

Phase 11:

# Potential Canadian VRS Models

VRS Feasibility Study

Mission Consulting

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# POTENTIAL CANADIAN VRS MODELS

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## EXECUTIVE SUMMARY

### 1. Overview

This research summary represents the findings of the eleventh 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 11 research summary, *Potential Canadian VRS Models*, provides a synopsis of potential considerations and options for different ways that VRS may be best offered and managed in Canada. This synopsis includes an analysis of:

- VRS goals
- Challenges and issues
- Types of providers
- Number of providers
- Location of providers
- VRS platform and interoperability
- Provider reimbursement
- Consumer costs
- Consumer technical support
- Education and outreach
- Other related services
- Program governance and management
- Funding
- Acquisition
- Implementation
- Summary of recommendations

## 2. Summary Findings

The recommended VRS model for Canada includes the following recommended elements:

### Types of providers

- Limit the potential VRS providers to organizations with experience in ASL or LSQ interpreting.

### Number of providers

- Begin in a research phase with multiple interpreter training programs only, then expand the research phase to include multiple interpreter agencies, and then after the research phase when regular VRS is deployed, allow multiple interpreter training programs, interpreter agencies, and experienced VRS providers to contribute to VRS in Canada.

### Location of providers

- For the long term benefit of consumers who will rely upon both community interpreting and VRS, select a model that emphasizes VRS provided from locations within Canada.

### VRS platform and interoperability

- Require all VRS providers to use the same interoperable platform during an initial research phase and monitor results to determine if one platform is suitable for VRS.

### Provider reimbursement

- Adopt a payment methodology that initially uses a fixed amount for a specific time period, such as an initial research phase. For a full deployment phase, consider paying vendors for each hour of contracted VRS interpreter's time, or paying vendors based on relayed conversation minutes.

### Consumer costs

- Consumers are responsible to obtain their own VRS equipment or software, and pay for their broadband access to VRS. There is no additional cost to consumers to use VRS, i.e., outbound calls are free.
- Non-relayed VRS calls are free to consumers.

### Consumer technical support

- The providers of each part of the service are responsible to offer their own consumer technical support.

### Education and outreach

- Different organizations to offer education and outreach according to their expertise and constituents.

### Other related services

- Do not allow VRI except to extend the VRS platform licensing for VRI use by authorized VRS providers in a cost neutral way.
- Video mail should be a normal part of VRS.

- All of the forms of visual communication discussed, including VCO, HCO and supporting real-time text, should be included in VRS.
- All of the specialized interpreter functions should be allowed.
- French-ASL and English-LSQ translation should not be included within VRS.
- Relaying of emergency calls to 9-1-1 call centers should be a CRTC mandated requirement of VRS.

#### Program governance and management

- Manage the VRS program by a third party administrator.

#### Funding

- No special CRTC mandated funding or subsidies for consumer network services.
- No special CRTC mandated funding or subsidies for consumer video devices.
- Provide funds as a percent of the telecommunications operations revenues of all telecommunications service providers, wireless service providers, and Internet service providers (collectively referred to herein as “TSPs”) as mandated by the CRTC, for VRS provider services, VRS platform, VRS consumer technical support, and VRS program administration.
- As an initial stimulus to increase the capacity and capability of the college and university ITPs, provide a VRS grant program that requires both program expansion and offering of VRS as a service to consumers. After a predefined term, such as three to six years, when the ITPs are self sustaining and robust enough to meet the training needs for interpreters, discontinue the grant program.

#### Acquisition

- Initially award VRS provider services as part of a competitively bid RFP for multiple grant awards based on the evaluated value of the offered VRS research and services. During the research phase determine if fully deployed VRS services would best be competitively acquired through an adjusted fixed rate, multi-vendor RFP, or by a multi-vendor flexible rate RFP.

#### Implementation

- Order an initial research phase of the services and other VRS matters, put controls in place, and based on the research results, plan for and award fully deployed services.

### **3. Conclusion**

VRS is highly feasible. The recommendations presented provide the optimum VRS model for Canada, given the variety of circumstances and issues affecting any potential video relay service. Not every recommended choice of VRS model element will be the choice of every stakeholder. With thoughtful planning it will be possible to establish an affordable and sustainable VRS that offers all Canadians a flexible and quality video relay service.

# Potential Canadian VRS Models

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## RESEARCH SUMMARY

### 1. The VRS Feasibility Study

This research summary represents the findings of the eleventh 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 11 research summary, *Potential Canadian VRS Models*, provides a synopsis of potential considerations for different ways that VRS may be best offered and managed in Canada. This synopsis will begin with a brief review of VRS goals and challenges, followed by an analysis of thirteen principal areas for consideration that are associated with any VRS solution. Each area is broken down into three areas of discussion: desired outcomes, primary options, and recommendation. The principal areas for consideration are:

- Types of providers
- Number of providers
- Location of providers

- VRS platform and interoperability
- Provider reimbursement
- Consumer costs
- Consumer technical support
- Education and outreach
- Other related services
- Program governance and management
- Funding
- Acquisition
- Implementation

There may be many other possible areas of consideration when determining the optimum VRS for Canada. However, as the purpose of this study is to establish the *feasibility* of VRS instead of an operational and technical design, the areas for consideration herein are those identified above.<sup>1</sup>

The analysis of these thirteen areas will be followed by a summary of the recommendations for VRS in Canada.

## 2. VRS Goals

This section will review five primary goals of a Canadian VRS, and will also list three secondary goals. In addition to these goals, many additional desired outcomes are discussed in this study's phases 1 through 10.

### 2.1. Primary Goals

A Canadian VRS should be:

- Acceptable quality
- Affordable
- Ubiquitous
- Manageable
- Legal

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<sup>1</sup> See section 16, *Implementation*, for a recommended process for the development of a VRS program design and service requirements.

### 2.1.1. Acceptable quality

VRS Quality of Service (QoS) is made up of many components, which are discussed in phase 7 of this study, *Quality of Service*. In brief, VRS QoS may be summarized as the overall experience of the users of the service – both the Deaf and hearing users. ASL and LSQ are very expressive and nuanced languages. Accurate relaying between an individual using signed language or other form of visual communication, and a hearing and speech user of English or French is not easy. Interpretation that loses meaning, is unclear, or includes wrong meaning is not acceptable. In addition to the need for considerable interpreter skills, the experience is also dependent on operations of the VRS provider: adequate numbers of interpreters for an acceptable answer time, appropriate call set-up, processing the call in a manner that allows both parties to control the conversation, customer service, and technical support. Consumer factors such as minimum broadband speeds and video phone or computer compatibility are all necessary for the VRS quality to be acceptable. For VRS to be effective, the consumers' overall VRS experience must be of a sufficient quality. Therefore VRS needs to be established and maintained in a manner that will provide a high level of quality of service to the consumer. While QoS is typically defined in more detail within program design and RFP/contract documents rather than in a feasibility study, QoS must be kept in mind when selecting a VRS model because some model options may make QoS more difficult to achieve than other options.

### 2.1.2. Affordable

VRS must be affordable to the communication industry that supports it, to the regulators that oversee it, to the administrators that manage it, to the vendors that provide it, and to the consumers who use it. VRS is, as demonstrated in this study's phase 10, *VRS Cost Variables and Forecasts*, very expensive. Nevertheless, it must be affordable in order to be ordered, funded, provided, managed, and used. Basic VRS (without consideration of consumer costs) was forecast in the phase 10 analysis to be between approximately \$27 and \$32 million dollars annually including administrative costs for a fully subscribed service, which may take some years to achieve. The actual cost will be significantly influenced by the model of service selected. This phase 11 will assess how the models may affect cost, and will endeavor to achieve the goal of an affordable and sustainable VRS for Canada.

### 2.1.3. Ubiquitous

Canadian VRS consumers must be able to communicate with each other and with hearing users over a variety of communication devices, and between telecommunications customers of all Telephone Service Providers (wireline and wireless, and Internet service providers without having to become a customer of a particular provider in order to use VRS. Likewise the service should be national in scope, that is, not limited to a geographic region such as a Province or TSP territory. Just like a telephone call between two parties who both hear and speak, a VRS call should not be limited by boundaries. VRS should serve visual communication users in a ubiquitous and interoperable manner, not less than experienced by hearing consumers who enjoy a variety of telecommunications technologies and services and who are free to choose the manner and mode of call according to individual circumstances.

#### **2.1.4. Easy to manage**

Canadian VRS must be easy to manage from the perspective of all parties. It must be easy and practical for the CRTC to regulate without endless proceedings regarding operational minutia. It must be easy for the providers to understand what is expected of them, and what they must do to provide a satisfactory service; and it must be practical for them to be able to do so. It must be easy for the TSPs and ISPs to participate to the degree called upon without undue administrative overhead or financial burden. It must be easy for an administrative body to manage the service contracts and VRS providers, balancing the needs of the consumers with that of the providers and other stakeholders (e.g., interpreter training programs, etc.) And finally it must be easy for the consumers to manage their accounts and to use the service.

#### **2.1.5. Legal**

Lastly, the new Canadian VRS should comport to existing laws and the CRTC's regulatory framework. VRS should not require Parliament to create new law. If possible, the selected VRS model should work within a legal and regulatory design that has already been proven viable for other services. It should not have to test new legal concepts or face court challenges or interpretations. VRS should be readily implementable within Canada's law, regulation and policy as they presently exist.

### **2.2. Secondary Goals**

There are many additional goals and objectives that may be applied to Canadian VRS. Considerations are discussed in detail in this study's prior phases. However, listed below are three that stand out.

#### **2.2.1. Inclusion of stakeholders in the oversight of VRS**

Stakeholders that are directly affected by the operation of VRS should be included in the oversight and guidance of the service.<sup>2</sup> This includes representatives of the user communities (users of ASL and LSQ, speech readers, and people who hear and speak) and interpreter communities (training programs, professional organizations, and fulfillment agencies). The perspectives and knowledge of these specific communities of interest are both unique and crucial to a successful VRS. These perspectives and knowledge cannot be obtained from outside of these groups, including from VRS vendors, TSPs, or regulators.

#### **2.2.2. Employ people who are Deaf**

In addition to stakeholder oversight and guidance, day-to-day operational excellence will be improved by directly employing people who are Deaf in the overall VRS solution. There are many significant roles

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<sup>2</sup> Opportunities for stakeholders include administrative Board membership, hired administrative staff including CEO, third party administrator/Board advisory committee membership, and other venues such as in interpreter training programs and VRS providers.

that Deaf people can fulfill that cannot be effectively filled by non-Deaf. For example, Deaf individuals should be used in interpreter screening and hiring practices. Deaf individuals can assist VRS interpreters understand the meaning and context of a Deaf consumer's communication.<sup>3</sup> Deaf individuals can be employed in functions that have direct contact with Deaf consumers, such as customer service and technical support. Deaf individuals can and should be used for outreach and education of the Deaf community. Finally Deaf individuals can fulfill management and administrative roles as effectively as hearing persons. By employing qualified people who are Deaf throughout the operation and oversight of VRS, VRS will be more sensitive and responsive to the needs of the consumers served by VRS.

### 2.2.3. Minimize opportunities for fraud, misuse and waste

The service should be set up and operated in a manner that minimizes the potential for fraud, misuse and waste. This consideration includes financial abuse, abuse of the purpose of VRS, and waste of interpreter and other scarce resources. Full transparency and accountability of all aspects of VRS including administrative, platform and provider functions (e.g., reporting, costs, etc.) are essential. Canada can learn from and avoid the mistakes in VRS implementation from the U.S. model, which has been plagued by fraud, abuse and waste.<sup>4</sup> Learning from the U.S. can possibly result in a VRS that is more cost efficient and affordable.

## 3. Challenges and Issues

Numerous challenges and issues have been discussed in this study's prior ten phases of research. Only those that stand out as the most significant are presented below for review while assessing the potential models of Canadian VRS:

- There are not enough interpreters for VRS
- The LSQ environment is unique
- VRS should not harm community interpreting
- The U.S. policies will affect Canadian VRS

### 3.1. Not enough interpreters for VRS

As demonstrated in this study's phase 3, *Consumer Interests and Perspectives*, and phase 6, *Interpreter Considerations*, surveys of consumers, consumer advocacy groups, interpreter agencies all across Canada indicate that there are presently not enough ASL or LSQ interpreters to fulfill the current

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<sup>3</sup> In the U.S. this VRS provider staff role is referred to as a "certified Deaf interpreter".

<sup>4</sup> *FCC Takes Further Steps to Ensure That Video Relay Service Will Continue as a Vibrant Service*. News Release May 27, 2010; at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-298446A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-298446A1.pdf)

demands for community interpreting.<sup>5</sup> Projections detailed in this study's phase 9, *Forecasts of VRS User Demand*, indicate that a fully subscribed VRS will require about twice as many ASL and LSQ interpreters than presently exist.

In Canada there are five ASL-English training programs and one LSQ-French training program. As identified in this study's phase 6, *Interpreter Considerations*, the ASL-English programs graduate about 51 interpreter students annually, and the LSQ-French program graduates about 6 interpreter students annually. Additional students who enter the ASL and LSQ programs begin interpreting without completing the formal interpreter training programs. Many other students drop out of the training due to difficulties in mastering competency in interpreting. VRS is more demanding of interpreter skills than typical community interpreting, so interpreters that are matriculated from an academic interpreter training program are strongly recommended for VRS.

The number of interpreters graduating from the current six programs does not meet the present demand for community interpreters, as demonstrated by shortages experienced by consumers and interpreter agencies. The five ASL-English programs state they have significant challenges to expanding their programs. Any solution for VRS in Canada must address the significant lack of skilled interpreters that will be needed for VRS.

### **3.2. The LSQ environment is unique**

The ASL professional interpreting organization (Association of Visual Language Interpreters of Canada or "AVLIC") requires graduation from a recognized ASL-English Interpreting Program in order to obtain membership. However, for LSQ interpreters there is no professional organization, and there are no generally accepted proficiency criteria for LSQ interpreting other than graduation from the only interpreter training program in Quebec. Therefore in Quebec the professional interpreter agencies that assign interpreters in response to requests, screen their interpreters for proficiency based on their own standards. Additionally, many individuals provide interpreting services freelance, that is, not through any agencies. Thus, in Quebec not only is there an interpreter shortage, but many LSQ interpreters that work in the field do not adhere to any standard of proficiency. This together with the very low number of interpreters that graduate from the academic LSQ interpreter training program, place additional stress on the lack of qualified LSQ-French interpreters to serve VRS.

### **3.3. VRS should not harm community interpreting**

VRS is expected to potentially offer significant employment benefits for interpreters compared to community interpreting assignments, including regular hours, higher income, comparatively little travel, a stable and safe work environment, and especially for freelance interpreters, employee benefits (insurance, vacation, etc) and relief from the pressure of maintaining a financially secure level of

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<sup>5</sup> The term "community interpreting" is used herein for all in-person interpreting assignments, including personal, social, legal, medical, religious, educational, workplace, and all others.

assignment work. When VRS employment becomes possible, many existing interpreters are expected to enter the VRS workforce. Even though most interpreters only work part time in VRS, VRS will likely further reduce the availability of ASL and LSQ interpreters for community assignments.

The issue then is how can VRS be modeled to minimize the reduction of interpreter availability to the community and still meet the requirements for a fully functioning VRS? If this is not possible, can a VRS model achieve a balanced approach or some other controlled outcome? These challenges should be addressed in any proposed VRS model for Canada.

