your request. You should include a statement that this information is needed to aid an emergency response.
5. The Canadian PSAP will follow their internal process to obtain the customer account information and will call you back with the results.

¹⁸ There are several providers of reverse look up, including (for example only) <http://www.411.com/phone>.

¹⁹ The Canadian Police Information Center (CPIC) is the Canadian equivalent of the NCIC/NLETS system in the U.S.

6. If a response is needed to the customer's home, the Canadian PSAP may be able to help identify the law enforcement agency for the customer account address given by the wireless carrier.

Example Use Case: William Murphy, a Canadian citizen using a Canadian carrier cell phone on the Bell Canada network is traveling in the State of Washington. He dials 9-1-1 to report that he is having chest pains and is stopping his car on the side of the road. Because Mr. Murphy has roamed onto the U.S. AT&T cellular carrier network, the 9-1-1 screen in the U.S. PSAP will display AT&T as the carrier who delivered the call. The 9-1-1 screen will not display Mr. Murphy's contracted carrier, Bell Canada. The PSAP call taker asks Mr. Murphy to confirm his location. He states he is near Marysville heading to a friend's house but is unsure of the name of the street he is on. He verifies his cellular call back number. The 9-1-1 Location Data only verifies for a Phase 1²⁰ tower location near the City of Marysville.

The connection is poor, and the call is dropped. There is no answer on the call back to Mr. Murphy's cell phone. In this specific example, location data for Mr. Murphy's phone will be in the 9-1-1 location database of AT&T (e.g., the U.S. carrier that delivered the call to the PSAP). The U.S. PSAP may also need to contact someone at Mr. Murphy's home in Canada to try to determine the make, model, and color of his vehicle and the destination to which he was traveling. Customer account data for Mr. Murphy will only be available from his cellular carrier. The U.S. PSAP would contact AT&T and ask them to help identify the Canadian carrier who manages this cell phone number. The U.S. PSAP would then contact their partner PSAP in Canada and ask them to obtain this information from Mr. Murphy's Canadian carrier (Bell Canada). The Canadian PSAP could also provide assistance in determining which law enforcement agency had jurisdiction at Mr. Murphy's address and help the U.S. PSAP contact that agency. The U.S. PSAP then could request that the local Canadian police department send an officer to Mr. Murphy's home in order to obtain additional information.

B) Local Caller Mis-Routed to Other Country PSAP

A U.S. caller using a U.S. carrier cell phone is traveling in the U.S. and dials 9-1-1 to report an emergency in the U.S. Their wireless phone has roamed onto a Canadian carrier network and the call is delivered to a Canadian PSAP. The call is transferred (or relayed) by the Canadian PSAP to the U.S. PSAP to generate a response. The U.S. PSAP does not receive any ANI/ALI data. The U.S. PSAP needs additional information in order to locate the caller.

B1: Follow PSAP Call Processing Procedure

1. Follow internal PSAP call processing procedures.

B2: Determine IDENTITY OF WIRELESS CARRIER

1. Obtain call back number of cellular phone used by caller.

²⁰ Phase 1 location data provides the street address and coordinates of the cellular tower that processed the 911 call. Phase 1 location does not include GPS or network data that would identify the location of the cell phone.

2. Ask the caller who their U.S. cellular carrier is.
3. Obtain the name of the Canadian wireless carrier who processed the 9-1-1 call. The 9-1-1 screen at the Canadian PSAP receiving this call should display the name of the Canadian wireless carrier that received and processed the call.
4. If unable to determine the identity of the U.S. carrier, call any U.S. Carrier 9-1-1 Help Desk for assistance, or search NXX Exchange²¹ on the Internet for this information. The Canadian PSAP which received the roaming call may also be able to contact the Canadian wireless carrier and ask them for assistance in identifying the U.S. carrier assigned to the cell phone.

