

Phase 8:

# Potential Related Services

VRS Feasibility Study

Mission Consulting

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# POTENTIAL RELATED SERVICES

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## EXECUTIVE SUMMARY

### 1. Overview

This report represents the findings of the eighth of twelve phases of a study commissioned by Bell Canada (Bell). The feasibility study was commissioned by Bell as part of a deferral account proposal. The objective of the feasibility study is to provide information to facilitate informed decisions regarding potential regulations and implementation of Canadian video relay service (VRS). Bell engaged Mission Consulting to conduct an independent and comprehensive study of the feasibility of VRS for Canada. The final feasibility report will draw, in part, on information contained in this research summary.

This Phase 8 research summary, *Potential Related Services*, provides an abstract of several key potential VRS related service enhancements, including:

- ☑ Video Relay Interpreting (VRI)
- ☑ Video voice mail and related message answering services and associated issues
- ☑ Non-ASL and non-LSQ forms of video communication
- ☑ The ability to select specialized vocabulary interpreters, or interpreters with preferred characteristics
- ☑ French-ASL and English-LSQ video translation service
- ☑ Integration or interface with emergency services

### 2. Summary Findings

The potential related services of this research phase are presented in a summary analysis rather than in detail. Salient points of this analysis include the following:

Initial service offering should consider the basic functionality of the service, service evolution (product lifecycle management) and the governance model related to its evolution and the costs associate to launch or modify features in the market place should VRS be offered in Canada. Regulation or policy decisions will need to be considered.

Feature rich VRS will have to be balanced against user demand, ease of use and cost. The CRTC may have to determine what problems VRS is intended to solve or equal.

#### Video Remote Interpreting (VRI):

- VRI has the potential to make interpreting available for many ad hoc, short duration, or remote interpreting needs.
- VRI may significantly impact the availability of interpreters for VRS and community interpreting, particularly if it is a subsidized function of VRS.
- There are no technical barriers to implementing VRI as a part of VRS.
- There are no regulatory precedents that would indicate that VRI should be considered or allowed as a part of subsidized VRS.
- If VRI is not included within VRS, it will require considerable VRS oversight to ensure that VRI is not being included within VRS billing.

#### Video Voice Mail:

- Video voice mail is a common feature offered by most VRS vendors.
- Video voice mail should not be difficult or expensive to provide.
- A precedent for video voice mail has been established with an equivalent function within IP Relay.
- Video mail does not represent a potential for misuse or fraud, and should require little or no administrative oversight.

#### Non-ASL and non-LSQ forms of Video Communication:

- There are no technical barriers to including Non-ASL and non-LSQ forms of video communication within VRS.
- The inclusion or exclusion of these forms of communities can be quite controversial, with stakeholder communities holding divergent views.
- The predominant consideration for offering these services is that they will allow many late deafened people who do not know ASL or LSQ to potentially communicate using alternative visual modalities.
- The predominant consideration against offering these services is that they will take additional funding and interpreter resources, which may be scarce.
- There are no CRTC rulings indicating that these services would be allowed or denied.

#### The Ability to Select Specialized Interpreters:

- There is no technical barrier to designing VRS to allow consumers to request specialized interpreters.
- This feature may have limited application or may require significant delays in fulfilling such requests if there is a shortage of interpreters.

- Costs to implement the service would be minimal, except that additional interpreter training may be needed.
- There are at present no CRTC rulings that would preclude this feature from being offered within VRS.
- The level of effort for effective oversight of this feature can vary depending upon the VRS model chosen.

#### French-ASL and English-LSQ Video Translation:

- Translation is not a part of Canadian TTY relay or IP Relay, and there are no CRTC rulings addressing it.
- Some multi-lingual countries offer limited translation services within their VRS.
- The ability to provide translation services with VRS may be difficult to achieve due to lack of multi-lingual interpreters or because multiple interpreters may need to be involved in a single conversation.
- Including translation within VRS may represent a significant opportunity for misuse and fraud, and may require significant administrative oversight.

#### Integration or interface of VRS with Emergency Services:

- TTY relay and IP Relay are required to relay emergency calls to 9-1-1 centers (PSAPs) throughout Canada. It is a manual process that does not include automatic identification of the caller's phone number or address.
- It is reasonable to expect the CRTC to also require VRS to similarly relay emergency calls to PSAPs.
- The design and implementation of the integration between VRS and PSAPs can be very simple and inexpensive, with limited functionality; or can be very complex and expensive, with more automated functionality.
- Measuring the effectiveness of VRS to PSAP communications will require cooperation between the VRS vendor(s), the VRS oversight authority, telephone companies, the PSAP authorities, and the VRS consumers.
- The complexity of the oversight will be directly related to the complexity of the solution.