### 3.4. U.S. VRS policies will affect Canadian VRS

VRS policies in the United States are established by the Federal Communications Commission (FCC) via regulations. These regulations presently allow multiple VRS vendors to be reimbursed at relatively high per minute rates for allowable VRS traffic.<sup>6</sup> Because the rates are currently high, it is cost effective for the dominant U.S. VRS vendor, Sorenson Communication, to establish multiple VRS call centers in Canada to serve U.S. VRS consumers. These call centers presently employ about a third of the AVLIC ASL members in Canada, contributing to the lack of availability of ASL interpreters for community interpreting, and significantly reducing the availability of ASL interpreters for work within a VRS that will service Canadian consumers.

Any new ASL VRS located in Canada will have to compete with Sorenson for interpreters. The largest cost component of VRS is the interpreter labour.<sup>7</sup> Therefore even if a Canadian VRS would be able to otherwise acquire VRS at cost rates significantly less than the U.S. rates, the higher U.S. rates will allow Sorenson or any other VRS provider that services U.S. consumers to pay higher wages to its interpreters and make it more difficult for a Canadian VRS to be operationally successful. This situation will not change until the FCC reduces its reimbursement rates for providers serving the United States, or until the FCC limits its reimbursements to VRS call centers located only in the United States.

## 4. Type of Providers

VRS is a managed combination of call center activities, technologies (network, hardware and software), and interpreting. When qualifying organizations that might provide VRS to Canada, there may be a tendency to assume that only companies that have this combination of VRS experience should be permitted to offer VRS. However, this is not the model used by most other countries. In fact, even in the United States anyone, without any VRS experience, can set up a VRS company and receive FCC certification if certain organizational and operational minimum standards are met. Most of these providers' VRS operations are small and highly skilled.

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<sup>6</sup> See this study's phase 10, *VRS Cost Variables and Forecasts*, for details.

<sup>7</sup> See this study's phase 9, *Forecasts of VRS User Demand*, for details.

The consideration for Canada is: What type of organizations should be qualified to provide VRS?

#### 4.1. Desired Outcomes

The desired outcome when considering what type(s) of provider(s) should be allowed to offer VRS in Canada and be paid from a CRTC mandated VRS fund, should include:

- Subject to oversight – that is, the type(s) of provider(s) will be responsive to CRTC regulatory oversight, either directly or indirectly
- From the perspective of third party administration by the CRTC or others, the type(s) of provider(s) will be easy to manage
- From the perspective of the VRS consumers, the type(s) of provider(s) will offer quality VRS
- From the perspective of the VRS consumers, the type(s) of provider(s) will not create disorder or confusion of who is providing what
- That the type(s) of provider(s) will contribute to meeting the challenges and issues associated with the potential for VRS in Canada

#### 4.2. Options

The primary options offered for consideration are:

1. Only companies with VRS experience (present VRS vendors).
2. Any organization meeting a minimum level of contact center experience.
3. Any organization meeting a minimum level of ASL or LSQ interpreting experience.
4. A new national non-profit VRS entity created specifically for Canadian VRS.

##### 4.2.1. Companies with VRS experience

This option assumes that the best type of VRS provider will be an organization that is already providing VRS elsewhere, e.g., in the United States or other country. This assumption is primary based on the view that VRS is so complex a service that only experienced firms will know how to do a good job.

##### Advantages of this option

1. Companies with VRS experience will know how to establish effective VRS with few challenges, while organizations without VRS experience may face many first unknowns and initial challenges.

2. Companies with VRS experience do exist in the United States and have expressed an interest in providing services in Canada.<sup>8</sup>

#### Disadvantages of this option

1. This option does not address the problem of an insufficient number of interpreters in Canada, and may result in a depletion of interpreter resources for community interpreting.
2. Some U.S. companies may hire interpreters with competence that might be below the standards that may be desired by consumers or other stakeholders.<sup>9</sup>
3. Provider costs will likely be based on the U.S. per minute rates, and as such may cost the program more than necessary, and may make VRS vulnerable to fraudulent practices.
4. No existing VRS company has experience in LSQ interpreting.

#### **4.2.2. Organizations with contact center experience**

VRS operations are run in small contact centers, often networked together to form a larger virtual contact center. There are many professional firms with proven expertise in efficient contact center staffing, training and operations experience. Today's contact centers typically offer voice, email, chat, and sometimes video. They also work with internal and external databases and networks, providing client organizations with complex call center and data center functions. Theoretically these firms may be suited to provide VRS with the addition of some staff expertise in ASL and LSQ interpreting and relay.

#### Advantages of this option

1. Professional contact center firms exist throughout Canada, and some should have the expertise and resources to competitively set up multiple networked VRS call centers throughout Canada.
2. Contact center firms can leverage their existing technical and organizational knowledge and resources, as well as their facilities and systems.

#### Disadvantages of this option

1. No Canadian contact center companies have experience with relay, or with ASL, LSQ, or interpreting.
2. Existing contact center companies will have no knowledge or appreciation for the Deaf consumers, their culture, or their communication needs. Many complexities and nuances will not be understood and the service may suffer as a result.

#### **4.2.3. Organizations with ASL or LSQ interpreter experience**

The heart of VRS is the interpreters. It is their skill and experience that is the primary resource that VRS consumers depend upon for satisfactory service. Therefore an argument can be made that VRS should

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<sup>8</sup> Both Sorenson Communications and Purple have presented their interests to the CRTC. Sorenson is presently providing a CRTC sponsored ASL VRS trial with Telus in British Columbia and Alberta.

<sup>9</sup> This was initially the case with the Sorenson/Telus trial.

be limited to organizations that have professional experience with ASL or LSQ interpreting. These organizations include established VRS providers, interpreting agencies (companies that fulfill community interpreting assignment requests), and college and university interpreter training programs (ITPs).

#### Advantages of this option

1. These organizations understand and appreciate the Deaf consumers, their culture, and their communication needs.
2. These are the only organizations that already have the ASL and LSQ interpreting skills and experience necessary to be able to provide effective VRS.
3. By balancing the resource demands for community interpreting with VRS, interpreter agencies could partially mitigate the negative effect that VRS may have in removing interpreters from community interpreting.<sup>10</sup>
4. Interpreter agencies are the only organizations presently capable of providing VRS to people who use alternative or dialect sign languages, such as Inuit Sign Language in the north or Maritime Sign Language in the Maritime Provinces.
5. The use of college and university interpreter training programs for VRS would help solve the problem of insufficient numbers of qualified interpreters by expanding their program resources and curricula, by attracting more students, by establishing standards for VRS interpreting, and by providing mentoring and employment for qualified students or graduates.
6. College and university ITPs could also use the resources of their information technology departments or support staff to provide IT support to their VRS operations.
7. Many Canadian college and university ITPs already employ Deaf interpreters, Deaf teachers and Deaf mentors. This could be expanded with the addition of VRS. Deaf employment could also be provided within the IT staff and IT help desk staff, especially if technical support is provided to VRS consumers.
8. Interpreter agencies and ITPs already have established relationships with the Deaf community and advocacy organizations, especially at the local level. These relationships could facilitate local education and outreach.

#### Disadvantages of this option

1. Interpreter agencies and ITPs typically do not have experience operating call centers or contact centers, or operating VRS.

#### **4.2.4. A new national non-profit organization**

This option would create a single new non-profit organization (or two organizations, one for ASL-English and one for LSQ-French) specifically to operate VRS nationwide.

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<sup>10</sup> This is the model successfully used in Sweden and France. For example, in France the interpreting agencies that provide VRS are prohibited from having any interpreter work more than 30% of their time in VRS.

### Advantages of this option

1. The organization would be focused exclusively on VRS without any distractions.
2. The not-for-profit nature of the organization may assist in deterring the types of VRS provider fraud experienced in the United States.

### Disadvantages of this option

1. While individual staff members may have various experience with contact centers, technologies, VRS, or ASL or LSQ interpreting, the organization as a whole would be new and thus have no corporate experience.
2. The organization would have no proven ability to accomplish any goals, no proven ability for staff to work together, and no established administrative, program or technical operations.
3. Conflicts may arise over who is to be involved in the new entity, which may delay implementation.
4. This places all expectations for success on a new organization, which represents a high risk situation.

## **4.3. Recommendation**

The recommendation for the type of relay provider(s) for Canada is:

- Limit the potential VRS providers to organizations with experience in ASL or LSQ interpreting.

Qualified interpreters are the most crucial part of any VRS. Organizations that already focus their energy on ASL or LSQ interpreting are the best suited to provide VRS. Additionally, the involvement of interpreter agencies can facilitate a balance between VRS and community interpreting needs, while the involvement of interpreter training programs will, in the long term, facilitate the development of more Canadian interpreters to serve both community interpreting and VRS.

## **5. Number of Providers**

Most countries that have a public VRS are served by only one VRS company. Countries in which VRS is restricted to work-related calls may have one, two or three VRS providers. Only the United States has a VRS model in which any firm that meets certain FCC minimum standards can be authorized for VRS reimbursement by the FCC. The result is that the U.S. has over twenty VRS provider companies that qualify for reimbursement.<sup>11</sup> The question is: What is the optimum number of VRS providers for Canadian VRS?

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<sup>11</sup> See this study's phase 4, *VRS Models in Other Countries*, for information about VRS models in other countries.

## 5.1. Desired Outcomes

The number of VRS providers serving Canada should be the optimum that:

- Provides the best video relay interpreting services to the consumers
- Is easiest to manage
- Is the least costly to acquire
- Does the least harm to community interpreting

## 5.2. Options

The primary options for consideration are:

1. One VRS provider for the country, serving all consumers.
2. Two VRS providers, each serving all consumers nationwide.
3. Two VRS providers, one serving ASL consumers nationwide, and one serving LSQ consumers nationwide.
4. Multiple experienced VRS providers, serving ASL, LSQ or any other visual language consumers.
5. Multiple interpreter agencies and college/university interpreter training programs, providing ASL or LSQ VRS.
6. A combination of multiple experienced VRS providers, interpreter agencies and college/university interpreter training programs, providing VRS.

Note that no options are being considered for regionally restricted providers. All options are for nationwide services, that is, consumers from anywhere in the country should be able to access a VRS provider. For example if there were only one LSQ VRS provider, LSQ consumers should be able to access that provider from anywhere in Canada and reach any French speaking/hearing telephone user in Canada.

### 5.2.1. One national provider (ASL & LSQ)

The first option for consideration is one VRS provider for the country, serving all consumers. This provider would staff both ASL and LSQ interpreters. In order to attract qualified interpreters, VRS call centers would be located in multiple cities where interpreters live.

#### Advantages of this option

1. It will be easier to administratively manage one provider than multiple providers, especially if quality of service and other requirements are clearly defined and the provider is cooperative.
2. A provider can be selected based on best value offered (quality, cost, promises, etc) from all bidding vendors, optimizing the chances that the provider selected will provide the best service for the best price to all consumers.

3. All consumers have the same VRS user interface, with ASL, English, LSQ, and French options. No confusion about multiple providers, such as can occur with multiple providers: Who is my provider? What are the differences? I thought I was signed up with one but I got the other. Etc.
4. This option offers the most efficient use of interpreter resources for overnight coverage. (In a multiple non-networked provider environment, interpreters sitting idle waiting for a call reduce interpreter availability overall.)

#### Disadvantages of this option

1. If the provider is not performing satisfactorily, there is limited punitive leverage that can be applied (payments can be reduced but traffic cannot be given to another provider, and the contract cannot be terminated).
2. Since 77% of the traffic is estimated to be ASL in a fully subscribed service, and since it may take longer to achieve LSQ services due to the lack of qualified LSQ interpreters, the finances of VRS will strongly favor ASL services. The provider will likely be an English/ASL company that will place its resources and attention on ASL and English, while putting relatively little effort on LSQ and French. The LSQ community may receive poor services, or may receive only a minimal effort from the provider to make the extra effort that will be required to develop a LSQ VRS.
3. No competition between providers for consumers, i.e., no competitive outreach by the provider to the Deaf who make most of the VRS calls. The provider may however still be incented to provide outreach to the Deaf in order to obtain more users and more reimbursable VRS traffic.
4. Consumers will not have a choice of providers.

#### **5.2.2. Two national providers (both ASL & LSQ)**

This option results in two VRS providers, each serving all languages.

#### Advantages of this option

1. If one of the providers is not performing satisfactorily, there is more leverage that can be applied (payments can be reduced, traffic can be given to the other vendor, and the contract can even be terminated).
2. There will be competition between vendors for consumers, i.e., competitive outreach by the providers to the Deaf who make most of the VRS calls.
3. This option similarly offers efficient use of interpreter resources for overnight coverage. (In a multiple non-networked provider environment, interpreters sitting idle waiting for a call reduce interpreter availability overall.)
4. Consumers will have a choice of providers.

#### Disadvantages of this option

1. Selection of the two providers can be more complex, since there will be differences between the two selected (one will be judged to have the better proposed service than the other). For example: How is traffic allocated between the two providers (consumer choice or award formula)? Are the two providers reimbursed at different bid rates? Etcetera.

2. Since 77% of the traffic is estimated to be ASL in a fully subscribed service, and since it may take longer to achieve LSQ services due to the lack of qualified LSQ interpreters, the finances of VRS will strongly favor ASL services. The providers may likely both be English/ASL companies that will place their resources and attention on ASL and English, while putting relatively little effort on LSQ and French. The LSQ community may receive poor services, or may receive only a minimal effort from the providers to make the extra effort that will be required to develop LSQ VRS.
3. Consumers will see different VRS user interfaces from each provider. There may be confusion about multiple providers: Who is my provider? What are the differences? I thought I was signed up with one but I got the other. Etc.
4. It will be more work to administratively manage two contractors instead of only one.

### 5.2.3. Two national providers (ASL only & LSQ only)

In this option there are two providers, one for ASL-English only, and one for LSQ-French only.

#### Advantages of this option

1. A single ASL provider and a single LSQ provider can each be selected based on best value offered (quality, cost, promises, etc) from all bidding vendors of each type of service, optimizing the chances that the providers selected will provide the best service for the best price to each language group.
2. All consumers of each language will have the same VRS user interface, either ASL-English or LSQ-French. Consumers will have no confusion about multiple providers, (such as may occur with multiple providers serving the same consumer: Who is my provider? What are the differences? I thought I was signed up with one but I got the other. Etcetera.)
3. Each provider will focus on either ASL only or LSQ only depending on which service they are awarded. Each language will receive the undivided maximum attention and resources of its assigned VRS provider.
4. This option similarly offers efficient use of interpreter resources for overnight coverage. (In a multiple non-networked provider environment, interpreters sitting idle waiting for a call reduce interpreter availability overall.)

#### Disadvantages of this option

1. If a provider is not performing satisfactorily, there is limited punitive leverage that can be applied (payments can be reduced but traffic cannot be given to another provider, and the contract cannot be terminated).
2. No competition between providers for the same consumers, i.e., no competitive outreach by the provider to the ASL or LSQ consumers. The providers may however still be incented to provide outreach to either the ASL or LSQ consumer groups in order to obtain more users and more reimbursable VRS traffic.
3. Consumers will not have a choice of providers.
4. It will be more work to administratively manage two contractors instead of only one.

#### **5.2.4. Multiple experienced national providers (ASL or LSQ)**

In this option, multiple experienced VRS vendors (companies with experience providing VRS) would be awarded contracts or are otherwise qualified and authorized to be reimbursed for services. The number of providers would be dependent upon the award or qualification criteria, or would be set at a specific maximum. Each VRS provider can elect to provide only ASL, or only LSQ, or both.

##### Advantages of this option

1. This option allows multiple, smaller, specialized providers (which make up most of the VRS providers in the U.S.) to contribute to Canada's VRS.
2. If a provider is not performing satisfactorily, there is more leverage that can be applied (payments can be reduced, traffic can be given to the other vendor, or the contract can even be terminated).
3. There will be competition between vendors for consumers, i.e., competitive outreach by the providers to the Deaf who make most of the VRS calls.
4. Consumers will have a choice of providers.