B3: If you need LOCATION DATA

1. The cellular location data resides on the Canadian carrier network, because the 9-1-1 caller's phone is connected to their network. The U.S. cellular company that provides service to the caller will not have location data (the call was not processed on their network).
2. The Canadian PSAP who received the 9-1-1 call should be able to get location data for you.
 - a. Location data may have been provided when the 9-1-1 call was answered at the Canadian PSAP.
 - b. The Canadian PSAP may need to call the Canadian carrier who processed the call to obtain location data. It is important that they state that this was a roaming call and that the location data may be in a different database. For example, some location data may be stored in the "Visiting Location Registry (VLR) database" or the "9-1-1 log file." Each carrier may use different terminology.
 - c. If the caller is near the border, it's possible that their cell phone may revert back to their home U.S. cellular network. In this case, location data may be available on both carriers' networks. If the caller is mobile, the time stamp on the location data should indicate which coordinates are the most recent.
3. Follow up your request with an NLETS/CPIC message, email, or FAX to the Canadian PSAP to document your request. You should include a statement that this information is needed to aid an emergency response.

B4. If you need CUSTOMER ACCOUNT DATA

1. Customer account data, including the caller's name and billing address, is maintained by their U.S. cellular carrier.
2. Contact the U.S. Cellular Carrier directly and follow existing SOPs.

Example Use Case: Robert Johnson, a U.S. citizen who is using a U.S. carrier cell phone from Verizon and is traveling in Michigan near the international border. He dials 9-1-1 to report that he is having chest pains

²¹ There are several providers of reverse look up, including (for example only) <http://www.411.com/phone>. You can enter the full phone number and the system will identify the wireless carrier in both the U.S. and in Canada. Note that this information may be incorrect if the caller has transferred their wireless phone number to a different wireless carrier. However, it will provide a starting point.

and is stopping his car on the side of the road. Because Mr. Johnson's phone has roamed onto the Canadian Telus cellular network, his call will be routed to a Canadian PSAP. The Canadian PSAP receives the call and determines that Johnson's location is in the United States. They confirm his cellular call back number and then transfer the call to the Michigan State Police PSAP. The call is transferred from the Canadian 9-1-1 network to a 10-digit emergency line at the Michigan State Police PSAP.

There is no ANI or ALI information available with the call transfer. The cellular connection was spotty and the call was dropped during the transfer. There is no answer on the call back. The Canadian PSAP only knows that the caller was near Riverview on Highway 85. The 9-1-1 screen in the Canadian PSAP displayed his U.S. phone number and that TELUS cellular delivered the call. The identity of Mr. Johnson's U.S. "home" cellular carrier (Verizon) is unknown. Only Phase 1²² location data was delivered with the 9-1-1 call to the Canadian PSAP. The Michigan State Police PSAP requests that the Canadian PSAP contact TELUS to provide updated location information on Mr. Johnson's cell phone. They also request that TELUS identify which U.S. carrier manages Mr. Johnson's cell number. The Michigan State Police receive updated location data and also learn that Verizon is the U.S. carrier. They then contact Verizon to obtain customer account information, including Mr. Johnson's billing address. Officers are then dispatched to Mr. Johnson's address to obtain additional information.

C) Call from a Third Party Reporting a Credible Emergency Incident

A Canadian citizen who uses a Canadian carrier cell phone is in the U.S. and is in immediate distress. A third-party caller reports the emergency to a U.S. PSAP²³ or the call is received by a Canadian PSAP and relayed to the U.S. PSAP. The PSAP has no contact with the person in distress (they do not answer their cell phone or agency policy prevents a call to the cell phone). No 9-1-1 call has been placed by the person in distress. The U.S. PSAP needs additional information in order to generate an emergency response.

C1: Follow PSAP Call Processing Procedure

1. Follow internal PSAP call processing procedures.

C2: Determine IDENTITY OF WIRELESS CARRIER

1. Ask the third-party caller for the cellular phone number of the person in distress.
2. Ask the third-party caller if they know which Canadian cellular carrier the person in distress uses.
3. If unable to determine who the home carrier is, contact your partner Canadian PSAP and ask them to contact any Canadian wireless carrier 9-1-1 Help Desk to determine which Canadian carrier is associated with the cell phone number of the person in distress²⁴.