### **3. Conclusion**

All of the potential VRS service optional features discussed in this phase are possible:

- Video Relay Interpreting (VRI)
- Video voice mail and related message answering services, e.g., call notification
- Non-ASL and non-LSQ forms of video communication

- The ability to select specialized vocabulary interpreters, or interpreters with preferred characteristics
- French-ASL and English-LSQ video translation service
- Integration or interface with emergency services

Several of these features are easy to implement, while others may be significantly problematic. Some challenges are technical while others are operational, and others are dependent upon policy considerations. The implementation of VRS need not be delayed until all issues of these features are resolved.

# POTENTIAL RELATED SERVICES

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## RESEARCH SUMMARY

### 1. The VRS Feasibility Study

This report represents the findings of the eighth of twelve phases of a study commissioned by Bell Canada (Bell). The feasibility study was commissioned by Bell as part of a deferral account proposal. The objective of the feasibility study is to provide information to facilitate informed decisions regarding potential regulations and implementation of Canadian video relay service (VRS). Bell engaged Mission Consulting to conduct an independent and comprehensive study of the feasibility of VRS for Canada. The final feasibility report will draw, in part, on information contained in this research summary.

The twelve phases of the study are as follows:

- Phase 1 Project Confirmation
- Phase 2 Legal Background for Canadian VRS
- Phase 3 Consumer Interests and Perspectives
- Phase 4 VRS Models in Other Countries
- Phase 5 Technologies and their Forecasts
- Phase 6 Interpreter Considerations
- Phase 7 Quality of Service
- Phase 8 Potential Related Services
- Phase 9 Forecasts of VRS User Demand
- Phase 10 VRS Cost Variables and Forecasts
- Phase 11 Potential Canadian VRS Models
- Phase 12 VRS Feasibility Study Report

This Phase 8 research summary, *Potential Related Services*, provides an abstract of several key potential VRS related service enhancements, including:

- Video Relay Interpreting (VRI)
- Video voice mail and related message answering services and associated issues
- Non-ASL and non-LSQ forms of video communication
- The ability to select specialized vocabulary interpreters, or interpreters with preferred characteristics
- French-ASL and English-LSQ video translation service
- Integration or interface with emergency services

## 2. Video Remote Interpreting (VRI)

### 2.1. The Application of VRI to VRS

Video Remote Interpreting (VRI, also known as Video Relay Interpreting) is a form of Video Relay Service in which a remote interpreter is used to provide interpreting services between two or more individuals who are together in the same room or venue. The individuals needing the interpreting services can be in any type of location – a government, medical, or private office, a school, or even a home. For example, if two co-workers, one Deaf and one hearing, need to hold a conversation but no interpreter is available in their office, a VRI “call” could be made. The two co-workers would connect to a remote interpreter via a high speed Internet connection using a videophone device capable of both voice and video. The Interpreter would translate the Deaf employee’s sign language for the hearing employee, and visa versa.

Video Remote Interpreting can be used in both scheduled and unscheduled (on-demand) applications. For example, VRI would be considered unscheduled when is used at a reception desk, when a Deaf guest needs to communicate with a hearing receptionist or employee. With a videophone device at the reception desk, the users can contact a remote interpreter who can provide live interpreting services. Hospitals, schools, and government offices are all areas in which VRI is used for interpreting when there has not been sufficient advance time to schedule on-site interpreters. VRI is also useful for ad-hoc or brief conversations which would be too short in duration to schedule an on-site interpreter.

VRI may be considered by some to be a form of Community Interpreting in certain situations, as when local interpreters are not available to be physically present to provide interpreting services, such as in a remote rural area, but can be available via the Internet from a distant location.

Many VRI providers and users stress that a VRI interpreter is not a replacement for in-person interpreting services, but that VRI can serve as a substitute when an on-site interpreter cannot be arranged.