##### Disadvantages of this option

1. It may be administratively very difficult or time consuming to manage multiple vendors.
2. With multiple vendors there is a higher probability that at least one vendor will have significant challenges that will have to be administratively managed.
3. There may be significant consumer confusion about the different vendors. For example: Who is my provider? What are the differences? I thought I was signed up with one but I got the other. Etcetera.
4. The deployment of interpreter resources for overnight coverage is inefficient. Interpreters sitting idle waiting for a call reduce interpreter availability overall.
5. There is a reasonable possibility that no provider will offer LSQ VRS.

#### **5.2.5. Multiple interpreter agency and/or university providers (ASL or LSQ)**

In this option, multiple interpreter agencies and/or universities with interpreter training programs (without VRS experience) would be awarded contracts or are otherwise qualified and authorized to receive reimbursement for services. The number of providers would be dependent upon the award or qualification criteria, or would be set at a specific maximum. Each VRS provider can elect to provide only ASL, or only LSQ, or both. This model has proved successful in Sweden, Finland and France using interpreter agencies.

##### Advantages of this option

1. If a provider is not performing satisfactorily, there is more leverage that can be applied (payments can be reduced, traffic can be given to the other vendor, or the contract can even be terminated).

2. There can be competition between vendors for consumers, i.e., competitive outreach by the providers to the Deaf who make most of the VRS calls.
3. There is a high probability that at least one provider will offer LSQ VRS.
4. Consumers will have a choice of providers.

#### Disadvantages of this option

1. It may be administratively very difficult or time consuming to manage multiple vendors.
2. With multiple vendors with little or no VRS experience there is a higher probability that a number of vendors may have challenges that will have to be administratively managed.
3. The deployment of interpreter resources for overnight coverage is inefficient. Interpreters sitting idle waiting for a call reduce interpreter availability overall.
4. There may be significant consumer confusion about the different vendors. For example: Who is my provider? What are the differences? I thought I was signed up with one but I got the other. Etcetera.

#### **5.2.6. A combination of VRS providers, interpreter agencies, and university ITPs**

In this option, multiple interpreter agencies and interpreter training programs (both without VRS experience) and experienced VRS providers would be awarded contracts or are otherwise qualified and authorized to be reimbursed for services. The number of providers would be dependent upon the award or qualification criteria, or would be set at a specific maximum. Each VRS provider can elect to provide only ASL, or only LSQ, or both.

#### Advantages of this option

1. This option has the advantages of both the experienced VRS providers (see section 5.2.4 above) and the advantages of the interpreter agencies and ITPs (see section 5.2.5 above).

#### Disadvantages of this option

1. It may be administratively very difficult or time consuming to manage multiple vendors.
2. With multiple vendors with little or no VRS experience there is a higher probability that a number of vendors may have challenges that will have to be administratively managed.
3. The deployment of interpreter resources for overnight coverage is inefficient. Interpreters sitting idle waiting for a call reduce interpreter availability overall.
4. There may be significant consumer confusion about the different vendors. For example: Who is my provider? What are the differences? I thought I was signed up with one but I got the other. Etcetera.

### **5.3. Recommendation**

The recommendation for the number of VRS providers is:

- Begin with an initial research phase with multiple interpreter training programs only, then expand the research phase to include multiple interpreter agencies, and then after the research

phase when fully deployed VRS is implemented, allow multiple interpreter training programs, interpreter agencies, and experienced VRS providers to contribute to VRS in Canada.

This option makes maximum use of the entities with pre-established relationships with interpreters (who are in short supply) in the communities where they live, encourages the development of more interpreters and the development of necessary VRS interpreter standards, and will also result in LSQ-French VRS provider(s) that will focus on the needs of the LSQ community.

## 6. Location of Providers

The nature of VRS requires that vendors place their call centers where the interpreters are located. This usually means multiple small call centers in different cities. However as demonstrated in this study's phase 9, there are presently not enough interpreters in Canada to supply both community interpreting and VRS. The question then is: Should VRS be serviced by call centers located in Canada and staffed by Canadian interpreters, or should they be outsourced to call centers located in the United States staffed by U.S. interpreters?

### 6.1. Desired Outcomes

The best outcome of this issue will:

- Provide the fastest ability to service the consumer's demand for VRS
- Build up a robust professional interpreter pool for the long term, serving both VRS and community interpreting
- Not be administratively burdensome to manage
- Not be financially burdensome
- Do the least harm to community interpreting

### 6.2. Options

The primary options for consideration are:

1. Source all VRS from within Canada.
2. To the degree possible, outsource VRS to the United States.
3. Adopt a blended approach.

#### 6.2.1. Source all VRS from within Canada

In this option all VRS call centers are located within Canada. The providers may be Canadian or U.S. companies (or companies from other countries).

### Advantages of this option

1. This option provides a need and incentive to develop, over time, a large pool of professional ASL and LSQ interpreters that will serve both VRS and community interpreting needs.
2. Interpreters will be Canadian and therefore familiar with the culture and regional dialects unique to Canada.
3. A solution developed by Canadians for Canadians.
4. It will be easier to monitor and manage vendors located in Canada, rather than in another country.
5. Acquiring VRS from within Canada may be less expensive than outsourcing to the U.S. where costs are set by the FCC at a very high rate.

### Disadvantages of this option

1. It will take time to develop the Canadian VRS interpreter labour pool, and consumer demand for VRS may be delayed or restricted by the unavailability of local interpreters.
2. Interpreters would be expected to work part time for VRS, creating a potential shortage of community interpreting during the period when there are not enough interpreters to satisfy the needs of both VRS and community interpreting.
3. The Canadian government affirms that VRS is a service that under the North American Free Trade Agreement (NAFTA) must be allowed to be provided across the border (as applied to this option, from the U.S.) This will necessitate provider selection criteria that favor Canadian locales without contravening NAFTA.

### **6.2.2. Outsource to the U.S.**

In this option ASL is outsourced to the United States where there are plenty of ASL interpreters. LSQ however must remain in Canada because LSQ interpreters only exist in Canada.

### Advantages of this option

1. Canadian ASL consumers will have plenty of professional VRS interpreters to relay their calls. Deployment of ASL VRS need not be delayed due to lack of interpreters.
2. There may be minimal VRS competition for Canadian ASL interpreters, and therefore less impact to ASL community interpreting within Canada.

### Disadvantages of this option

1. It will be difficult to monitor and administratively manage vendors located in another country.
2. This option will create a disparity of service availability between Canadian VRS ASL and LSQ consumers, which may be politically unacceptable.
3. This option creates no incentive to develop a robust ASL interpreter labour pool to serve VRS and community interpreting. ASL community interpreting shortages will prevail over the long term, and Canadian ASL VRS will always be required to be provided from the United States.

4. Outsourcing ASL to U.S. providers with their call centers located in the U.S. will likely result in pricing equivalent to what U.S. providers are receiving from the FCC, which may be more expensive than what may be available via a competitive bid for services located in Canada.
5. U.S. interpreters would need training in differences in ASL found in the U.S. and Canada, and training in spelling and pronunciation of place names and personal names in Canada (including Canadian French names).

### 6.2.3. Combination

In this option, LSQ VRS is served from within Canada, while ASL VRS is served from both the U.S. and Canada. Potentially ASL VRS might be initially provided more from the U.S. than Canada, with Canadian based ASL VRS increasing over time. At this point it is unclear how ASL VRS would be acquired in a manner that would ensure its provisioning from both countries.

#### Advantages of this option

1. Canadian ASL consumers will initially have sufficient VRS interpreters to relay their calls. Full deployment of ASL VRS need not be delayed or deployed gradually due to lack of interpreters.
2. The impact to ASL community interpreting would be not as great as a Canadian only solution.
3. ASL VRS interpreters in Canada would still be needed, thereby providing a long-term incentive to develop a larger ASL interpreter labour pool in Canada.

#### Disadvantages of this option

1. It will be difficult to monitor and administratively manage vendors located in another country.
2. This option will create a disparity of service availability between Canadian VRS ASL consumers and LSQ consumers, which may be politically unacceptable.
3. Outsourcing ASL to U.S. providers with their call centers located in the U.S. will likely result in pricing equivalent to what U.S. providers are receiving from the FCC, which may be more expensive than what may be available via a competitive bid for services located in Canada.
4. ASL consumers will see different VRS user interfaces from different providers. There may be confusion about multiple providers: Who is my provider? What are the differences? I thought I was signed up with one but I got the other. Etcetera.
5. It may be difficult to transition services from U.S. vendors' proprietary VRS platforms to Canadian provider platforms. Management of traffic between vendors may also be a challenge (is traffic allocated by award formula, by consumer choice, by first available interpreter or wait times, etc....?)
6. It may be difficult to create ASL VRS provider selection criteria or contract language that will ensure the migration of services from the U.S. to Canadian locales without contravening NAFTA.

### 6.3. Recommendation

- For the long term benefit of consumers who will rely upon both community interpreting and VRS, select a model that emphasizes VRS provided from locations within Canada.

This solution may initially involve some augmentation of ASL VRS from the United States, but this should be carefully defined, managed and its outsourced traffic or costs limited to ensure that VRS is provided in large part from within Canada by a set timeframe. This solution also endeavors to place ASL VRS and LSQ VRS on parity, with specific goals and timelines understood at the outset.

## 7. VRS Platform and Interoperability

The selection of, or requirements for, the VRS operational software (the VRS platform) used by the VRS provider will impact the scalability, flexibility and degree of interoperability experienced by the VRS consumers. In VRS there are two different types of compatibility or interoperability:

1. Compatibility of different consumer end-user video devices with the platforms of different VRS providers. Some VRS platforms may only work with certain consumer equipment or software.
2. Compatibility of different consumer end-user video devices to communicate point-to-point directly with other end-users through the VRS provider's user interface and network. Some VRS platforms do not support video communication between different types of consumer devices.

VRS platform selection/requirements will also affect the ability to manage multiple locations, consumer registration, different options with VRS such as text, and relaying of emergency calls to 9-1-1 centers.

### 7.1. Desired Outcomes

As much as possible VRS should use platform(s) that:

- Allows consumers to use a variety of video devices (including wireless) to connect to the VRS provider
- Allows consumers to change VRS providers without having to change their video devices
- Allows consumers to visually communicate point-to-point (without a relay interpreter) with consumers who use a different type of device
- Facilitates the use of other related services such as emergency calls, text with video, network call distribution and distribution by skill level or other factors, etcetera.<sup>12</sup>
- Facilitates management reporting and auditing<sup>13</sup>

### 7.2. Options

The following options are considered for VRS platform and interoperability.

1. Allow all VRS providers to use any VRS platform they desire.

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<sup>12</sup> See section 12 of this paper, *Other Related Services*.

<sup>13</sup> See section 13 of this paper, *Program Governance and Management*.

2. Require all VRS providers to use any VRS platform that meets minimum interoperability standards.
3. Require all VRS providers to use the same VRS platform, which also must meet minimum interoperability standards.

### 7.2.1. Allow all VRS providers to use whatever VRS platform they desire

This option allows each VRS provider to select whatever VRS platform they feel will best meet their business goals, regardless of the level of interoperability supported by the platform.

#### Advantages of this option

1. Different VRS platforms may offer different features or functions. A VRS model with multiple VRS platforms may allow different providers to distinguish themselves from each other by functionality as well as graphically.
2. This option will not require any experienced VRS vendors to change their platforms in order to offer their services in Canada.

#### Disadvantages of this option

1. If Canada has multiple VRS providers, or when a provider is replaced at the end of its contract, consumers may be required to change their VRS end user devices or software, depending upon the level of interoperability (or lack of) supported by the platform.
2. Depending upon the non-open or non-standard design of a provider's platform, it may significantly limit the consumers' choices of the types of video devices that may be operable with the providers VRS platform. For example, some platforms may support Apple iPhones or mobile devices using Android while other platforms might not.
3. Depending upon the capabilities or settings of the provider's platform, direct peer-to-peer video calling may be blocked between consumers who use different VRS providers, or between consumers who use end user equipment or software distributed by different VRS providers.<sup>14</sup> This is not equivalent to the ability of hearing persons to call each other on any telephone network.
4. Different platforms may contribute to different user experiences among consumers, and confusion as to why some consumers can do some things (for example, have a speed dial list or have video mail, or have real-time text along with video, or have audio for VCO) while others cannot. Some consumers may think that VRS is not working or is broken for them, or they may wonder why some people get a function while they do not. To the extent that these differences are between groups, such as between ASL and LSQ users, there may be feelings of discrimination with political ramifications.
5. In a multiple VRS provider environment, distribution of incoming VRS calls will most likely be restricted to within each vendor's networked sites.

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<sup>14</sup> This was the case in the United States with Sorenson's platform and their "free" consumer devices for many years until the FCC ordered interoperability.

6. In a multiple VRS provider environment, the reporting and monitoring of different VRS provider's traffic quality measurements (average speed of answer, call abandoned rate, etc) will be problematic, as different platforms will provide different data in different formats.

### **7.2.2. Require all VRS platforms to meet an interoperability standard**

Because new consumer equipment comes to the market monthly, it can be a challenge to establish an interoperability standard. Nevertheless, some basic standards and requirements can be identified. For example, a platform should be able to support both H.323 and SIP protocols. Platform providers can be selected for their general approaches to exclusivity and openness, and commitments for ongoing compatibility and openness can be requested. This option allows different vendors to use different VRS platforms (and potentially to distribute different end user devices and software), as long as those platforms, end user devices and software meet a set standard for interoperability and functionality.<sup>15</sup>

#### Advantages of this option

1. Different VRS platforms may offer different features or functions. A VRS model with multiple VRS platforms may allow different providers to distinguish themselves from each other by functionality as well as graphically.
2. This option will not require many experienced VRS vendors to change their platforms in order to offer their services in Canada.
3. Consumers will be promised interoperability, dependent upon the definition of the interoperability standard.

#### Disadvantages of this option

1. Different platforms may contribute to different user experiences among consumers, and confusion as to why some consumers can do some things (for example, have a speed dial list or have video mail, or have text along with video) while others cannot. Some consumers may think that VRS is not working or is broken for them, or they may wonder why some people get a function while they do not. To the extent that these differences are between groups, such as between ASL and LSQ users, there may be feelings of unfairness with political ramifications.
2. In a multiple VRS provider environment, distribution of incoming VRS calls will most likely be restricted to within each vendor's networked sites.
3. In a multiple VRS provider environment, the reporting and monitoring of different VRS provider's traffic quality measurements (average speed of answer, call abandoned rate, etc) will be problematic, as different platforms will provide different data in different formats.

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<sup>15</sup> For example, the "Total Conversation Standard" adopted by the International Telecommunications Union (ITU-T). See <http://www.itu.int/en/ITU-T/studygroups/com16/accessibility/Pages/conversation.aspx>.

### 7.2.3. Require all VRS providers to use the same interoperable platform

This option selects a VRS platform for its interoperability and other features, and requires all VRS providers to use it. This platform could include a user registration data base for peer-to-peer routing, emergency call routing to 9-1-1, and 10 digit numbering.

#### Advantages of this option

1. The same level of interoperability and features is offered to all consumers.
2. Updates to accommodate new consumer devices entering the market need only be done by one firm, simplifying testing (verification) and the consumers' experience.
3. There is no confusion or upset feelings resulting from different functionality offered by different VRS providers.
4. Consumer education and outreach, and technical support, can be mainstreamed with only one platform to explain and install.
5. As individual VRS providers come and go (are awarded contracts, are authorized to provide services, or cease services), the consumers will not necessarily experience changes to their VRS interface.<sup>16</sup>
6. There may be cost efficiencies and savings for one platform versus many.
7. Depending upon the overall network configuration, incoming VRS call distribution could be shared among providers to balance wait times or route to consumer chosen skills or providers.
8. In a multiple VRS provider environment, the reporting and monitoring of different VRS provider's traffic quality measurements (average speed of answer, call abandoned rate, etc) will be greatly simplified and directly comparable.