²² Phase 1 location data provides the street address and coordinates of the cellular tower that processed the 9-1-1 call. Phase 1 location does not include GPS or network data that would identify the location of the cell phone.

²³ The third-party reporter of this emergency may be in Canada and may have dialed 9-1-1 and reached a Canadian PSAP, which would transfer the 9-1-1 call or relay the call information.

²⁴ There are also several providers of reverse look up available on the internet, including (for example only) <http://www.411.com/phone>. Note that this information may be incorrect if the caller has transferred their wireless phone number to a different wireless carrier.

4. Have your Canadian PSAP partner then contact the Canadian Wireless carrier used by the person in distress to determine which U.S. Cellular network their customer will roam to.

C3: If you need LOCATION DATA

1. Location data resides on the U.S. carrier network because the person in distress has roamed into the U.S. coverage area.
2. Using information obtained in Step C2, #4 above, contact the U.S. carrier to obtain location information on this roaming phone. Convey the following information to the U.S. carrier:
 - a. This is an emergency incident involving a Canadian phone that has roamed onto their network.
 - b. No 9-1-1 call has been placed from this phone, so you are requesting cell tower location data.
 - c. You have been advised that the cell tower location data will not be in the 9-1-1 network but may instead be tracked in a different database. Each carrier has different names for these databases, which include the "Visitor Location Registry (VLR) database."
3. These requests are typically handed by the wireless carrier's corporate security department. The wireless carrier's 9-1-1 Help Desk should be able to connect the PSAP to the correct department.
4. The wireless carrier should be able to determine which tower the cellular phone is currently connected to and the approximate coordinates.
5. You should follow up with a written request (email or FAX) to the cellular carrier documenting that the information was needed for an emergency call.

C4: If you need CUSTOMER ACCOUNT DATA

1. Customer account data, including the name and billing address, is maintained by the Canadian cellular carrier.
2. Contact your Canadian PSAP partner and request that they obtain this information for you. Provide the name of the Canadian cellular company who provides service to the involved cell phone.
3. Follow up your request with an NLETS/CPIC message, email, or FAX to the Canadian PSAP to document your request. Include a statement that this information is needed to aid an emergency response.
4. The Canadian PSAP will follow their internal process to obtain this information.
5. If a response is needed to the customer's home, the Canadian PSAP may be able to help identify the law enforcement agency for the customer account address given by the wireless carrier.

Example Use Case: Robert Johnson is a Canadian citizen who is using a cell phone on the Rogers Canadian carrier network. He is traveling from Saint Stephen, New Brunswick, into Maine and stops his car because he is having chest pains. He calls his wife and asks her what to do, noting he is near the town of Beddington on Highway 9. She notices that he is having trouble breathing and the connection to his cell phone is dropped. She tries to call him back and there is no answer. The wife dials 9-1-1 and reaches a Canadian PSAP. The wife provides a description of her husband's vehicle and his cellular phone number and the location information he provided. She also provides the name of the cellular company they use (Rogers).

The Canadian PSAP dials the husband's cell phone but there is no answer. The Canadian PSAP contacts the Bangor, Maine, PSAP and reports the emergency. Staff at the Bangor 9-1-1 Center also try to contact Mr. Johnson on his cell phone, but the call goes to voicemail. The Canadian PSAP contacts Mr. Johnson's wireless carrier (Rogers) and determines that his call would likely roam onto the T-Mobile network in that portion of Maine. This information is relayed to the PSAP in Bangor. They contact T-Mobile to request cell tower coordinates for Mr. Johnson's cell phone. Using coordinates provided by T-Mobile and the description of the vehicle provided by the wife, units are dispatched and locate Mr. Johnson 2 miles east of Beddington.