### 2.2. Cost and Capability to Provide VRI

The equipment to access a remote interpreter using VRI is exactly the same as that which is needed to place a VRS call but with a microphone and speaker. The users requiring the interpreting service must have a high speed Internet-connected videophone device, which can be either a standalone videophone, or a computer or mobile device with a web cam, microphone and speaker.<sup>1</sup> At the service provider’s site, the equipment and services to enable VRI are identical to that required of VRS. The hardware and software cost to the VRI consumers and to the VRI providers would be identical to that of VRS. If VRI services were made available to Canadians as a function of VRS, in theory no special equipment or

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<sup>1</sup> Or a separate telephone line and speakerphone can be used to provide the voice connection and audio. See this study’s phase 5, *Technologies and Their Forecasts*, for a more in-depth discussion of the required technologies.

operational barriers or costs, other than to support the demand for handling the additional volume of VRI calls, would be necessary.<sup>2</sup>

### 2.3. Congruity of VRI with MRS Regulations

Some countries have VRS regulations that allow vendors to provide both VRS and VRI services from one (or more) call centers. In France, for example, Viable France provides both VRS and VRI services, as well as sells and distributes proprietary videophone products for use with both services.<sup>3</sup>

Other countries, however, have regulations that preclude VRI within the government subsidized models of VRS. For example, in the United States all forms of relay service paid under the authority of the federal government are required to be “functionally equivalent” to a telephone call; that is, between two parties at different locations. Therefore VRI is not authorized by the FCC for reimbursement from the national Telecommunications Relay Service (TRS) fund. To the extent that it is provided by VRS providers in the United States, it is offered to users on a for-profit, fee basis.

However, functional equivalency is not an established legal basis for MRS in Canada as it is in the United States, and the CRTC has not yet established precedents against the potential provisioning of video relay services to two users at the same location.

In Canada, VRI services are already being provided by some business entities and advocacy groups such as the Canadian Hearing Society. Since VRS (and VRI) have not yet been mandated or regulated by the CTRC, these current VRI services are functioning outside of the present scope of MRS regulations.

### 2.4. Potential Impact of VRI on Interpreting Services

As long as VRI is paid for by consumers or businesses, instead of at free or deeply discounted rates reimbursed as a MRS funded offering, VRI should not materially change the demand for, or availability of, community interpreters. In this case VRI would be forced to compete for community interpreting services, which often provide a superior quality of service. In this scenario, VRI would usually only be more competitive with community interpreting services when any of the following conditions occur:

1. The need for interpreting cannot be scheduled in advance and the need is imminent.
2. The interpreting session is expected to be very brief.
3. The location where interpreting is needed is at a significant distance from the location of available interpreters.
4. Local interpreters do not have a special skill set, e.g., vocabulary, needed by the parties.

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<sup>2</sup> The potential additional costs to accommodate VRI calls within any Canadian VRS model will be reviewed in this study's phase 10, *Cost Variables and Forecasts*.

<sup>3</sup> <http://www.viable.fr/>

However if VRI is paid for as a part of VRS, its use could impact the interpreting services business and the availability of community interpreters. The above VRI situations would result in a much higher frequency of VRI services versus on-site community interpreting for the same situation. This use of VRI may not significantly reduce the user demand for community interpreting, but would require more interpreters to meet the combined needs of VRI, VRS, and community interpreting. The largest competitive impact of VRI upon community interpreting will be in the normal settings of community interpreting, in which the present fee-based on-site interpreting would need to compete with government subsidized VRI services. Also hearing users may consider VRI services to be not only cheaper, but also more convenient, even though the Deaf user may consider the quality of VRI to be inferior to that of on-site in-person community interpreting. The hearing community would need to be educated as to the drawbacks of VRI compared to community interpreting; but even so, the low cost (or free) service and the convenience of simply calling in when needed, may cause VRI to be frequently selected over community interpreting.<sup>4</sup>

## 2.5. Administrative Oversight of VRI

If VRI were included within Canadian VRS, the requirements and demands for its administrative oversight would be the same as for VRS. If VRI were not included within VRS, some additional oversight would be needed to avoid misuse of VRS. Examples of misuse might be users calling VRS for conducting VRI calls with or without the knowledge of the VRS provider, or VRS providers that incorporate their cost of VRI calls into the reimbursement practices of its VRS operations.

The experience in the United States is that it can be problematic to define VRI (compared to VRS) for all situations. For example while two people in the same room are clearly VRI, would it be VRI or VRS if they were in two adjacent rooms, or perhaps in two adjacent work cubicles? Is the separation of the parties simply to create a VRS environment? Would it have occurred if interpreting were not needed or if an on-site interpreter were available? If the two parties are in a large building or campus in which communication between parties is usually by phone, would registered users with the same address be precluded from using VRS because the system might have indexed the users to be at the same location, i.e., address, and thereby classified the call as VRI? These are some of the administrative challenges of separating VRI from VRS. In the United States it has been found that while regulations may make some of these situations partially clear, ultimately it is up to the users and the vendors to not abuse the rules, either unknowingly or purposefully. While the United States federal government has the ability to enforce its regulations via withholding of payment, financial penalties and even incarceration, it has almost no administrative tools or ability to monitor compliance or abuse in a manner that ensures effective ongoing oversight regarding VRI.