#### Disadvantages of this option

1. Experienced VRS vendors have developed their technical operations, interpreter training, consumer user interfaces and education, and other significant practices in association with their platform. Many VRS vendors will not be prepared to change platforms for Canada. This option may limit the potential participation or competition of experienced VRS vendors in the Canadian market.

### 7.3. Recommendation

For VRS platform interoperability and functionality, the recommendation is:

- Require all VRS providers to use the same interoperable, flexible and scalable platform during an initial research phase and monitor results to determine if one platform is suitable for a fully deployed VRS.

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<sup>16</sup> This depends on a decision regarding the extent that different VRS providers will be allowed to customize their user interface screens. This will be addressed in section 13, *Program Governance and Management*.

This recommended option greatly simplifies the management of the services, provides equal functionality to all consumers, offers the potential of networked call distribution across different VRS providers, can assure maximum interoperability, and can assure that advanced VRS features such as the ITU's Total Conversation, are available to all consumers.

With this recommendation, the selection of the platform and its ownership will be considerations for a VRS design, and potential acquisition.<sup>17</sup>

## 8. Provider Reimbursement

Different countries have established different ways that they pay their VRS vendors. Some provide a fixed total amount of annual funds, and the vendor provides the services it can afford with the money provided. Other options include reimbursement at a set amount per VRS call, regardless of how long the call is, how much time it takes to set the call up, how much idle time there is between VRS calls, or how much time is spent on customer service or technical support non-relayed calls. Most countries pay the provider for the minutes of VRS. Some include set up time, while others only pay for the time that the conversation is actually being relayed between the Deaf user and the hearing user. Some countries pay for each hour that a video interpreter is assigned to VRS.<sup>18</sup>

The question is: What should be the basis for Canadian VRS provider reimbursement?

### 8.1. Desired Outcomes

The optimum reimbursement outcome will:

- Be fair but not excessive
- Incent providers to offer quality services
- Be easy to administratively manage; and can be audited
- Will dissuade vendor abuse and fraud
- Will be competitively attractive to multiple VRS vendors who might want to provide VRS

### 8.2. Options

The primary options for VRS provider payment are:

1. Payment per relayed conversation minute.

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<sup>17</sup> See section 16, *Implementation*.

<sup>18</sup> The implementation of the selected basis for reimbursement may be achieved via the acquisition methodology selected, which is discussed in section 15.

2. Payment per session minute.
3. Payment per relayed call.
4. Payment for each registered VRS consumer.
5. Payment for each hour of VRS interpreter time.
6. Payment of a total fixed annual amount for the service.

### 8.2.1. Per conversation minute

In this option the VRS provider is paid for each minute of relayed conversation.<sup>19</sup>

#### Advantages of this option

1. This type of billing is a normal practice for call center operators and VRS vendors, and can be measured.
2. Only the actual relay function is being reimbursed. The VRS provider is financially incented to make their relay operations as efficient as possible since all non-relay functions must be paid for out of their conversation minute revenues.

#### Disadvantages of this option

1. The VRS provider may be financially disinclined to spend significant time on consumer activities that are not directly reimbursable, such as customer service calls and technical support.
2. VRS providers with poorly skilled interpreters will spend more time interpreting on a call than would be spent if the interpreters were more highly skilled. The result is that VRS providers may be financially incented to employ poorly skilled interpreters.
3. Without carefully defined requirements, accountability and monitoring, payment based on minutes can lead to provider abuse and fraud, whereby the VRS provider makes and bills for disallowed calls, pays consumers or others to make VRS calls, or pays consumers to make calls to toll-free numbers known to have unusually long hold times.<sup>20</sup>

### 8.2.2. Per session minute

In this option the VRS provider is reimbursed for each minute that the interpreter is engaged on a call; even if the outbound call (such as to the hearing user) is not yet established, or fails (e.g., no answer).

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<sup>19</sup> A conversation minute can be the time that the Deaf and hearing users are both connected to the relay center and the interpreter is conversing with either one of them. Or it may be for the time that the Deaf and hearing users are both connected to the relay center and the interpreter is relaying actual conversation between them (for example, as opposed to explaining relay to the hearing user). The details of how a conversation minute is defined, including to what interval of seconds, are usually specified in a Request for Proposal and in the resulting contract, and therefore need not be resolved here.

<sup>20</sup> This has been a significant problem in the United States, where VRS providers are reimbursed on a per minute basis.

Session minute billing can optionally also be extended to non-relay calls, such as customer service or technical support.

#### Advantages of this option

1. The VRS provider is incented to spend as much time as necessary with consumers, regardless of the function (relay, customer service, technical support, etc.)

#### Disadvantages of this option

1. The VRS provider can abuse the reimbursement design (and annoy the calling party) by spending more interpreter time than is necessary on non-relay functions.
2. The VRS provider may encourage its interpreters to spend non-relay time with callers that are personally known by the interpreters, either before or after the relayed conversation.
3. VRS providers with poorly skilled interpreters will spend more time interpreting on a call than would be spent if the interpreters were more highly skilled. The result is that VRS providers may be financially incented to employ poorly skilled interpreters.
4. Without carefully defined requirements, accountability and monitoring, payment based on minutes can lead to provider abuse and fraud, whereby the VRS provider makes and bills for disallowed calls, pays consumers or others to make VRS calls, or pays for consumers to make calls to toll-free numbers known to have unusually long hold times.<sup>21</sup>

#### **8.2.3. Per completed relay call**

In this option the VRS provider is reimbursed a flat amount for each completed relayed call, regardless of the length of the call.

#### Advantages of this option

5. This type of billing can be easily measured.

#### Disadvantages of this option

1. Since VRS vendors will not know how long the average call may last, or what the effect might be of unusually long calls,<sup>22</sup> this method of payment represents a higher risk to VRS bidders than either conversation minutes or session minutes. The result is that VRS vendors may bid rates that are higher than necessary rates in order to protect themselves against this risk.
2. Unless this payment method is extended to non-relay functions, the VRS provider is financially disinclined to spend significant time on consumer activities that are not directly reimbursable, such as customer service calls, and technical support.
3. VRS providers are incented to try to keep each call as short as possible.

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<sup>21</sup> This has been a significant problem in the United States, where VRS providers are reimbursed on a per minute basis.

<sup>22</sup> For example, late night personal calls may occasionally be significantly longer than day time calls.

#### 8.2.4. Per registered VRS consumer

This option assumes that consumer registration is required. The design of a potential registration system is beyond the scope of this feasibility study, but basic options could be a single national registration system or, with multiple VRS providers, each provider having their own registration system and reporting results for reimbursement.<sup>23</sup>

##### Advantages of this option

4. This type of billing can be measured, especially if there is only one registration system.

##### Disadvantages of this option

1. Since VRS vendors will not know how long the average call may last, or what the effect might be of unusually long calls,<sup>24</sup> this method of payment represents a higher risk to VRS bidders than either conversation minutes or session minutes. The result is that VRS vendors may bid rates that are higher than necessary in order to protect themselves against this risk.
2. VRS providers will be financially incented to not make VRS calls, to keep VRS calls short, and to not spend time on customer service or technical support. The financial emphasis will be on signing up consumers and not on providing the service.
3. In any scenario, most VRS consumers will place very few VRS calls, while a minority will make most of the calls. For this option the VRS providers will be incented to sign up the low volume users and dissuaded from signing up the high volume users.
4. This option will be very susceptible to fraud, as hearing and non-signing people may be encouraged or even paid to register even though it may be against the rules. People who sign but who generally have little interest in using the service will also probably be inappropriately encouraged to register, driving up costs. Inappropriate or fraudulent registration will be very difficult to monitor.<sup>25</sup>

#### 8.2.5. Per video interpreter hour

In this option, a VRS program office contracts with provider(s) to staff for VRS calls, and pays for the staffing level regardless of how many calls are handled or how many minutes are relayed. This model is successfully used in France and other countries where interpreter agencies are also the VRS providers.

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<sup>23</sup> A single registration database could include 10 digit numbering matched to local North American Numbering Plan design, could facilitate peer-to-peer video calling to VRS consumers of different providers, and could facilitate the relaying of emergency calls to a consumer's local 9-1-1 call center, could be used for account management or limitations placed on VRS usage, and could be used to deal with suspected fraud. The use of a single registration database is not dependent upon reimbursement of the VRS providers based on user registration.

<sup>24</sup> For example, late night personal calls may occasionally be significantly longer than day time calls.

<sup>25</sup> For example, a provider may donate money to Deaf advocacy and social organizations with the clearly implied understanding that the organizations will work to get all their members, relatives and friends who sign (including those who would not use VRS) to register with the provider.

### Advantages of this option

1. Eliminates revenue versus cost risks to the VRS provider that would otherwise be dependent on the amount of incoming VRS calls and their length, which the provider has no control over.
2. This type of billing can be easily measured by log-on status on a common single VRS platform.
3. Interpreter efficiency can also be measured by minutes of conversation being relayed during each assigned hour.
4. Eliminates almost all potential vendor fraud by removing incentives for inappropriately increasing the number of minutes, number of call, or number of users.

### Disadvantages of this option

1. Like all VRS payment options, would require establishment of minimum video interpreter qualifications. Potential fraud could occur if those qualifications are not met, or if calls are not answered.
2. Would cause the administrative contracting entity to be more active in forecasting VRS traffic and in collaboratively contracting for the appropriate VRS staffing levels.

### **8.2.6. Fixed annual or monthly amount**

In this option, each VRS provider is provided a fixed amount to provide services for a fixed length of time, regardless of the number of minutes of use or number of calls.<sup>26</sup>

### Advantages of this option

1. For new services in which there are no accurate forecasts of the amount of calls, minutes of use, or number of consumers, or in which the amount of usage is expected to be initially very low, this type of reimbursement can significantly reduce the VRS provider's financial risk.
2. This type of funding can be more akin to a grant than a reimbursement of usage, and as such can be tied to other service requirements and matrices. Examples are funding for a fixed number of interpreters by time of day, or funding to support a certain number of users per month, as well as the provision of other non-relay functions (testing, customer surveys, customer service, technical support, interpreter training, outreach, reporting, etc.)
3. This option will provide consistently accurate cost forecasting, which is not based on changing minutes of use or other variable cost forecasting methods.
4. Eliminates almost all potential vendor fraud by removing incentives for inappropriately increasing the number of minutes, number of calls, or number of users.

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<sup>26</sup> This is the reimbursement model for the VRS interpreter centers in France, which also uses interpreter agencies as the VRS providers. The administrative contracting entity essentially purchases a number of hours of video interpreters from each provider on a schedule agreed upon by the administrator and the provider.

### Disadvantages of this option

1. May be significantly more expensive on a per minute or per user basis, compared to payment for minutes of relay.
2. May not be appropriate or cost effective for a service with many users and minutes of use.
3. May cause the administrative contracting entity to be more active in forecasting VRS traffic and in contracting for the appropriate VRS staffing levels.

### **8.3. Recommendation**

- Adopt a payment methodology that uses a fixed amount for a specific time period, such as during an initial research phase (see section 16, *Implementation*). For a full deployment phase, consider paying vendors for each hour of contracted VRS interpreter's time (without separate funding for non-relay functions), or paying vendors based on relayed conversation minutes.

This payment methodology offers the most value for services performed. If desired, the VRS provider can also be reimbursed for non-relay functions to the degree required by contract. The decision to continue payment based on the number of contracted interpreter hours, or based on per relayed conversation minutes, can be made by the VRS administrative authority as part of its design and RFP for fully deployed services that follow an initial research phase (see section 16, *Implementation*). This decision can be supported by information gained from the research, including consumer usage rates, average answer times, differences in availability and costs of interpreters in different cities or regions, the effect of the then current U.S. VRS reimbursement rates on Canadian VRS operations, and etcetera.

## **9. Consumer Costs**

As with any telecommunications service, consumers of VRS may be expected to pay for certain parts of their calling experience. However, which parts if at all, to what degree, and how subsidies if any should be paid, are all relevant questions. For example, costs typically borne by consumers can include:

1. The cost of consumer VRS equipment or software
2. The cost of broadband service that connects the consumer to the Internet (both fixed monthly costs and usage costs)
3. The wireline or wireless carrier usage costs of the inbound or outbound voice portion of the call
4. A cost per minute or per call for using VRS

Regardless of which type of cost is considered, the overall issue is the same: To what degree, if any, should VRS consumers pay for their access and use of VRS? The answer is in part dependent upon one's perspective of MRS. Is it a service whose purpose is to provide equivalency of telephone service to people who need an accommodation? Or is it a social program with the goal of providing a service to persons with disabilities?

Different countries have established VRS based on these different perspectives. For example the Scandinavian countries consider VRS to be a social program for persons with disabilities, and consumer equipment (including video phones and laptops) is provided to Deaf VRS consumers for free, and VRS usage is without cost to the consumer. In the United States, VRS is part of a legal framework built on telecommunications equivalency for persons with disabilities, and the consumer pays for some VRS costs in the same manner that are paid by voice/hearing users of the telecommunications services in general.<sup>27</sup>

For Canada, the MRS is part of the CRTC's oversight of telecommunications and IP access, and not a social or health service. However, MRS consumer equipment such as TTYs are often provided to consumers for free or subsidized as part of a Provincial government's social or health programs. For VRS the model for consumer costs will most likely be approved if it parallels the consumer cost arrangement for Canadian MRS in general: TTY-Relay and IP-Relay.

Also of significance is the question whether or not non-relay VRS related usage should be charged to the consumer. Examples of this are point-to-point calls, customer service and technical support.

## 9.1. Desired Outcomes

The optimum reimbursement outcome will:

- Be fair, but will not create a barrier to access or use of VRS
- Be easy to administratively manage; and if necessary can be audited
- Is not overly burdensome or costly for the VRS providers
- Will dissuade vendor or consumer misuse of VRS

## 9.2. Options

Rather than identifying every potential option for each type of consumer cost, general consumer costs will be addressed as a single topic. Primary options for consideration are:

1. All VRS consumer costs (equipment, access and usage) are free.
2. Consumers are responsible to obtain their own VRS equipment or software, and pay for their access to VRS. Consumers pay for the VRS call at an amount equivalent to a direct (non-operator) voice call from the consumer to the called party.
3. Consumers are responsible to obtain their own VRS equipment or software, and pay for their access to VRS. There is no additional cost to consumers to use VRS, i.e., outbound calls are free.

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<sup>27</sup> In the U.S. the consumer pays for their own broadband access and usage (wireline, wireless, cable, etc) to reach VRS. The consumers pay for their own VRS equipment or they may accept free equipment from some VRS providers. Unlike U.S. TTY-Relay, there is no per minute or per call cost to the consumer to use VRS.

Additionally, consumer costs for non-relayed VRS calls (e.g., point-to-point calls, customer service and technical support) can be considered:

4. Non-relayed VRS calls are free to consumers.
5. Non-relayed VRS calls are paid for by the consumers.

### 9.2.1. All VRS consumer costs are free

In this option consumers are reimbursed for their VRS equipment or it is provided for free by others (the Provincial or local governments, by the VRS provider, or subsidized from a CRTC VRS fund). Payment or reimbursement could be for paid receipts, vouchers to be used by the consumer to obtain VRS hardware and/or software, or free equipment physically supplied to the consumer. Monthly network access costs and per minute network costs to use VRS via the telephone (for voice users), via the Internet (for VoIP or Deaf users), or via wireless (cellular or satellite for voice and Deaf users) would also be reimbursed to the consumer. When an outbound VRS call is made by the interpreter to the called party, the consumer would not pay for using VRS, and would also not pay for any portion of the call to the called party.