D) Request for Criminal Investigative Assistance

Assistance is needed in support of a criminal investigative case that does not involve an immediate threat to life or property or other emergency condition.²⁵ Requests for cellular account information and location information from a Canadian wireless provider to support a criminal case investigation are handled differently than an emergency request for data involving an immediate threat to life and property and must follow specific rules for international data sharing.

1. A PSAP should never use the emergency process described in this report to request cellular account or location data to aid a public safety agency conducting a routine investigation.
2. The law enforcement agency needing cellular location and account data that resides in another country should follow their internal procedure to acquire this information.²⁶
3. Wireless carriers in all countries must comply with the specific legal framework for their country before data can be released.

6. Recommendations for Canadian PSAPS

A) Roaming 911 Caller Routed to Visiting Country PSAP

A U.S. caller using a U.S. carrier cell phone has traveled into Canada and roamed onto a Canadian wireless carrier network. The caller dials 9-1-1 reporting an emergency in Canada and reaches a Canadian PSAP. The Canadian PSAP needs additional information in order to generate an emergency response.

A1: Follow PSAP Call Processing Procedure

1. Follow internal PSAP call processing procedures

A2: Determine IDENTITY OF WIRELESS CARRIER

1. Verify call back number of cellular phone number that is displayed on the 9-1-1 screen.
2. Ask the caller who their U.S. cellular carrier is.

²⁵ If an internal request is received that involves immediate danger to a person, the PSAP may use this policy to get the requested information from the cellular carrier. This may include cases involving imminent domestic violence, verified intelligence reports that a suspect is about to commit violence, etc.

²⁶ In many cases, assistance with these requests can be obtained from the regional FBI office.

3. If unable to determine who the carrier is (and if this information is needed), call the Canadian wireless carrier who delivered the 9-1-1 call to your PSAP. They will be able to assist you in determining which U.S. carrier is associated with the cell phone. While this data can be unreliable, it can provide a starting point for additional research.

A3: If you need LOCATION DATA

1. The 9-1-1 ALI screen should identify the Canadian carrier who delivered the 9-1-1 call to the PSAP.
2. The 9-1-1 screen should display location data for this call.

If location data is not displayed (e.g., this is a Wireless Phase 1 call) contact the Canadian carrier to request 9-1-1 Location Data, notifying them that the caller has roamed onto their network. Location data may be stored in different databases based on the unique circumstances of each call. Each carrier may have a different name for these databases, which include the “Visitor Location Registry database” and the “9-1-1 System Log File.”

A4: If you need CUSTOMER ACCOUNT INFORMATION

1. Customer account information, including the name and billing address, is maintained by the caller’s U.S. cellular “home” carrier.
2. If you do not know the identity of the caller’s U.S. carrier, contact the Canadian carrier who delivered the 9-1-1 call to your PSAP and request their assistance in determining this information. You may also contact your U.S. partner PSAP to request assistance if the Canadian carrier cannot help you.
3. Once you know the identity of the U.S. wireless carrier, contact your U.S. PSAP partner and request that they obtain this information for you.
 - a. Provide the cellular phone number of the calling party.
 - b. Provide the name of the U.S. cellular company who provides service to the involved cell phone.
4. Follow up your request with an CPIC²⁷ message, email, or FAX to the U.S. partner PSAP to document your request. You should include a statement that this information is needed to aid an emergency response.
5. The U.S. PSAP will follow their internal process to obtain the customer account information and will call you back with the results.
6. If a response is needed to the customer’s home, the U.S. PSAP may be able to help identify the law enforcement agency for the customer account address given by the wireless carrier.

Example Use Case: Adam Johnson, a U.S. citizen using a U.S. carrier cell phone on the AT&T network is traveling through Canada after just leaving the state of Washington. He dials 9-1-1 to report that he is having chest pains and is stopping his car on the side of the road. Because Mr. Johnson has roamed onto the Rogers cellular network in Canada, the 9-1-1 screen in the Vancouver, B.C. PSAP will display Rogers as the carrier who delivered the call. The 9-1-1 screen will not display Mr. Johnson’s contracted carrier, AT&T. The PSAP call taker asks Mr. Johnson to confirm his location. He states he is on Highway 99 heading to a friend’s house but is unsure of the name of the street he is on. He verifies his cellular call back number.