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<sup>4</sup> VRI users would also avoid the common practice of charging for a minimum time period, such as one or two hours, that is common with community interpreting.

### 3. Video Mail and Related Message Answering Services

#### 3.1. The Application of Video Mail to VRS

Voice mail systems for telephone hearing users typically allow the mail box holder to receive and listen to stored messages. The hearing person listens to computerized or pre-recorded voice prompts, and navigates through “menus” choices, selecting options by either entering digits or in some cases by speaking simple words recognized by the system. These voice mail systems are prevalent in many organizations, and are used when retrieving voice mail from cellular provider services and even remotely accessed home answering machines. However, these voice retrieval systems are not suited to Deaf users, and are significantly difficult to use through any form of MRS, including VRS.<sup>5</sup>

Therefore, most VRS providers now offer a video mail messaging option. If a VRS center places a call to a Deaf individual and the individual is not available, the VRS interpreter can leave a signed message on behalf of the hearing caller.<sup>6</sup> Because Video Mail is commonly used in other countries’ VRS systems, many Canadian consumers may consider it as a necessary component of VRS. Some VRS providers offer users the ability to create a profile and sign on to the VRS provider’s web site, and thus access their video mail from anywhere they can sign in. This type of service is especially valuable to users in households with multiple Deaf individuals, users who travel frequently, individuals who access VRS services through community locations (e.g., kiosks or libraries), or who wish to check personal messages from work. Retrieval and viewing of video mail does not involve interpreter interaction or time.

Video mail can also be supplemented by the same type of message alerts that are available for incoming VRS message alerts.<sup>7</sup> These include flashers, notification devices, pagers, etcetera. Pager or cell phone notification systems are also commonly offered by VRS providers. This is the ability to send a notification to a pager or cell phone when an incoming VRS call is being received, or when a new VRS Video Mail message has been left. The pager or cell phone and associated cellular service, of course, are not provided by the VRS provider. Many VRS providers also allow the users to configure an email or Instant Message to be sent for the same purposes, and can be received on multiple devices.

Another common utility often included in VRS provider software is an address book or other means of storing contact information and numbers. When receiving notification of a video message from someone entered in a user’s personal VRS address book, the name of the calling party may also be displayed.

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<sup>5</sup> It is difficult for the interpreter and Deaf user to transfer information quickly enough over relay to be able to respond to the prompts before the system “times out”.

<sup>6</sup> This feature can also be available through VRS providers in point-to-point video calls without a relay interpreter, in which case the signed video message is left by the caller. Such messaging is not a function of relay, but is an ancillary service of VRS providers in point-to-point video calls.

<sup>7</sup> See this study’s phase 5, *Technologies and Their Forecasts*.

### 3.2. Cost and Capability to Provide Video Mail

Since most VRS vendors already offer video mail functionality, there is no anticipated technical barrier to providing video mail through VRS. Vendors typically limit their video mail storage and streaming costs by limiting the number of messages stored and/or by length of time stored. Likewise no significant additional costs to provide the service are anticipated. Users may incur minor costs to acquire notification devices, but may do so for VRS calls regardless of whether video mail is offered. The degree of user expense for devices for message notification is dependent upon the individual choice of devices and services. Users may experience normal costs associated with network access and usage to retrieve video mail messages. If access to video mail messages is not part of a government funded VRS, then some VRS vendors may elect to charge users to retrieve messages.

### 3.3. Congruity of Video Mail with MRS Regulations

There are no CRTC MRS regulations for including or excluding video mail from potential VRS in Canada. However, IP Relay as adopted in Canada has established an accepted precedent by offering text message storage initiated by the IP Relay operator in a similar manner as would be the case for video mail. For IP Relay messages, the Deaf customer receives a text message on the customer's "Make a call" page on the IP Relay web portal.<sup>8</sup> Since Canadian IP Relay offers message storage and remote retrieval, other than possible cost considerations, CRTC regulations would not appear to restrict a similar video message storage and remote retrieval service.

From a functional viewpoint, video mail offers Deaf users access to the storage and retrieval of messages in an equivalent manner to what is a commonly accepted component of the prevalent voice communication technologies and services afforded to hearing users. In this sense it is congruent with existing IP Relay services and with potential VRS.