This option aligns more closely with MRS as a social or health program, rather than as a telecommunications accommodation or equivalency program.

#### Advantages of this option

1. Consumers experience no financial barriers to VRS.

#### Disadvantages of this option

1. Considering the variety of network providers and their different rates and billing plans, as well as the variety of equipment types (videophones, computers, laptops, smart phones, tablets, etc), the payment and reimbursement requirements will be very complex to establish and maintain, and very difficult and expensive to effectively operate and manage.
2. This option would require defining payment and reimbursement details with many different network and equipment provider stakeholders, initially and ongoing. Consensus would be difficult to achieve.
3. The total cost of the consumer payment/reimbursement outlay may also be very expensive, and potentially may put the approval and sustainability of the overall VRS program funding at risk.
4. This totally free approach does not align to current CRTC MRS policy. As a general program, if VRS is paid for by Telecommunication Service Provider's ratepayers (either directly or as a percent of TSP revenue), the ratepayers may question the fairness of their paying for services that voice users typically pay for. Therefore this option may not be politically acceptable.
5. To the extent that VRS providers are required to reimburse, pay for, or administer the program, they will likely see this option as an operational and financial burden that may be a barrier to offering VRS.

### 9.2.2. Consumers pay for access, and pay to use VRS

In this option consumers are responsible to obtain their own VRS equipment or software. They can purchase their devices, or they may be able to obtain them for free or at a discount from Provincial or local governments or from a VRS provider.

#### Advantages of this option

1. Many consumers already have VRS compatible equipment (computers, laptops, smart phones, tablets, etc) and will not need to purchase special equipment.
2. Consumers may take advantage of currently existing Provincial or local government programs that provide or subsidize MRS consumer equipment.
3. This option will not be difficult for a VRS administrative body to manage, and will not require significant stakeholder consensus.
4. This option aligns to current CRTC MRS policy.

#### Disadvantages of this option

1. Some VRS consumers may not be able to afford broadband or wireless access to VRS, or may not be able to obtain the necessary VRS consumer equipment.
2. The expense to the VRS provider to establish, maintain and operate a consumer billing system and practice may be more than the revenue it receives from the billing. This outcome is dependent upon the complexity or simplicity of such billing; such as whether it is designed to be financially equivalent to a non-VRS consumer's outbound calling costs, accommodating all types of wireline, wireless, and VoIP carriers and their different rate plans; or whether a simple fixed per minute charge is applied regardless of destination, carrier or calling plan.<sup>28</sup>
3. VRS consumers may not want to pay for the equivalent of the outgoing portion of their VRS calls, especially considering that all VRS calls are free in the U.S.
4. Some consumers may question why they are paying for outbound calls when they are also paying (via broadband or wireless access and usage) to call to VRS and to keep their network connection during the relayed conversation. They may view these costs as already equivalent to making a call directly to the other party.

### 9.2.3. Consumers pay for access, but do not pay to use VRS

This option is the same as the previous one, except that consumers do not pay for the outbound VRS call.

#### Advantages of this option

1. Many consumers already have VRS compatible equipment (computers, laptops, smart phones, tablets, etc) and will not need to purchase special equipment.

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<sup>28</sup> An example of a simple approach might be 5¢/minute for local calls, 10¢/min for long distance, and 90¢/min for international calls.

2. Consumers may take advantage of currently existing Provincial or local government programs that provide or subsidize MRS consumer equipment.
3. This option will not be difficult for a VRS administrative body to manage, and will not require significant stakeholder consensus.
4. This option will be easy for the VRS provider to operate and manage.
5. This option aligns to current CRTC MRS policy.

#### Disadvantages of this option

1. Some VRS consumers may not be able to afford broadband or wireless access to VRS, or may not be able to obtain the necessary VRS consumer equipment.

#### **9.2.4. Non-VRS calls are free to the consumers**

For this option, what is being considered are the costs associated with non-relay VRS related calls. For example, consumer calls to a VRS provider's customer service or to a provider's technical support group. Also under consideration is the cost of consumer calls made through the VRS provider's network, but which are point-to-point (between two people who sign, and not involving an interpreter). These types of services and calls are typically a part of most VRS provider's operations, and the provider's expenses are factored into the provider's general VRS program reimbursement rates.

Nevertheless, a program model decision concerning these expenses should be made so that all stakeholders are clear on expectations. For this option, these types of calls are at no additional expense to the consumer.

#### Advantages of this option

1. Consumers of most services expect that their calls to a company's customer service or technical support are normally free, especially when the call is in regard to using the company's services.
2. Free point-to-point calls are a usual practice in VRS. In fact this type of call is the most prevalent form of VRS platform use, making up 70 to 80 percent of the traffic.<sup>29</sup> Point-to-point calls are truly the Deaf consumers' equivalence to voice users' direct voice-to-voice calling through the telecommunications network. The difference is that since point-to-point video calls are made via the Internet, the consumers' access and usage costs are based on their IP network rate plans instead of based on a telecommunication carrier's voice rate plans.
3. Free non-relayed VRS calls will significantly encourage potential VRS consumers to understand and use the service.<sup>30</sup>

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<sup>29</sup> Mission Consulting assessment based on proprietary data of U.S. VRS providers. This figure will likely also be confirmed with the Telus VRS trial.

<sup>30</sup> Also refer to section 11, *Education and Outreach*.

### Disadvantages of this option

1. The VRS provider's costs to handle these types of calls will need to be built into the provider's overall VRS reimbursement.
2. Some minor program or provider revenue may be not realized.

### **9.2.5. Non-VRS calls are paid for by the consumers**

For this option non-relayed VRS calls are charged to the consumer.

### Advantages of this option

1. Some revenue will be generated for non-relayed VRS calls.

### Disadvantages of this option

1. Easy access to customer service and technical support is crucial for VRS to succeed. Placing a cost on these calls could be a barrier to adoption of VRS, not from a financial point of view as much as from a cultural point of view.
2. Establishing a cost to use point-to-point video calling through the VRS provider's network will likely result in most consumers either electing to use a free point-to-point service such as Skype, or will result in numerous consumer complaints that they did not know they would be charged or that they are being taken advantage of.
3. The cost to set up and maintain a billing program for non-relayed VRS calls may exceed the revenue generated.

## **9.3. Recommendation**

For this area of consideration, the following are recommended:

- Consumers are responsible to obtain their own VRS equipment or software, and pay for their broadband access to VRS.<sup>31</sup> There is no additional cost to consumers to use VRS, i.e., outbound calls are free.
- Non-relayed VRS calls are free to consumers.

The cost and operational and administrative overhead associated with complex reimbursement and bill back scenarios is excessively burdensome and frequently non-functional. The program should be kept operationally simple, designed to encourage consumer participation, aligned to CRTC policies, and be within the expectations of usual VRS provider operations. These two recommendations achieve those purposes.

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<sup>31</sup> Consumer representatives request that the CRTC consider discounted usage based broadband fees for VRS users similar to the current 50% discount applied to TTY calls.

## 10. Consumer Technical Support

VRS customer support will be necessary in order to assist consumers implement VRS to their end-user video devices. In some cases this will be a download of an application through the Internet, or the IP connection and set up of a video phone, or the configuration of a firewall and computer for optimum VRS. In many cases consumers will handle these tasks without difficulty, particularly if they have experience with current consumer computing or communication devices and networks. However, there will be potential VRS consumers who have little or no exposure to technology, and who are not comfortable communicating in English or French. These consumers in particular will need technical assistance provided in their sign language. This type of technical support will be required in the field for installation assistance, and remotely by video (e.g., via Skype), by text (via IP chat, SMS and TTY), and by voice (for at home or work assistance provided by a hearing person on behalf of the Deaf person).

Some countries, e.g., Sweden, provide and set up the consumer's VRS equipment at the consumer's location (work or home) at no cost to the consumer. In the U.S. the most popular VRS providers (that have about 85% of the market) do the same. In the case of the U.S. providers who do this, the equipment they provide is set up to work with the provider's service, and installation includes demonstrating how to use the provider's VRS. Typically the equipment is installed and explained to the consumer by a Deaf technician.

The questions for Canadian VRS are: to what extent will field technical support be needed, and who is the best entity to provide it, and who is best equipped to provide remote VRS technical support?

### 10.1. Desired Outcomes

The desired outcomes for consumer technical support are:

- Easy setup and support experienced by consumers for all technical aspects of VRS (device, network and VRS).
- Cost effective/affordable technical support.
- Technical support provided in the preferred language of the consumer.

### 10.2. Options

The following options for consumer technical support are offered for consideration:

1. Offered by the consumer equipment suppliers
2. Offered by the TSPs
3. Offered by the VRS providers
4. Offered by the VRS platform provider
5. Offered by a third party or parties
6. Offered by a hybrid of entities

### 10.2.1. Offered by the consumer equipment suppliers

This option aligns with the fact that there are many different manufacturers and models of end-user consumer devices that may be compatible with VRS. These devices are always changing in the marketplace, with new models regularly being offered. Many consumers new to technology may need assistance with basic device set up and operations, in addition to setting up the devices for compatibility with VRS. This option assumes that most VRS consumer assistance will be needed at the device level, and suggests that the manufacturers and suppliers of these devices are in the best position to support consumer technical assistance.

#### Advantages of this option

1. It takes advantage of a robust market driven evolution of consumer technologies, and their existing technical consumer support operations.
2. Many device manufacturers' consumer technical support operations are accessible by email and web chat, as well as through TTY-Relay.
3. Technical support is also available in person at some retail outlets where the devices can be purchased.
4. Device support is market driven, and is available to all consumers.
5. Many devices are relatively simple to set up (e.g., "plug and play" applications, etcetera) and many devices will not need unique configuration for VRS that is beyond the capability of most manufacturer/supplier's technical support capabilities.

#### Disadvantages of this option

1. Existing device technical support is usually not available in sign language, and therefore may not be accessible to people who are not conversant in written English or French.
2. Although most device manufacturers may have an understanding of general video communication requirements, most will have no understanding of VRS. Consequently very few will be able to assist with any unique setup requirements for VRS that may be different from general video communications.

### 10.2.2. Offered by the TSPs

This option assumes that because VRS will be accessed through the networks of the TSPs, that they will be in the best position to assist consumers with technical support.<sup>32</sup>

#### Advantages of this option

1. Because VRS is a telecommunications and IP network service (paid for by TSPs, and regulated by the CRTC), therefore the TSPs should be responsible for VRS's technical support to consumers.

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<sup>32</sup> The acronym "TSP" used herein includes telecommunications service providers, wireless service providers, and Internet service providers.

2. Most TSPs already have technical support available, both via consumer help desk access (web-chat, voice, and TTY or TTY-Relay), as well as established field technical support for installation and repair.
3. TSP technical support is market driven, and is available to all consumers

#### Disadvantages of this option

1. Existing TSP technical support is generally not available in sign language, and therefore may not be accessible to people who are not conversant in written English or French.
2. Although most TSPs may have an understanding of general video communication requirements, most will have no understanding of VRS. Consequently very few will be able to assist with any unique setup requirements for VRS that may be different from general video communications.
3. TSP technical support will usually only be capable of providing assistance for the setup and use of their networks – this is particularly true for wired IP networks, e.g., DSL and cable. (Wireless providers usually do offer technical support for both their wireless network and wireless devices, both in-store and remotely.)

#### **10.2.3. Offered by the VRS providers**

This option suggests that VRS providers are in the best position to offer technical support to consumers of VRS because they best know their software application requirements and network configuration requirements. The viability of this option is influenced in large part by the model of who the VRS providers are. If they are professional VRS companies with technical support staff, this can be a good option. If they are professional interpreting organizations with little technical staff capabilities, this option will probably not be practical.

#### Advantages of this option

1. VRS professional companies have the strongest motivation to solve all VRS consumers' technical problems so that the consumer will be able to use VRS, and the provider will receive revenue.
2. VRS providers typically have technical staff that can assist consumers with setup and operational questions.
3. VRS providers typically have staff that can communicate with consumers in sign language. Staff can be available at outreach events. Some VRS providers, e.g., Sorenson, provide setup and instruction in the home at no cost to the consumer (under the U.S. compensation model).

#### Disadvantages of this option

1. If VRS providers are interpreting agencies or similar organizations they will not have technical staff knowledgeable or available to help consumers with their technical questions.
2. It is impractical to assume that all VRS providers will have knowledge of all consumer devices and all network issues. Their primary focus will be on their own devices (if any), and their own user software.
3. Most VRS providers are too small to offer in-home setup, or to attend outreach events in all locations. Most may be too small to assume the responsibility to offer technical support

nationwide for an entire new population of potential users that is significantly larger than their current user base.

#### **10.2.4. Offered by the VRS platform provider**

This option assumes that the VRS platform provider is most knowledgeable regarding the specialized VRS software that will be used by consumers, and therefore they are in the best position to provide VRS technical support.

##### Advantages of this option

1. If the VRS platform provider is the same as the VRS provider (e.g., where the VRS provider uses its own proprietary software as is the case with many U.S. VRS providers – Sorenson, Purple, ZVRS, etcetera), then this solution is operable to the same degree (advantages and disadvantages as the previous option).
2. If the VRS platform provider is not a VRS provider (e.g., iVès, nWise, and AuPix supporting most VRS operations in Europe), these companies are expert in their software and know its technical compatibilities and interoperability better than anyone else.

##### Disadvantages of this option

1. The independent VRS platform providers, e.g, iVès, nWise, and AuPix, are small companies that are not staffed to handle direct contact with a large consumer base. Their business focus is to support the VRS providers that use their software, not the consumers.
2. The independent VRS platform providers are not in a position to answer all types of technical questions regarding all potential consumer devices or networks.

#### **10.2.5. Offered by a third party or third parties**

This option assumes that none of the above options are viable, and that the best option is to establish or contract with a third party to provide technical support for consumers. The contract requirements could specify the level of support required (e.g., in-home or not; device, network and/or VRS software support; support at outreach events; etcetera).

##### Advantages of this option

1. The design and degree of support can be predefined in a procurement or contracting process.
2. The desired services can be specific to the needs of the signing public.

##### Disadvantages of this option

1. This could be a very expensive solution for technical support, depending upon the services required.
2. No single entity is likely to have all of the required expertise (device, network, VRS, signing, etc.) and therefore a hybrid or new entity creation would probably be required. (For example, existing third party technical support companies with field service capabilities, such as Geek Squad and others, are focused on the general public PC market, and only have some of the expertise and skills that may be needed.)

3. The new service entity would need to learn much of the information necessary.

#### 10.2.6. Offered by a mixture of entities

This option assumes that different parts of the technical environment are best handled by the organizations that serve those parts, and where there is a service gap, that a new entity might be sought or created to service that gap and to share information with consumers and the providers of the various technologies used by consumers of VRS.