²⁷ The Canadian Police Information Center (CPIC) is the Canadian equivalent of the NCIC/NLETS system in the U.S.

The 9-1-1 Location Data only verifies for a Phase 1²⁸ tower location near Granville Island. The connection is poor and the call is dropped. There is no answer on the call back to Mr. Johnson's cell phone.

In this specific example, location data for Mr. Johnson's phone will be in the 9-1-1 location database of Rogers Cellular (e.g., the Canadian carrier that delivered the call to the PSAP). The Canadian PSAP may also need to contact someone at Mr. Johnson's home in the U.S. in order to determine the make, model, and color of his vehicle and the destination to which he was traveling. Customer account data for Mr. Johnson will only be available from his cellular carrier. The Canadian PSAP would contact Rogers Cellular and ask them to help identify the U.S. carrier who manages this cell phone number. The Canadian PSAP would then contact their partner PSAP in the U.S. and ask them to obtain this information from Mr. Johnson's wireless carrier (AT&T). The U.S. PSAP could also provide assistance in determining which law enforcement agency had jurisdiction at Mr. Johnson's home address and help the Canadian PSAP contact that agency. The Canadian PSAP could then request that the local U.S. police department send an officer to Mr. Johnson's home to obtain additional information.

B) Local Caller Mis-Routed to Other Country PSAP

A Canadian caller using a Canadian carrier cell phone is traveling in Canada near the border and dials 9-1-1 to report an emergency in Canada. Their wireless phone has roamed onto a U.S. carrier network and the call is delivered to a U.S. PSAP. The call is transferred (or relayed) by the U.S. PSAP to the Canadian PSAP to generate a response. The Canadian PSAP receiving the transferred call does not receive any ANI/ALI data. The Canadian PSAP needs additional information in order to locate the caller.

B1: Follow PSAP Call Processing Procedure

1. Follow internal PSAP call processing procedures.

B2: Determine IDENTITY OF WIRELESS CARRIER

1. Obtain call back number of cellular phone used by caller.
2. Ask the caller who their Canadian cellular carrier is.
3. Obtain the name of the U.S. wireless carrier who processed the 9-1-1 call. The 9-1-1 screen at the U.S. PSAP receiving this call should display the name of the U.S. wireless carrier that received and processed the call. The U.S. wireless carrier should be able to help identify the Canadian carrier associated with the cellular phone number.
4. If unable to determine the identity of the Canadian carrier, call any Canadian Carrier 9-1-1 Help Desk for assistance. The U.S. PSAP who received the roaming call may also be able to contact the U.S. wireless carrier who processed the 9-1-1 call and ask them for assistance in identifying the Canadian carrier assigned to the cell phone.

B3. If you need LOCATION DATA

²⁸ Phase 1 location data provides the street address and coordinates of the cellular tower that processed the 911 call. Phase 1 location does not include GPS or network data that would identify the location of the cell phone.

1. The cellular location data resides on the U.S. carrier network, because the 9-1-1 caller's phone is connected to their network. The Canadian cellular company that provides service to the caller will not have location data (the call was not processed on their network).
2. The U.S. PSAP who received the 9-1-1 call should be able to get location data for you.
 - a. Location data may have been provided when the 9-1-1 call was answered at the U.S. PSAP.
 - b. The U.S. PSAP may need to call the U.S. carrier who processed the call to obtain location data. It is important that they state that this was a roaming call and that the location data may be in a different database. Each carrier may call these databases something different, but they functionally involve the "Visiting Location Registry (VLR) database" and their "911 log file."
 - c. If the caller is near the border, it's possible that their cell phone may revert back to their home Canadian cellular network. In this case, location data may be available on both carriers' networks. If the caller is mobile, the time stamp on the location data should indicate which coordinates are the most recent.
3. Follow up your request with an NLETS/CPIC message, email, or FAX to the U.S. PSAP to document your request. You should include a statement that this information is needed to aid an emergency response.