### 3.4. Administrative Oversight of Video Mail

Issues associated with the administrative oversight of video mail are similar to that of VRI, except on a much smaller scale. Video mail does not represent a significant potential for misuse or fraud.

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<sup>8</sup> Bell Canada, *Bell IP Relay Service Description*, version 0.93, Q4 2010, page 14.

## 4. Non-ASL and Non-LSQ Forms of Video Communication

### 4.1. The Application of Non-ASL and Non-LSQ Communication to VRS

The history and definitions of the different types of interpreting are described in this study's phase 6 subject, Interpreter Considerations. However a brief description of some of these non-ASL and non-LSQ forms of communication follows as they apply to Potential Related Services.

In general, sign language allows Deaf or speech disabled users to visually communicate without speech or hearing. Formal sign language, whether ASL or LSQ (or another sign language), is a structured, complete language with its own syntax and grammar. In VRS, interpretation occurs between the signed language and a spoken language (such as English or French).

Other forms of sign language besides ASL and LSQ and other methods of translation, however, do exist. There are many non-ASL and non-LSQ forms of communication in use in Canada by various individuals or groups of people. These types of communication, also known as visual or sign supported speech, include signed transliteration, cued speech, lip reading, oral transliteration, finger spelling, etc. These all are methods of translating spoken speech (e.g., English or French) into a non-ASL or non-LSQ visual form. These forms of sign supported speech often require specific training or skill sets in order to be used effectively.

VRS can also be supplemented by other forms of non-LSQ and non-ASL formats within the same VRS screen, such as text (French or English). Text with video can be provided as captioned streaming text, as chat via instant messaging, or as chat software on web based systems.

Likewise VRS can be designed to support audio along with video for consumers who sign and speak but cannot hear (using a voice carryover or VCO feature), or for consumers who sign and can hear but cannot speak (using a hearing carryover or HCO feature). Video can also be a part of a non-VRS relay such as speech-to-speech relay, in which the interpreter's comprehension of the speech disabled user's communication may be greatly facilitated by being able to see the speech disabled person's expressions and movements.<sup>9</sup>

### 4.2. Cost and Capability to Provide Other Visual Communication Services

There are no technical barriers for a VRS provider to offer other forms of visual or sign supported speech, including signed transliteration, cued speech, lip reading, oral transliteration, and finger spelling. None of these modes of communication require any additional technical equipment or systems. However, adding scrolling captioned text within a video session can be technically and operationally complex to provide, although it is offered by some current VRS providers with advance notice and

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<sup>9</sup> Speech-to-speech relay is not presently offered in Canada, and is not a part of this VRS Feasibility Study.

potentially at an additional cost to the user. While chat is easy to provide, it is not congruent with fluid signed communications. Audio with video as either HCO or VCO is also easy for VRS providers to offer.

The demand for certain of these services may be higher in certain provinces or regions, and also may be higher or consistent in certain groups of individuals. For example, late deafened people usually do not know ASL or LSQ, but may have learned to lip read and could use VRS with oral interpreters to read the interpreter's lips. In those countries that allow VRS to offer visual communications in addition to the formal signed language, there are no available statistics of the percentage of demand for these services compared to that of the formal signed language.<sup>10</sup>

Potential VRS providers in other countries have demonstrated that they can provide these types of services if they have staff available that has been properly trained to do so. One advantage of providing these services in a VRS call center is that users may be able to reach specialized interpreters who may not be available in their geographical areas for in-person interpreting.

### 4.3. Congruity of Non-ASL and Non-LSQ with MRS Regulations

The current CRTC documents that discuss VRS define it as a service for people who use sign language, and offer ASL and LSQ as examples of sign language.<sup>11</sup> In this sense the CRTC has not explicitly restricted its description of VRS to ASL and LSQ. It is possible that the CRTC may define VRS to include non-ASL and non-LSQ forms of signed and unsigned communication. It may be noted that the CRTC's description of VRS is lacking detail, including basic definitions of features, functions, capabilities, minimum qualifications, and etcetera. It is understood that the CRTC is requesting information from this study, from its authorized VRS trial, and perhaps from other sources such as consumer advocacy groups, institutes of higher education and others, as part of its normal deliberative processes to determine the nature and scope of VRS for Canada. It should be noted that expectations and opinions among different consumers and their advocacy organizations may differ significantly regarding the appropriateness of including various non-ASL and non-LSQ forms of communication within VRS.<sup>12</sup>

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<sup>10</sup> VRS in France, Germany and Sweden provide some forms of non-signed language communication, sometimes in a restricted offering by time of day or day of the week. See this VRS feasibility study's phase 4 subject, *VRS in Other Countries*.