In this technical service model, the first level of consumer technical support for VRS compatible consumer devices is provided by the device manufacturers and suppliers, including field support to the degree that they offer it. The first level of support for the consumer network setup, access and usage is provided to the VRS consumers by the TSPs, including field support to the degree that they offer it. If the VRS providers are established VRS companies with consumer technical support capabilities or if they are using their own proprietary VRS software at the client interface (e.g., downloaded on videophones or computers), then those providers would offer their technical support of the VRS software to the VRS consumers. If the VRS software is provided by a third party company not associated with a VRS provider, then a separate third party entity may be the optimum source for consumer technical support of the VRS software. In this instance the third party entity may optimally also be focused on keeping track of the consumers' significant VRS issues with the device manufacturers/suppliers, the network providers, and the VRS software provider, only as they relate to VRS. The first role of this task would be to identify problems and to try to get the device manufacturers, network providers, and VRS software provider to address the problems and to cooperatively develop solutions. The second role of this task would be to publicize issues, actions and results to the VRS consumer communities in the preferred language of the consumers and through the outreach of the consumer organizations.

#### Advantages of this option

1. This option makes use of the knowledge and technical support capabilities already in place for each portion of the technologies used by VRS consumers.
2. A third party role is focused on getting these entities to solve consumers' VRS problems instead of trying to have the third party develop the technical solutions.
3. The level of support and funding of the third party can be predefined in a procurement or contract, including reporting of status and findings.

#### Disadvantages of this option

1. Consumers will be looking to multiple entities instead of a single entity for assistance in setting up and operating their VRS.
2. There will be finger pointing between the different entities (our part is working fine, the problem is the other guy's.)
3. This may require the establishment of a new third party technical support/coordination entity (if this service cannot be offered by an established VRS provider.)

### 10.3. Recommendation

For this area of consideration the recommendation is:

- The providers of each part of the service are responsible to offer their own consumer technical support. This is the mixed approach described in section 10.2.6.

This approach maximizes the existing available technical support and product/service knowledge without creating new costs for that support. It also offers the possibility of a third party that can provide the knowledge transfer from the Deaf consumers to the manufacturers/service providers, and feedback for common issues to the Deaf community. The costs associated with this third party can be controlled through the management of roles, responsibilities and funding.

## 11. Education and Outreach

As discussed in more detail in this study's phase 7, *Quality of Service*, education and outreach will be key components to a successful VRS implementation. All potential users of VRS (Deaf, deaf, hard of hearing and hearing) will need to know: how VRS works; the compatibility requirements for consumer equipment, software, and broadband; how to acquire the equipment and software; how to make and receive calls; how to sign up for the service and what functional options are available; how to reach customer service; how to get technical help; and other related information.

From a design perspective the issues are:

- Who needs to receive education and outreach?
- Who should carryout it out?
- Who should pay for it?

### 11.1. Desired Outcomes

Desired outcomes for education and outreach are an understanding

- By potential VRS consumers that the service is available, and what is necessary in order to use it.
- By hearing users that VRS calls may be made or received.
- By the telecommunication service providers, wireless service providers, and Internet service providers (all referred to herein as "TSPs") of their role in providing VRS.

### 11.2. Options

Five primary options offered for consideration are that education and outreach should be provided:

1. By the VRS vendors.
2. By the nonprofit groups that represent consumers.

3. By the TSPs.
4. By public social service agencies.
5. By a mixture of the above.

#### 11.2.1. Provided by the VRS vendors

This option assumes that the VRS providers are in the best position and are the most motivated to perform education and outreach, and can do so as a normal operating expense of VRS. Minimum requirements for education and outreach could be included within a provider's contract, or an approach could be taken in which requirements are not set, and providers carry out education and outreach to the extent that they believe will benefit their ability to successfully provide the service and at an expense that they determine contributes to their return on investment and profit.

##### Advantages of this option

1. VRS providers are inherently motivated to take all reasonable steps to maximize consumer use of the service. Therefore they should be willing to perform this function.
2. VRS providers can perform this function as part of their normal operations. Therefore no additional contracts are required for education and outreach.
3. VRS providers should be able to communicate using the preferred sign language of the potential consumers of VRS.
4. Certain functions such as customer service are best provided by the VRS vendor. It can be unclear to what extent customer service may be considered education and outreach. Having the VRS provider responsible for all eliminates any potential concern about who is appropriately performing which function.
5. Having the VRS provider do education and outreach will ensure that the provider develops close relations with the consumers, and knows of their concerns and needs.

##### Disadvantages of this option

1. VRS providers' primary motivation is to make a profit. Any education and outreach performed by them will be only to that purpose. Education and outreach that does not significantly contribute to the bottom line, will not be done or will not be done effectively.
2. Some types of education, such as general media campaigns to hearing users to let them know about VRS (e.g., do not hang up on VRS calls), are likely not within the VRS provider's normal business skill set, and should not be expected to be performed effectively or efficiently by them.
3. While it may be normal for a few VRS providers to perform education and outreach, their core competency and business focus is running multiple small VRS call centers. They may not have the trained resources to perform the necessary education and outreach.
4. Canada is geographically a very large country. Education and outreach may be too large a task for a medium to small VRS provider.
5. In VRS models where there are multiple VRS providers competing for consumers (such as in the U.S.), the VRS providers are motivated to perform education and outreach in order to try to gain market share. If Canada adopts a VRS model with only one provider for ASL and one provider

for LSQ, those providers will have no competitive motivation to perform education and outreach.

6. Education and outreach performed by the VRS providers tends to emphasize the provider company rather than the service. For example, a provider will try to use media and outreach to “brand” their name and selection of their product/service, rather than promoting a generic service such as “VRS Canada” that might be the general service description for all VRS provided in Canada at the time, and in the future.

### **11.2.2. Provided by the consumer groups**

This option assumes that the consumer advocacy and social groups are the best organizations to provide education and outreach.

#### Advantages of this option

1. The consumer advocacy groups and social organizations of the Deaf, deaf and hard of hearing know their members’ needs, and are better connected to their members, than any other entities.
2. They already have established two-way communication with their members, and education and outreach are already a normal and significant part of their operations.
3. They can communicate using the preferred sign language of the potential VRS consumers.
4. The consumer groups will be highly motivated to perform some level of VRS education and outreach to their members, as a function that will be highly valued by their members.

#### Disadvantages of this option

1. Consumer advocacy and social groups are generally not equipped to handle VRS customer service.
2. Except for just a few national or provincial groups, most consumer groups cover a very small geographic area or potential user base. In order to assure that the consumer groups perform education and outreach with consistency of effort and message, some entity will need to coordinate the ongoing engagement of these groups.
3. Most consumer groups are run by volunteers, who may not have the time, skills or financial capabilities to perform VRS education and outreach adequate to the need.

### **11.2.3. Provided by the communication utilities (TSPs)**

This option assumes that because VRS will be funded by the telecommunications and IP providers, and is regulated by the CRTC, then the telecommunications service providers (wireline and wireless and Internet service providers), should be responsible for education and outreach as a normal part of their business.

#### Advantages of this option

1. All VRS consumers will be customers of a TSP and therefore should be able to be reached by their TSP.

2. Since TSPs need to be aware of VRS anyway, an argument can be made that they should therefore be made responsible for VRS education and outreach.
3. TSPs have existing operations in marketing and education. Therefore they should have the skills and resources to perform the function, especially to the hearing community.

#### Disadvantages of this option

1. TSPs do not understand the Deaf and would therefore not be effective at education and outreach to the potential VRS user community.
2. TSPs do not have two-way communications already established with potential VRS consumers, and are not equipped to do so.
3. TSPs are not equipped to communicate in the sign language of the potential VRS consumers.
4. The TSPs will view VRS as a cost but not as a revenue generator. Therefore they will never be motivated to perform VRS education and outreach, and will not be motivated to do an excellent job. Education and outreach performed by TSPs will likely be inadequately performed, will not be sensitive to the needs of the Deaf or other VRS consumers, and will not adequately offer two-way communication with the VRS consumers.
5. The customer service and technical support functions of TSPs will likely remain focused on the services that they directly offer, and will likely not be expanded to include VRS functions. Therefore TSPs should not be expected to answer customer service and technical support issues of VRS, except as they may relate to the TSP portion of the call or service set up.

#### **11.2.4. Provided as a public social service**

This option assumes that VRS education and outreach can be best performed as a public service of a government run or sponsored social service. In addition to general public education campaigns, this type of approach can also be used to reach specific social or business venues for messages tailored to these organizations. Examples are educational campaigns directed at financial institutions, health care providers or insurers, educational institutions and districts, large business employers, etcetera. Each of these will need to know how to accept and use VRS in light of their own unique concerns for consumer privacy or other considerations. This type of education and outreach can be performed directly by the social service agency or contracted to marketing campaign companies.

#### Advantages of this option

1. General public education campaigns are a normal part of social service programs (such as stop smoking campaigns, etcetera), and therefore can be most effectively managed by these organizations.
2. Public education campaigns have been proven to be the most effective, consistent and cost efficient way to reach the general population with a simple message, when a large for-profit business is not self-motivated to advertise the message.

### Disadvantages of this option

1. Social service programs may not have the knowledge, the expertise, or the close relationships with the Deaf, deaf and hard of hearing communities that are needed in order for education and outreach to these groups to be effective.<sup>33</sup>
2. Public education campaigns are only effective for a simple message. They cannot effectively communicate details.
3. Most social agencies cannot communicate using the preferred sign language of potential VRS consumers.
4. Social agencies will have no expertise in the VRS customer service that will be needed by VRS consumers.

### **11.2.5. Hybrid of the above**

This option assumes that the best way to provide the necessary VRS education and outreach will be by a mixture of the above options.

### Advantages of this option

1. This approach will ensure that the organizations that are best at what they do, and are motivated to perform education and outreach within their normal business operations, are engaged for those functions.
2. This approach will not try to be a “one-size fits all” solution, but will match specific education and outreach needs to organizational capabilities.

### Disadvantages of this option

1. It will take an overall planning, coordination and ongoing management effort, which may need to be significant.
2. Funding will need to be allocated to multiple organizations and through multiple contracts or grants.

## **11.3. Recommendation**

As seen from the review of advantages and disadvantages, different organizations have different purposes, resources and motivations. No single approach will likely meet all of the requirements for education and outreach. Therefore the recommendation is for:

- Different organizations to offer education and outreach according to their expertise and constituents. This is the hybrid or mixed approach described in section 11.2.5, and is suggested with the following particulars:

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<sup>33</sup> They could, however, collaborate with the Deaf advocacy organizations and interpreting agencies to make their messages available in sign language and to develop outreach plans.

- ✓ VRS providers are best suited to offer VRS customer service and VRS technical support.
- ✓ VRS providers should be expected to perform some direct outreach activities to VRS consumers so that they make themselves available to learn directly from consumers what service improvements are desired.
- ✓ Consumer advocacy and social organizations are best suited to provide most outreach to their members who are potential VRS consumers.
- ✓ Government (federal, provincial or local) social agencies are best suited to provide educational campaigns to the general public, especially to the hearing population.
- ✓ TSPs will need to be educated regarding the availability of VRS to their customers and will need to know the technical requirements of how their services work with VRS so that they can be responsive to VRS consumers who need assistance in establishing or troubleshooting their VRS connection. But TSPs should not be expected to perform VRS education and outreach to either the VRS consumers or to the general population.
- ✓ A third party coordinator/administrator will be needed to manage or coordinate some of the above efforts.

## 12. Other Related Services

In this study's phase 8, *Potential Related Services*, six services that could be associated with VRS were analyzed for potential inclusion or exclusion with Canadian VRS.<sup>34</sup> In this section 12, these related services are considered from the perspective of an optimum VRS model.

### 12.1. Desired Outcomes

The primary desired outcomes for the possibility of including the related services within VRS are:

- The additional services offer functionality that will be desired by consumers
- The additional services do not add any significant cost to the VRS program
- The additional services do not create a significant additional demand for interpreters
- The additional services do not create a significant administrative or management burden on the program
- The additional services do not create a significant technical or administrative challenge for the VRS providers

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<sup>34</sup> See this study's phase 8, *Potential Related Services*, for descriptions of these services, a discussion of their application to VRS, the potential relative significance of their cost impacts to VRS, their congruity to MRS regulations, and their potential effect on VRS administrative oversight.

- The additional services are not contrary to MRS regulation or policy, and are acceptable by all stakeholder groups

## 12.2. Options

Although each of the following options should be considered from the point of view of whether or not they should be included within the Canadian VRS model, they are presented here in a positive format, i.e., the related service will be included within VRS, simply as a device that will allow each option to be discussed in the continuing format of “advantages” and “disadvantages” of each option.

1. Include Video Remote Interpreting (VRI) within VRS
2. Include video mail and related message answering services within VRS
3. Include non-ASL and non-LSQ forms of visual communication within VRS
4. Include the ability to select specialized interpreters within VRS
5. Include French-ASL and English-LSQ translation services within VRS
6. Include relaying of emergency calls to 9-1-1 call centers within VRS

### 12.2.1. Include Video Remote Interpreting (VRI) within VRS

This option assumes that VRS providers will be reimbursed from the VRS fund for VRI.

#### Advantages of this option

1. VRI will remotely support the need for interpreters at a site (such as at a business visited by people who use sign language) and can be an effective and cost efficient way of providing interpreting, especially for non-scheduled, short duration interpreting needs.

#### Disadvantages of this option

1. It is unknown what the impact of including free VRI within VRS will have on minutes of use, the need for additional VRS interpreters, the additional costs to the VRS program, and the impact upon community interpreting and interpreting agencies. Without this information it would be very risky to order VRI as a part of VRS.
2. Since VRI is not an equivalent telecommunications function and not relay, it may be outside the authority of the CRTC to: 1) require TSPs to fund, 2) mandate as a part of VRS, and 3) reimburse VRS providers for VRI.
3. Many VRI and community interpreting settings such as government, medical or legal, are currently meant to be accommodated through provincial laws related to accessibility, and should not be conflated with CRTC mandated VRS.

### 12.2.2. Include video mail and related message answering services within VRS

This option assumes that video mail and related message answering services will be reimbursed from the VRS fund. If the video mail is from a relayed caller, then the interpreter time would be considered reimbursable. If it is a point-to-point call, without involving an interpreter, then reimbursement would not be provided. Retrieval of video mail typically does not involve an interpreter.

### Advantages of this option

1. Video mail is equivalent to a hearing user being able to retrieve a message from their answering machine or voice mail service.
2. Most VRS platforms provide video mail capability, and it is a common feature offered by many VRS providers.

### Disadvantages of this option

1. There will be some additional minor interpreter time and reimbursement costs involved for video mail.

### **12.2.3. Include non-ASL and non-LSQ forms of visual communication within VRS**

This option assumes that a variety of visual communication is provided as part of VRS. In addition to ASL and LSQ, this includes visual or sign supported speech, signed transliteration, cued speech, lip reading/ speech-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.

VRS can also be supplemented by text (e.g., English or French) provided as real-time text within the VRS screen/session. This can speed up the interpreting and accuracy of some relayed information such as names, addresses and numbers.

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).

This option assumes all of these features will be part of VRS.

### Advantages of this option

1. The above ancillary services will make VRS far more useful for a broader range of people who use visual modes of communication.
2. All of the services are technically easy to provide.<sup>35</sup>
3. Generally the services require only minimal additional interpreter training, which depending upon the type of VRS provider, may be offered by the provider.
4. None of the additional communication modalities will significantly increase the demand for interpreter time or VRS costs.<sup>36</sup>

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<sup>35</sup> Especially with VRS platforms that offer “Total Conversation” capabilities.

<sup>36</sup> See this study’s phase 9, *Forecasts of VRS Demand*, and phase 10, *VRS Cost Variables and Forecasts*.

### Disadvantages of this option

1. Cued speech would require additional interpreter training, is not offered in college and university interpreter training programs, is often not accepted by many consumers and its level of use may be marginal.<sup>37</sup>
2. Speech reading without sign language support is highly susceptible to fraudulent use.

### **12.2.4. Include the ability to select specialized interpreters within VRS**

This option offers the ability for consumers to request interpreters with special skills or attributes such as:

- Specialized vocabulary or experience (such as medical, legal, etc.)<sup>38</sup>
- 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 male consumer can select a male interpreter to voice for him)

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.