B4. If you need CUSTOMER ACCOUNT DATA

1. Customer account data, including the caller's name and billing address, is maintained by their Canadian cellular carrier.
2. Contact the Canadian cellular carrier directly and follow existing SOPs.
3. A Humanitarian Letter may be needed to support your request.

Example Use Case: Bob Hogan, a Canadian citizen who is using a Canadian carrier cell phone from Bell Canada is traveling in Windsor, Ontario, near the international border. He dials 9-1-1 to report that he is having chest pains and is stopping his car on the side of the road. Because Mr. Hogan's cell phone has roamed onto the U.S. Verizon cellular network, his call will be routed to a U.S. PSAP, arriving at the Michigan State Police PSAP. The U.S. PSAP receives the call and determines that Mr. Hogan's location is in Canada. They confirm his cellular call back number and then transfer the call to the Windsor, Ontario PSAP. The call is transferred from the U.S. 9-1-1 network to a 10-digit emergency line at the Windsor PSAP. There is no ANI or ALI information available with the call transfer. The cellular connection was spotty, and the call was dropped during the transfer.

There is no answer on the call back. The U.S. PSAP only knows that the caller is in Canada near the Ambassador Bridge. The 9-1-1 screen in the U.S. PSAP displayed his Canadian cell phone number and that Verizon cellular delivered the call. The identity of Mr. Hogan's Canadian "home" cellular carrier (Bell Canada) is unknown at this point. Only Phase 1²⁹ location data was delivered with the 9-1-1 call to the Canadian PSAP. The Windsor PSAP requests that the Michigan State Police PSAP contact Verizon to provide updated location information on Mr. Hogan's cell phone. They also request that Verizon identify which

²⁹ Phase 1 location data provides the street address and coordinates of the cellular tower that processed the 9-1-1 call. Phase 1 location does not include GPS or network data that would identify the location of the cell phone.

Canadian carrier manages Mr. Hogan's cell phone number. The Windsor PSAP receives updated location data and also learns that Bell Canada is the Canadian carrier. They then contact Bell Canada to obtain customer account information, including Mr. Hogan's billing address. Officers are then dispatched to Mr. Hogan's address to obtain additional information from relatives or co-workers.

C) Call from a Third Party Reporting a Credible Emergency Incident

A U.S. citizen who uses a U.S. carrier cell phone is in Canada and is in immediate distress. A third-party caller reports the emergency to a Canadian PSAP³⁰ (or the call is received by a U.S. PSAP and relayed to the Canadian PSAP). The PSAP has no contact with the person in distress (they do not answer their cell phone or agency policy prevents a call to the cell phone). No 911 call has been placed by the person in distress. The Canadian PSAP needs additional information in order to generate an emergency response.

C1: Follow PSAP Call Processing Procedure

1. Follow internal PSAP call processing procedures.

C2: Determine IDENTITY OF WIRELESS CARRIER

1. Ask the third-party caller for the cellular phone number of the person in distress.
2. Ask the third-party caller if they know which U.S. cellular carrier the person in distress uses.
3. If unable to determine who the home carrier is, contact your partner U.S. PSAP and ask them to contact any U.S. wireless carrier 9-1-1 Help Desk to determine which U.S. carrier is associated with the cell phone number of the person in distress.
4. Have your U.S. PSAP partner then contact the U.S. wireless carrier used by the person in distress to determine which Canadian cellular network their customer will roam to.