<sup>11</sup> Paragraph 24 of *Broadcasting and Telecom Regulatory Policy CRTC 2009-430*, at <http://www.crtc.gc.ca/eng/archive/2009/2009-430.htm> states: *Unlike TTY Relay or IP Relay, Video Relay enables communication with a relay operator using sign language. As such, Video Relay provides significant benefit to those persons with hearing and speech disabilities who communicate via sign language (e.g. American Sign Language (ASL) or Langue des signes québécoise (LSQ)).* Also see Appendix 1 of CRTC 2009-430.

<sup>12</sup> Refer to this VRS feasibility study's phase 3, *Consumer Considerations and Perspectives*.

#### 4.4. Administrative Oversight of Other Visual Formats

Including other forms of visual communication within VRS should pose no significant additional administrative burden for oversight of VRS. Definitions of allowable or funded services would need to be developed and such services would need to be sought within any procurement and contract for Canadian VRS. Awarded VRS provider(s) would need to be given the authority to prevent non-allowed communications from occurring over its funded VRS services.

### 5. The Ability to Select Specialized Interpreters

#### 5.1. The Application of Selecting Specialized Interpreters to VRS

The ability to request specialized interpreters is a normal practice in Community interpreting, in which there is an attempt to match a consumer's communication needs and preferences to the abilities of available interpreters. This type of matching is more difficult to achieve in a VRS setting where calls are not scheduled in advance. "Specialized" can encompass a range of skill sets or cultural experiences, such as:<sup>13</sup>

- Specialized vocabulary or experience (such as medical, legal, etc.)
- Regional/cultural knowledge including place names, unique nomenclature or dialects (such as the unique signs of Maritime sign users)
- Gender of the interpreter (e.g., a female consumer can select a female interpreter to voice for her)

VRS can be designed to permit consumer requests for preferences within personal registration profiles, and/or can be offered as options each time a VRS call request is made. Intelligent VRS systems could indicate estimated wait times for certain types of requests and allow the consumer to choose to wait or to take the first available video interpreter who may not have the abilities requested.

#### 5.2. Cost and Capability to Select Specialized Interpreters

The ability of VRS providers to offer consumers the ability to select interpreters that have specialized skills, knowledge or attributes will be highly dependent upon the availability of those interpreters at the time of the VRS call. Some of the knowledge, such as specialized medical or legal vocabulary, or place names, can be learned with additional training. Other knowledge or skills (such as Maritime or Aboriginal signing) may be more difficult to obtain. Therefore the costs to add these services are not related to equipment but are related to interpreter training and background, and the availability of interpreters.

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<sup>13</sup> In the context of potential Canadian VRS, the ability to select ASL or LSQ would be considered basic to the service, and would not be considered a "special offering".

### **5.3. Congruity of Interpreter Selection with MRS Regulations**

Since matching consumer needs with interpreter skills is a normal practice of community interpreting, it may be viewed by consumers as a normal expectation of a fluent interpreting experience, and one that from the consumers' point of view should naturally be accommodated within VRS. There is nothing within CRTC MRS regulations that would preclude this type of service choice. Rather, the constraint will be, to what extent should regulations require this type of choice if it cannot be practically fulfilled due to a lack of trained or certified interpreters with the skill sets required? Should in fact the potential for consumer choice in interpreter skill sets be a regulated or a freely competitive offering, or a blending of the two? What kinds of extra wait times might VRS consumers face, and to what extent might this conflict with regulatory expectations for prompt service? These types of issues will need to be considered. Because conflicting effects of selection may occur, even without a general interpreter shortage there could be significant wait times for certain selected specialties, or they may need to schedule calls in advance to ensure availability of specialized interpreters. VRS users would need to be educated of this, and there would need to be some monitoring to ensure that users do not select or request specialized or higher skilled interpreters unnecessarily.

### **5.4. Administrative Oversight of Specialized Interpreter Selection**

Administratively, the effectiveness of consumer choice of VRS interpreter skill sets and their consequences on overall service parameters, can be measured and reported by the VRS provider(s) to an oversight agency or contracting entity. In this regard oversight should not be burdensome to the agency, but should allow consumers, providers and an oversight body to make informed policy and operational decisions that will facilitate the most responsive VRS possible.

The requirement of choice of offerings can be developed within regulation (social policy regulation), service governance, within solicitations and contracts for services, or if a competitive VRS model is selected it can simply be left to competitive supply and demand.