For VRS it is assumed that the above specialized services would be made available to the extent that they are available within the VRS provider's employed interpreter labour pool. The VRS provider would not be forced to have interpreters on staff to meet every consumer request for these specialized services.

### Advantages of this option

1. The above specialized interpreter services or skills will make VRS more useful for relaying in a wider range of situations or assignments.
2. All of the services are technically easy to provide.
3. The services can make use of the additional skills, training and experience of some interpreters, to the degree that they are available.
4. None of the additional specialized interpreter services will materially increase the demand for interpreter time or VRS costs.

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<sup>37</sup> If interpreter training programs were to offer training in cued speech, it is unclear whether interpreters would elect to take the training as many are opposed to it due to its controversial nature; i.e., it is generally considered to not be a language or a means of communication, but is often considered to be a tool used to teach speech, and therefore viewed by many as audism. See this study's phase 3, *Consumer Interests and Perspectives*, and phase 6, *Interpreter Considerations*.

<sup>38</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 interpreter offering".

### Disadvantages of this option

1. None

### **12.2.5. Include French-ASL and English-LSQ translation services within VRS**

This option assumes that relayed calls between ASL and French, and between LSQ and English, will not be required but will be allowed and reimbursed. Alternatively they could be required; however, there are only a few interpreters that may have the ability to provide this combined interpreting/translation service.

### Advantages of this option

1. This option would expand the ability of people who use ASL or LSQ to converse with people who use either English or French, which could be very useful.

### Disadvantages of this option

1. It has been reported that only a few interpreters have the ability to provide this combined interpreting/translation service.
2. Translation is not part of other MRS services: TTY-relay and IP-relay, and is not part of existing CRTC MRS policy or orders.
3. Hearing telephone users do not have access to free translation services. Therefore an argument can be made to exclude translation from any MRS including VRS.
4. The demand for combined interpreting/translation services is unknown. In a few other countries where it is provided as part of VRS, it is offered only by appointment during limited hours.<sup>39</sup>
5. If oral interpreting or speech-reading are provided through VRS or by VRS providers, the addition of translation could potentially invite misuse of VRS or fraudulent VRS calling, impacting interpreter resources and program costs. To the extent that VRS providers might be complicit in such arrangements, this could be difficult to monitor and correct.

### **12.2.6. Include relaying of emergency calls to 9-1-1 call centers within VRS**

This option assumes that consumers' emergency calls to 9-1-1 centers can be placed through VRS. This option assumes that these calls are relayed, not point-to-point.<sup>40</sup>

### Advantages of this option

1. This option aligns with the CRTC's requirement for emergency calls from consumers to be relayed to 9-1-1 call centers (Public Safety Answering Points) via TTY-relay and IP-relay.

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<sup>39</sup> Sweden offers VRS translation services four hours a week.

<sup>40</sup> See this study's phase 8, *Potential Related Services*, section 7, *Integration or Interface of VRS with Emergency Services* for more information.

2. This option allows consumers to communicate with 9-1-1 call center personnel via relay using the consumers' preferred sign language. Communication will be faster and usually more accurate than with either form of text relay.

#### Disadvantages of this option

1. It may be complex and time consuming to establish, depending upon the degree of automation required.

### **12.3. Recommendations**

The recommendations for inclusion or exclusion of the related services within VRS are as follows:

#### Video Remote Interpreting (VRI)

- VRI should not be paid for from VRS funds as a part of VRS. However, the VRS platform should be made available to VRS providers at cost so they may offer VRI independently of VRS and without cost to VRS.

However if VRI is approved by the CRTC as part of VRS paid for from the VRS fund, it should only be initiated within a controlled and measured trial because the demand and impact of VRI is unknown. If the trial indicates that the impact of VRI is minimal for VRS interpreter demand and VRS costs, and other considerations are acceptable, only then should VRI be offered in a permanent production mode as a normal part of VRS.

#### Video mail

- Video mail should be a normal part of VRS.

Video mail is a normal part of most VRS capabilities, incurs minimal costs, and provides a valuable communication service comparable to that enjoyed by hearing users. VRS providers should be allowed to limit a consumer's mail storage in order to not place a stress on the providers.

#### Non-ASL and non-LSQ forms of visual communication

- All of the forms of visual communication discussed, including VCO, HCO and supporting real-time text, should be included in VRS to the extent that interpreter resources are available..

These forms of communication augment VRS and broaden its usefulness to more people, including people who are deaf or hard of hearing that do not use ASL or VRS, but rely upon other modes of visual communication. In particular some of these forms of visual augmentation such as HCO and VCO are widely regarded as basic and integral requirements of relay, and should not be considered as optional. The cost impact of including these forms of visual communication is expected to be negligible.<sup>41</sup> These

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<sup>41</sup> See this study's phase 3, *Consumer Interests and Perspectives*, and phase 10, *Cost Variables and their Forecasts*.

forms of communication augmentation should be included within a controlled and measured initial research phase so that information can be gained regarding the usage, procedures, and training that may be necessary in a fully deployed VRS environment.

#### Select specialized interpreters

- All of the specialized interpreter functions should be allowed.

These specialized services are often offered by experienced VRS providers, and can be made available to the consumers in a way that is congruent with the VRS providers' capabilities. These specialized capabilities should be included within a controlled and measured initial VRS research phase so that information can be gained regarding the usage, procedures, and training that may be necessary in a fully deployed VRS environment.

#### French-ASL and English-LSQ translation

- French-ASL and English-LSQ translation should not be included within VRS.

It is not practical to mandate translation services since there are only a few interpreters with the capability to provide simultaneous interpreting and translation. If it is allowed, it should first be offered through a controlled and measured trial. If a trial proves translation to be effective, and if it does not place too great a demand upon interpreter resources, and if it is not subject to fraud and misuse, only then it might be considered for limited availability within VRS with CRTC approval.

#### Relaying of emergency calls to 9-1-1 call centers

- Relaying of emergency calls to 9-1-1 call centers should be a CRTC mandated requirement of VRS.

If the CRTC mandates that VRS only needs to be provided within limited times of day or days of the week, then availability of relaying emergency calls to 9-1-1 should only be required during the hours that the VRS providers offer VRS to consumers.

Because the establishment of VRS to 9-1-1 may be complex (depending upon the functional design), the implementation of VRS to 9-1-1 should take place during an initial controlled and measured research phase of VRS. Serious caveats should be made to all consumers and research phase participants that other already proven ways to contact 9-1-1 (TTY-relay and IP-relay) should be considered and relied upon until 9-1-1 VRS access issues are identified and resolved. The deployment of VRS should not be delayed while these complexities and issues are worked out.

## 13. Program Governance and Management

Rules defining the VRS program will need to be developed and maintained. The program will then need to be managed to those rules. VRS is a very complex service and program with many different involved parties. The question arises; what is the optimum model of governance and management of the VRS program?

### 13.1. Desired Outcomes

The primary desired outcomes for governance and management are:

- Ease of governance/management
- Responsive to consumer input
- Facilitates cooperation among all parties
- Encourages continuous program improvement
- Responsive and effective in dealing with challenges
- Results in an affordable cost to the ratepayers and the public
- Minimize opportunities for VRS vendor or user fraud, misuse or waste
- Facilitates quality service
- Equity of services and treatment for all parties

### 13.2. Options

1. CRTC provides total management through regulation.
2. TSP managed in response to CRTC orders.
3. By a third party administrator agency.

#### 13.2.1. CRTC provides total management through regulation

This is the U.S. model, where all detailed rules regarding VRS are provided by the FCC. In this option, the many varieties of issues are constantly worked on by FCC staff, with an almost unbroken string of open proceedings, petitions, and “temporary” waivers since the inception of VRS. Ongoing input is received from stakeholders with vested interests (primarily VRS providers) with fewer comments from advocacy groups and the public, and very few comments from state government organizations. Orders are made directly to the VRS providers in lieu of the telecommunications carriers.

#### Advantages of this option

1. All authority and decisions are in one organization.

### Disadvantages of this option

1. The management of VRS can be a very complex and detailed endeavor, and the regulatory process may not be the best way to handle all the situations and management obligations that may arise.
2. The management of VRS will likely require daily involvement and significant effort. If all of this was the responsibility of the CRTC, it would be very labour intensive for the CRTC.
3. The time required for the regulatory process may prevent issues from being addressed in a timely manner.<sup>42</sup>
4. The regulatory process is geared to respond to input rather than create its own research. Almost all input received is not neutral; it is biased towards the self interest of the stakeholders.
5. Consumer input can be significantly manipulated by VRS providers.<sup>43</sup>
6. VRS governance at the public regulatory level is subject to significant political influence wielded by stakeholders. Experienced VRS vendors may resort to political means or the courts when they do not obtain favorable rulings from the CRTC.<sup>44</sup>

### **13.2.2. TSP managed in response to CRTC orders**

Since VRS will be regulated by the CRTC as a telecommunications and Internet service provider service, and paid for by the TSPs, it can be argued that the TSPs should be the ones to perform the detailed day-to-day management of VRS. Such management would be in response to CRTC orders that generally define VRS and provide such management authority to the TSPs. If the VRS model selected assigned the responsibility to provide VRS to each TSP, the governance may be through CRTC approved TSP tariffs. The daily management of the service would be carried out by the TSPs.

### Advantages of this option

1. Governance is aligned with who is paying for the service.

### Disadvantages of this option

1. TSPs that are not also VRS providers will have little self interest in managing the complexities of VRS for quality service. Their primary focus will be to keep costs low so that they pay a minimum to support the service, and to maintain a low risk of liability.

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<sup>42</sup> The U.S. FCC experience has demonstrated that some issues can take years to reach resolution. Some issues, such as high costs, have never been resolved.

<sup>43</sup> In the U.S., consumer input is often manipulated by VRS providers, who frequently get consumers to send in identical complaints or positions by the hundreds or thousands based on minimal or often false information. For example if the FCC is planning on reducing the reimbursement rate by 30 cents based on VRS provider submitted costs, providers will initiate a campaign to consumers asserting that the FCC is going to make the providers go out of business and end their VRS.

<sup>44</sup> In the U.S. when VRS providers do not get their way they use all available methods to combat the FCC's plans or orders, including political means and the courts.

2. It is unclear how multiple TSPs would manage VRS provided by others. This would be expected to be a problem since few, if any, TSPs are expected to provide VRS from their own call centers.
3. A collaborative management approach between TSPs would be necessary. The outcome could be delays, little interest, and minimal resources applied to issues. Consensus on issues may be difficult to obtain, as most TSPs would not be interested in the details of VRS.

### 13.2.3. Managed by a third party administrator

This option assumes that the best governance and management approach would be one in which the industry (TSPs), at the direction of the CRTC, creates a third party VRS administrator agency (the Corporation) to which it provides funding, and through its Board, direction. The agency would be an independent, accountable corporation and run accordingly (i.e. in the corporation's best interest and mandate). In order to determine the makeup and structure of the agency, the following five guiding principles for governance are suggested.<sup>45</sup>

#### Linguistic and Cultural Balance

In order to ensure that all potential users of VRS have meaningful input and all major interests are represented, the VRS program administrator agency would strive to have balance in regard to linguistic preference (e.g. ASL, LSQ, speech-reading) as well as cultural identification (e.g. French Canadians, culturally Deaf, hard of hearing, deafened, etc.). The CEO, staff, and board members should all have awareness of the linguistic and cultural factors existing in the various communities that VRS serves and to the extent possible the agency should hire and be composed of individuals directly from these communities.

#### Accountability and Transparency

The agency should be an independent, accountable, not-for-profit corporation with a public purpose of administering a national Canadian VRS. To this end, the CEO, staff, and board members must not have conflicts of interest related to the provision of VRS services and should not be affiliated in any way with VRS providers. The intent being that the operations and policy objectives of the agency would be completely transparent.<sup>46</sup>

#### Manageable and Efficient

The agency should operate in accordance with its objectives and should do so in a manner that is easily managed and efficient, particularly in regard to fiscal responsibility. Experienced staff and a board with proper expertise will ensure that the goals of manageability and efficiency are achieved to the benefit and approval of shareholders.

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<sup>45</sup> Guiding principles were determined through consultation with this study's VRS advisory committee on November 4<sup>th</sup>, 2011.

<sup>46</sup> Full transparency and accountability of all aspects of VRS including administrative, platform and provider functions (e.g., reporting, costs, etc.) are essential.

### Accessibility

The operations and related data of the agency should be accessible to consumers and stakeholders. This requires implementing minimum standards of accessibility to the agency's information and procedures. In order to be accessible to the majority of VRS users this means that the agency should produce information in ASL and LSQ, as well as written communication.

### Independence

In order to truly be an independent agency, no one interest can control the board or agency. Therefore, the makeup of the board needs to be balanced in such a way that ensures equality and independence from outside influence. The makeup of the board and its voting thresholds should be designed with these goals in mind.

Consistent with a successful model followed in Canada,<sup>47</sup> a corporation without share capital (the Corporation) would be established pursuant to Part II of the *Canada Corporations Act*. Legal details of the Corporation's structure would be set out in its By-Laws.

Membership in the agency would be compulsory for all TSPs pursuant to a directive from the CRTC which would also require TSPs to offer VRS. In order to meet the requirements of the Commission's directive, only the services of VRS providers who have been selected by the Corporation can be used. Selected VRS providers are subject to terms and conditions for the delivery of VRS that have received the approval of the Corporation pursuant an RFP or equivalent process. Membership in the agency would permit TSPs to offer VRS to their customers through the agency approved VRS providers.

Rights and obligations of TSP members would be specified in a Membership Agreement which all TSP members would be required to execute as a condition of membership.

The operations of the Corporation would be subject to oversight by a Board of Directors (Board).

Responsibilities of the Board of Directors could include:

- a) Selection of a Chief Executive, secretary and treasurer of the corporation;
- b) Providing the Chief Executive general guidance in carrying out the duties of Chief Executive;
- c) Approval of the annual report, budget and business plan of the Corporation;
- d) Approval of the Chief Executive's recommendation(s) regarding the selection of service providers further to RFP process(es) to be conducted by the Chief Executive;

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<sup>47</sup> For example, the Commissioner for Complaints for Telecommunications Services (CCTS), an agency created by industry subject to CRTC approval which the CRTC granted in 2008 and again in 2011, and the Canadian LNP Consortium Inc. responsible for the operation of certain systems needed to support local as well as wireless number portability. The model suggested is also similar to a successful MRS program under the authority of the California Public Utilities Commission, which has brought valuable innovations to California's Deaf and disabled population. The former chairman of the FCC, William Kennard, called this program design, "a model for the nation."

- e) Approval of contracts with service providers developed by the Chief Executive for the supply of VRS;
- f) Approval of recommendations submitted by the Chief Executive for VRS platform(s), VRS user registration systems and practices, VRS provider services, education and outreach programs, consulting, and administrator facilities, operations and support;
- g) Approve compliance and quality of service standards and procedures developed by the Chief Executive;
- h) Direct the Chief Executive to conduct such audits of the corporation's books as the Board may consider appropriate;
- i) Direct the Chief Executive to provide such information and reports concerning the services, systems and operations of the Corporation as the Board considers appropriate;

The board could be designed similarly to the Commissioner for Complaints for Telecommunications Services (CCTS) board;<sup>48</sup> for example a nine member board consisting of:

- 4 Consumer representatives (appointed by consumer groups)
- 2 Independent directors with expertise in running corporations/organizations without ties to TSP industry, VRS industry, or consumers (nominated through an independent process and/or a third party ad hoc nominating committee selected by an independent firm)
- 3 TSP industry representatives (appointed by the TSPs)

The size of the Board should remain manageable in order to simplify the scheduling and organization of meetings. In order to ensure consumer perspectives are included, quorum and majority voting thresholds could be set for decisions in relation to items a), b), d), e) f), g) and i), above. The make-up of the Board should also reflect funding obligations as well as accountability of TSPs to the Commission. Only TSPs are responsible for funding VRS and the obligation to provide VRS resides with TSPs. To further ensure that approvals reflect funding obligations and accountability, unanimous approval by the 3 industry Board members would be required for decisions in relation to items c), f) and g), above.