C3: If you need LOCATION DATA

1. Location data resides on the Canadian carrier network because the person in distress has roamed into the Canada coverage area.
2. Using information obtained in Step C2, #4 above, contact the Canadian carrier to obtain location information on this roaming phone. Convey the following information to the Canadian carrier:
 - a. This is an emergency incident involving a U.S. cell phone that has roamed onto their network.
 - b. No 9-1-1 call has been placed from this phone, so you are requesting cell tower location data.
 - c. You have been advised that the cell tower location data will not be in the 9-1-1 network but is likely in a different database which may be called the Visitor Location Registry (VLR) database. Each carrier has a different name for these databases.
 - d. These requests are typically handed by the wireless carrier's corporate security department. The wireless carrier's 9-1-1 Help Desk should be able to connect the PSAP to the correct department.

³⁰ The third-party reporter of this emergency may be in the U.S. and may have dialed 9-1-1 and reached a U.S. PSAP which would transfer the 9-1-1 call to Canada or relay the call information to the Canadian PSAP.

- e. The wireless carrier should be able to determine which tower the cellular phone is currently connected to and the approximate coordinates.
- f. You should follow up with a written request (email or FAX) to the cellular carrier documenting that this information was needed for an emergency call.
- g. A Humanitarian Letter may be needed to support your request.

C4: If you need CUSTOMER ACCOUNT DATA

1. Customer account data, including the name and billing address, is maintained by the U.S. cellular carrier which has the contract with the person in distress.
2. Contact your U.S. PSAP partner and request that they obtain this information for you. Provide the name of the U.S. cellular company who provides service to the involved cell phone.
3. Follow up your request with an NLETS/CPIC message, email, or FAX to the U.S. PSAP to document your request. Include a statement that this information is needed to aid an emergency response.
4. The U.S. PSAP will follow their internal process to obtain the needed information.
5. If a response is needed to the customer's home, the U.S. PSAP may be able to help identify the law enforcement agency for the customer account address given by the wireless carrier.

Example Use Case: Jeff Carter is a U.S. citizen who is using a cell phone on the Sprint carrier network. He is traveling into Canada from Maine and stops his car because he is having chest pains. He calls his wife and asks her what to do, noting he is near the town of Saint Stephen on Route 170. She notices that he is having trouble breathing and the connection to his cell phone is dropped. She tries to call him back and there is no answer. The wife dials 9-1-1 and reaches a U.S. PSAP. The wife provides a description of her husband's vehicle and his cellular phone number and the location information he provided. She also provides the name of the cellular company they use (Sprint). The U.S. PSAP dials the husband's cell phone but there is no answer. The U.S. PSAP contacts the RCMP PSAP near Saint Stephen's and reports the emergency.

Staff at the RCMP 9-1-1 Center also try to contact Mr. Carter on his cell phone, but the call goes to voice mail. The U.S. PSAP contacts Mr. Carter's wireless carrier (Sprint) and determines that his call would likely roam onto the TELUS network in that portion of New Brunswick. This information is relayed to the RCMP PSAP in Canada. They contact TELUS to request cell tower location data for Mr. Carter's cell phone. Using coordinates provided by TELUS and the description of the vehicle provided by the wife, units are dispatched and locate Mr. Carter on Highway 170 near the Saint Stephen airport.

D) Request for Criminal Investigative Assistance

Assistance is needed in support of a criminal investigative case that does not involve an immediate threat to life or property or other emergency condition.³¹ Requests for cellular account information and location information from a U.S. wireless provider to support a criminal case investigation are handled differently than an emergency request for data involving an immediate threat to life and property and must follow specific rules for international data sharing.

1. A PSAP should never use the emergency process described in this report to request cellular account or location data to aid a public safety agency conducting a routine investigation.
2. The law enforcement agency needing cellular location and account data that resides in another country should follow their internal procedure to acquire this information.³²
3. Wireless carriers in all countries must comply with the specific legal framework for their country before data can be released.

³¹ If an internal request is received that involves immediate danger to a person, the PSAP may use this policy to get the requested information from the cellular carrier. This may include cases involving imminent domestic violence, verified intelligence reports that a suspect is about to commit violence, etc.

³² In many cases, assistance with these requests can be obtained from the regional RCMP office.