## **6. French-ASL and English-LSQ Video Translation Service**

### **6.1. The Application of Translation Service to VRS**

Some countries restrict VRS to relayed communication between the native sign language and the native spoken language, e.g., ASL and English, or LSQ and French. Other countries that include more bi-lingual or multi-language native languages, authorize communications between different languages groups

such as ASL and Spanish as long as the relayed communication is between a deaf modality (signed language) and a spoken language.<sup>14</sup>

Since Canada has two official languages the consideration of whether or not to allow cross language translation to be part of the interpreting function of a potential VRS offering will be a significant decision. A consideration against it is that hearing people who speak French are not provided a paid translator if they call an English speaking person or organization. A consideration for it is that ASL and English are already two very different languages, so what is important is that the relayed communication is between a Deaf visual language user and a hearing spoken language user regardless of the actual languages chosen. Ultimately this will be a political policy and cost decision.

## 6.2. Cost and Capability of Translation Services

Even if allowed, the ability to provide VRS translation services will be greatly constrained by the very limited availability of video interpreters who are fluent in combinations of at least three languages and are proficient in simultaneous translation and interpreting between ASL, LSQ, French and English. With the anticipated scarcity of qualified interpreters for ASL to English, and LSQ to French, it is likely that the unavailability of interpreters with the additional necessary cross training and fluency for translation services will simply preclude such translations from being a VRS possibility. Alternatively multiple interpreters could be used on the same call, but at a greater expense to the VRS provider.<sup>15</sup> Use of a third interpreter would slow the call flow and potentially impact the accuracy of the translation.

## 6.3. Congruity of Translation Services with MRS Regulations

TTY relay and IP Relay services throughout Canada are not currently mandated by the CRTC to provide French to English and English to French translation services, and such translations are not advertised to consumers as a component Canadian relay services. Canadian IP Relay does not perform English/French translations. VRS regulations have not yet been developed by the CRTC, but it is doubtful that it would mandate translations since it has not done so for TTY relay and IP Relay. It is possible however that the CRTC might allow translation services within VRS and authorize reimbursement of providers that elect to offer it at regular VRS rates.

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<sup>14</sup> See phase 4 of this VRS feasibility study, *VRS in Other Countries*. VRS in some countries limit the availability of translation between language types to certain days or time of the day.

<sup>15</sup> An example of two interpreters on the same call is provided by the current use of Deaf interpreters serving as the third translator/interpreter, the argument being that the use of a Deaf interpreter will not impact any potential hearing-able interpreter shortage. Canada does not currently certify Deaf interpreters, but there is a process by which Deaf interpreters may become members of AVLIC.

## 6.4. Administrative Oversight of Translation Services

If translation services are allowed, any agency that is responsible for administrative oversight of VRS will need to ensure that the service is not abused as a primary way to achieve live French to English and English to French translations in lieu of relay's primary purpose to facilitate conversations between Deaf users and hearing users. This will especially be the case if oral interpreting (non-ASL and non-LSQ) is provided within VRS. The opportunity for extensive public misuse and vendor fraud is considerable, and not necessarily reportable or easily preventable.<sup>16</sup>

## 7. Integration or Interface of VRS with Emergency Services

### 7.1. The Application of Emergency Services to VRS

Deaf and hard of hearing consumers who use TTY relay services are usually encouraged to directly dial 9-1-1 when they have an emergency. Nevertheless, many TTY users prefer to use relay services to communicate with 9-1-1 Public Safety Answering Points (PSAPs).<sup>17</sup>

Calls relayed to 9-1-1 PSAPs by Canadian TTY relay services do not enter the PSAP via normal 9-1-1 trunks and do not provide their original caller's automatic number identification (ANI) or automatic location information (ALI), which are provided with most voice calls to 9-1-1.<sup>18</sup> Additionally, many PSAPs are not set up to receive TTY calls directly, and TTY users are forced to use their relay service to communicate an emergency with their local PSAP.<sup>19</sup>

The CRTC required Canadian IP Relay service providers to relay emergency calls to PSAPs even though limitations exist.<sup>20</sup> Direct connection and communication to PSAPs using a variety of non-TTY texting services do not exist because of network and PSAP equipment incompatibilities.<sup>21</sup>

The network and PSAP equipment incompatibilities associated with text communications, are also similarly prevalent for video communications. An eventual technical solution called Next Generation 9-1-1 (or NG9-1-1) is not yet in any active planning phase in Canada, and is not anticipated to be an

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<sup>16</sup> The potential for misuse and fraud would also extend to TTY relay and IP Relay if the CRTC approved translation in all forms of relay (and in fact be most significant for IP Relay).

<sup>17</sup> PSAPs are the call centers maintained by local jurisdictions to receive and respond to 9-1-1 calls for emergency assistance.

<sup>18</sup> The delivery and display of ANI and ALI are referred to as "enhanced 9-1-1" or "E9-1-1". 9-1-1 calls without ANI and ALI are referred to as "basic 9-1-1" or "B9-1-1". In addition, some rural or small municipality PSAPs do not have equipment capable of receiving ANI and ALI.

<sup>19</sup> See CRTC 2009-430, paragraph 30, at <http://www.crtc.gc.ca/eng/archive/2009/2009-430.htm>.

<sup>20</sup> Ibid, paragraphs 36 and 37.

<sup>21</sup> See CRTC 2010-224, paragraph 3 at <http://www.crtc.gc.ca/eng/archive/2010/2010-224.htm>.

implemented solution in the foreseeable future. If PSAPs were able to directly take video 9-1-1 calls, they would need trained PSAP operators who could sign ASL and/or LSQ. This would put a very significant demand upon available interpreter resources, to the significant detriment of community and VRS interpreting.

The Canadian Telus VRS trial does not permit relaying of emergency calls to PSAPs. Other countries have a variety of integration or interface policies regarding VRS and 9-1-1. For example in the U.S., the FCC has mandated that all VRS consumers register their location with their preferred VRS provider. With registration they receive a 10-digit telephone number which is used by all VRS providers to facilitate a database lookup in order permit the VRS provider to connect with and relay the call with the VRS user's primary PSAP.<sup>22</sup> VRS providers that allow consumers to request emergency services will need to have a means of prioritizing emergency calls, so that callers do not experience delays when they reach congested VRS networks or call centers.

## 7.2. Cost and Capability of Emergency Services within VRS

The cost to ensure that Canadian VRS providers will be able to relay emergency calls to PSAPs will be dependent upon the degree that:

- consumer information (e.g., address) will be provided,
- the information will be accurate and automatically provided,
- the identification of the appropriate PSAP will be accurate and automatic, and
- the information can be automatically transferred when a call is transferred from one PSAP to another PSAP.

Simple non-automated solutions (the VRS interpreter asking the user for their address and looking up the associated PSAP) will cost very little compared to sophisticated solutions such as provided in the United States. The complexity of the solution will also be affected by the VRS model chosen (such as one vendor nationwide, versus multiple vendors). Whatever the solution that is ultimately selected, the implementation of VRS in Canada need not wait for the final design and implementation of integration of VRS with 9-1-1 emergency services.

## 7.3. Congruity of Emergency Services with MRS Regulations

The CRTC has placed a high priority on ensuring that all Canadians have access to 9-1-1 services.<sup>23</sup> At present many Canadian PSAPs are not capable of directly receiving TTY calls, and none of the Canadian PSAPs are capable of receiving IP communications, whether text or video. Consequently the CRTC has required TTY relay services and IP Relay services to relay emergency calls from consumers to PSAPs,

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<sup>22</sup> See phase 4 of this VRS feasibility study, *VRS in Other Countries*.

<sup>23</sup> See CRTC 2009-430, paragraph 28, at <http://www.crtc.gc.ca/eng/archive/2009/2009-430.htm>.

even though this option has significant limitations. If the CRTC were to mandate VRS, it would be reasonable to expect that the CRTC would seek ways to provide access to PSAPs via VRS as it has done for TTY relay and IP Relay.

#### **7.4. Administrative Oversight of Emergency Services**

Administrative oversight of integration or interface of VRS with 9-1-1 services will primarily be dependent upon monitoring and reporting by the VRS vendor(s). Coordination with Canadian PSAP authorities, the telephone companies, the VRS vendors, and consumer organizations will help the oversight entity understand the issues and verify the effectiveness of services. The complexity of the oversight will be directly related to the complexity of the solution.

### **8. Conclusion**

All of the potential VRS service optional features discussed in this phase are possible:

- Video Relay Interpreting (VRI)
- Video voice mail and related message answering services and associated issues
- Non-ASL and non-LSQ forms of video communication
- The ability to select specialized vocabulary interpreters, or interpreters with preferred characteristics
- French-ASL and English-LSQ video translation service
- Integration or interface with emergency services

Several of these features are easy to implement, while others may be significantly problematic. Some challenges are technical while others are operational, and others are dependent upon policy considerations. The implementation of VRS need not be delayed until all issues of these features are resolved.