However, because multiple stakeholders are involved in VRS, the governing Board will need to and should consult with an advisory committee. The representative categories and subcategories suggested for a VRS program advisory committee without consideration for how many representatives per category are as follows:

- Consumer Representatives
  - ASL Deaf users
  - LSQ Deaf users
  - Hard of Hearing individuals
- Sign Language Interpreters
  - ASL interpreters and interpreter trainers

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<sup>48</sup> CRTC Telecom Decision CRTC 2007-130; "Establishment of an independent telecommunications consumer agency"; December 2007; available at <http://www.crtc.gc.ca/eng/archive/2007/dt2007-130.htm>

- LSQ interpreters and interpreter trainers
- TSP Industry Representative(s)

The advisory committee members would serve for a specific maximum length of time, e.g. four years, before rotating off and being replaced by others, in a staggering fashion. No committee members may have financial conflicts of interest with any of the VRS contractors or TSPs. Committee members would receive a per diem and travel allowance for attending committee meetings.

The Corporation's Board would select and appoint a Chief Executive whose responsibilities would include the conduct of periodic Request for Proposal (RFP) competitive processes to select VRS providers, accountability for the performance of the VRS providers, preparation of an Annual Budget and Business Plan, and for the day-to-day management of the Corporation.

More specifically, the Chief Executive's responsibilities would include the following:

- a) Assess, collect and manage the VRS funds provided by the TSPs.
- b) Define VRS service provider performance requirements in detail, setting standards and minimum requirements as appropriate for a variety of VRS functions, including but not limited to: technical, operational, functional and interpreting for approval by the Board;
- c) Develop outreach and user education requirements for approval by the Board;
- d) Develop RFP(s) for competitively awarded program services;
- e) Select successful VRS service provider proposal(s) in response to the RFP(s) for approval by the Board;
- f) Enter into and manage contracts and grants for delivery of VRS as authorized by the Board, including as appropriate: VRS platform(s), VRS user registration systems and practices, VRS provider services, research, education and outreach programs, consulting, and administrator facilities, operations and support;
- g) Develop and implement VRS provider oversight systems and procedures, develop operations and support systems and procedures, subject to approval by the Board;
- h) Monitor program compliance and quality of service against specific benchmarks and report findings to the Board, as requested by the Board;
- i) Facilitate the resolution of problems with different entities;
- j) Investigate, plan, analyze, evaluate and report to the Board at the request of the Board on new service features, offerings or methods;
- k) Conduct research and trials of new service features, offerings or methods, as directed by the Board;
- l) Produce an annual report, annual budget and annual business plan for Board approval;
- m) Hire and manage staff with consideration for linguistic and cultural balance;
- n) Establish advisory committees and task forces of stakeholders as requested by the Board;
- o) Plan or coordinate public education and outreach programs as requested or approved by the Board;
- p) Conduct and/or commission such audits or reviews of the Corporation's books as the Board may request and further to such directions as the Board may issue;

- q) Provide a point of contact with the CRTC for VRS matters possibly through submission of an annual report and periodic reporting of service performance.

The Chief Executive would be appointed for a fixed term (renewable at the Board's discretion).

Under the contemplated mechanism, an Annual Budget and Business Plan would be developed by the Chief executive and subject to Board approval. The Annual Budget and Business Plan would form the basis upon which TSPs' funding obligations would be set.

TSPs could contribute to costs reflected in the Annual Budget and Business Plan of the Corporation via an allocation of revenues generated by any given TSP in given areas of service as a proportion of overall industry revenues associated with such areas of service, as ordered by the CRTC.<sup>49</sup> In addition an initial membership fee could be considered to cover the initial costs incurred by the Corporation to accept a member.<sup>50</sup>

#### Advantages of this option

1. Accountability of a Chief executive to the Board and, in turn, accountability of VRS suppliers to the Chief executive focuses responsibility for the performance of the organization and its suppliers upon a clear chain of authority.
2. Responsibility of the members of the Board who are TSPs for approval of the Annual Budget and Business Plan ensures that ultimate direction and funding obligations reside in a single location, namely, TSPs upon whom the Commission has imposed (directly or indirectly) the obligation to provide VRS.
3. Use of periodic RFP or equivalent processes ensures cost effectiveness and flexibility to reflect changing market conditions and provides incentives for suppliers to improve cost effectiveness and service quality over time.
4. This option reflects elements of models already in existence in relation to functions such as the operation of LNP NPAC-SMS databases and the operations of the CCTS.
5. This option puts in place a long term solution for day-to-day management of the Canadian VRS program.

#### Disadvantages of this option

1. This option will involve significant work to establish in an operational mode.

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<sup>49</sup> See Section 14, *Funding*, for details on funding options. Specifically Section 14.2.3.2

<sup>50</sup> A mechanism based on similar considerations was developed by industry to fund a portion of the costs associated with the operations of the Commissioner for Complaints for Communications Services. This mechanism is described in section 5 of the CCTS Amended and Restated Membership Agreement filed with the Commission in the proceeding initiated by Telecom Notice of Consultation 2010-247 (TNC 2010-247) See response to interrogatory CCTS(CRTC)30Apr10-1, Appendix 16(a).

### 13.3. Recommendation

For VRS program governance and management, the recommendation is:

- Manage the program by a third party administrator as described above.

This option provides the knowledgeable resources necessary for program success.

## 14. Funding

The overall VRS program has different cost components. By far the largest cost component is 1) the reimbursement of the VRS providers for their service. Other lesser cost components are 2) the cost to provide or subsidize consumer VRS hardware or software, 3) the cost to provide or subsidize consumer network access and network usage in order to access and use VRS, 4) the cost for VRS education and outreach, 5) the cost for consumer technical support, and 6) the cost to administer the program. All six of these cost areas can be funded by the same source, or different components can be funded by different sources, or some may not be funded at all. The choices are influenced by how much funds are needed compared to their availability, and by established MRS or related funding policies.

A basic assumption is made that funds are short; that is, money is politically scarce and not every possible or desired outcome may be achieved. For example, VRS devices and broadband network access and usage may be ubiquitously available, but may not be affordable by all potential VRS consumers. The numbers of qualified ASL and LSQ interpreters needed to support a fully subscribed VRS are presently a scarce resource, and the expansion of the interpreter training programs in Canada will require additional funds. The question then is, what components of VRS should be funded and by whom? The answers can be influenced in large part by the selection of other non-funding elements of the Canadian VRS model presently under consideration. Some of these key variations are presented below in the *Options* section.

### 14.1. Desired Outcomes

The desired optimum outcomes for VRS funding are:

- All VRS program components are financially available to the extent that quality services can be provided to meet consumer demand
- The funding demands are acceptable to all of the stakeholders, including the CRTC and other government oversight bodies, and to the general public
- Program funds are not wasted, nor spent on fraudulent activities
- VRS program component funding is aligned to fund sources designed to support the component

## 14.2. Options

The following primary funding options are considered for:

### VRS consumer devices

1. No special CRTC mandated funding or subsidies.
2. CRTC mandated funds subsidize VRS device purchases.
3. VRS providers are required to offer devices at no cost to the consumers.

### Consumer broadband services

4. No special CRTC mandated funding or subsidies for network services.
5. CRTC mandated funds subsidize network services.

### VRS provider services, VRS platform, VRS consumer technical support, and VRS program administration

6. Provide CRTC mandated funds from TSP customer fees.
7. Provide CRTC mandated funds as a percent of all TSP revenue.
8. Provide CRTC mandated funds as a percent of all TSP profits.

### Interpreter training program expansion

9. No CRTC mandated VRS funds for interpreter training.
10. Interpreter training programs provide VRS
11. Interpreter training is funded or offered by the VRS providers
12. CRTC mandated VRS funds support interpreter training programs
13. CRTC mandated VRS funds support students of interpreting

#### 14.2.1. VRS consumer device funding options

##### 14.2.1.1. *No special CRTC mandated funding or subsidies*

In this option consumers would be required to purchase their VRS devices at their own cost, or with subsidies that may be offered by Provincial or other government programs, or as may be voluntarily offered by VRS providers.

#### Advantages of this option

1. This option matches the current MRS programs for TTY-relay and IP-relay, and should not require CRTC approval.
2. This option avoids the potentially high costs of consumer equipment being paid from limited VRS funds.
3. This option avoids the establishment of a resource intensive administrative program to qualify consumers and equipment.

4. This option allows consumers to select and pay for their communication equipment in the same market driven way that hearing users select and pay for their communications equipment.

#### Disadvantages of this option

1. Some potential VRS consumers may not be able to afford their own equipment.
2. In a multi vendor environment, large VRS providers that can afford to provide their own proprietary equipment to consumers will have a strong market advantage over other VRS providers for consumers and minutes of use.<sup>51</sup>

#### **14.2.1.2. CRTC mandated funds subsidize VRS device purchases.**

In this option CRTC mandated funds are used to subsidize VRS devices based on an individual consumer's need, such as demonstration that the consumer does not presently own a VRS compatible device (e.g., computer, laptop, videophone, smart phone, mobile tablet, etc.) and that the consumer's household income is below a certain threshold. VRS devices needed at work would be the responsibility of the employer.

#### Advantages of this option

1. Potential VRS consumers in need would have all or some of their VRS device costs paid for.

#### Disadvantages of this option

1. This option would require the establishment of a permanent national administrative program to qualify consumers, and to qualify equipment. Such a program would be complex and very expensive to operate.
2. The equipment qualification part of the program would insert delays from the time a new product comes to market to when it is approved for subsidization.
3. This option would be subject to significant fraud and misuse, as both Deaf and hearing users may attempt to get free or subsidized equipment via qualified friends who do not plan to use VRS, or via fake qualification documents or statements.
4. This option is not congruent with current CRTC MRS policy.
5. This option is potentially very expensive, and would take that money from the available scarce VRS funds.

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<sup>51</sup> In the U.S., Sorenson Communications gained about 85% of the VRS market by providing proprietary devices to consumers. Consumers have reported anecdotally that they believe they were encouraged to increase their VRS calls to prevent their equipment from being taken away due to lack of funding from the FCC. Some consumers report confusion over how relay is funded and may feel that if they do not generate enough VRS calls (i.e. revenue for the providers), the FCC will cut the service. Communication from providers to their customers may perpetuate this misinformation. For example, see <http://commerson.blogspot.com/2010/03/open-letter-from-alfred-sonnenstrahl.html>. Also in section 7, *VRS Platform and Interoperability*, regarding the non-interoperability of these Sorenson devices with other non-Sorenson devices and with non-Sorenson VRS platforms.

#### *14.2.1.3. VRS providers are required to offer devices at no cost to the consumers*

In this option the VRS providers would be required to offer compatible devices to consumers who do not have a device and who do not exceed the income threshold. Funding would be part of the CRTCC mandated VRS program.

##### Advantages of this option

1. The VRS provider can offer technical support for both their offered consumer devices and their VRS.

##### Disadvantages of this option

1. Equipment costs and qualification program expenses paid for by the VRS funds would not be avoided; they would only be shifted to the VRS providers who would include them within their operating costs needing VRS fund reimbursement.
2. The equipment offered may only be those devices which are the least costly to the VRS provider, and may not represent the wide range of types of devices (mobile tablet, 4G smart phone, etc) desired by consumers, or may not offer the range of features (memory, address book, etc) desired by consumers.
3. To the extent that VRS providers might impose proprietary equipment or equipment not compatible with other VRS providers or not compatible with other VRS provider's consumer devices, this option would prevent consumers from selecting a different VRS provider without also changing their equipment. It could also prevent consumers from being able to communicate directly via point-to-point with non-compatible equipment provided to customers of another VRS provider.<sup>52</sup>
4. In a competitively awarded VRS in which a provider is granted the right to provide VRS for a limited time, e.g., five years, all proprietary VRS consumer equipment would need to be replaced if a new provider is selected that is not compatible with the existing distributed consumer equipment, or if the distributed consumer equipment is only on loan.
5. This option is also subject to significant fraud and misuse, as both Deaf and hearing users may attempt to get free or subsidized equipment via qualified friends who do not plan to use VRS, or via fake qualification documents or statements.

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<sup>52</sup> These issues assume a multi-vendor environment. This incompatibility was the case in the United States for many years for most VRS consumers before the FCC ruled that interoperability was a VRS requirement.

## 14.2.2. Consumer broadband services

### 14.2.2.1. No CRTC mandated funding or subsidies for network services

In this option consumers acquire wireline or wireless broadband networks for VRS at their own cost, or with subsidies that may be offered by Provincial or other government programs, or with subsidies that may be voluntarily offered by VRS providers.

#### Advantages of this option

1. This option matches the current MRS programs for TTY-relay and IP-relay, and should not require CRTC approval.
2. This option avoids the potentially high costs of consumer broadband networks being paid from limited VRS funds.
3. This option avoids the establishment of a resource intensive administrative program to qualify consumers and networks.
4. This option allows consumers to select and pay for their broadband network services in the same market driven way that hearing users select and pay for their broadband network services.

#### Disadvantages of this option

1. Some potential VRS consumers may not be able to afford their broadband network services.
2. Since broadband is required for video calls, consumers may feel punished based on their need to use video to communicate.

### 14.2.2.2. CRTC mandated funds subsidize network services

In this option CRTC mandated funds are used to subsidize VRS broadband network access based on individual consumer's need, such as demonstration that the consumer does not presently have a broadband network and that the consumer's household income is below a certain threshold. Broadband network access and usage needed for VRS at the consumer's work would be the responsibility of the employer.

#### Advantages of this option

1. Potential VRS consumers in need would have all or some of their VRS broadband services paid for.

#### Disadvantages of this option

1. This option would require the establishment of a permanent national administrative program to qualify consumers, and to qualify broadband network services. Such a program would be complex and very expensive to operate.
2. The network qualification part of the program would insert delays from the time a new network service comes to market to when it is approved for subsidization.

3. This option would be subject to significant fraud and misuse, as both Deaf and hearing users may attempt to get free or subsidized network services via qualified friends who do not plan to use VRS, or via fake qualification documents or statements.

#### **14.2.3. VRS provider services, platform, consumer technical support, and program administration**

For 1) the operation of the VRS providers' services, 2) the VRS platform and related services, 3) the third party or VRS provider offered technical support, and 4) the operation of a necessary VRS program administration, the primary funding options considered are:

##### ***14.2.3.1. Provide funds from CRTC mandated TSP customer fees***

In this option customer fees would be collected by the TSPs as specifically mandated by the CRTC to support VRS.<sup>53</sup> The fees may be a flat amount per user account or a percentage of the customer's bill. The fees would appear on every TSP customer's monthly invoice as a separate line item. The CRTC may try to apply the fees with parity by electing to establish the same fee amount for all, or may order different fee levels for different categories of TSPs, such as: market entrants vs. ILECs, or by size of company, or telecommunications vs. Internet providers, etcetera. Customer invoices for broadcast only (e.g., subscribed accounts for radio, television or movies) would not be assessed since those services do not provide two-way communication.

##### Advantages of this option

1. The funding is transparent; that is, all TSP customers would clearly see their contribution to VRS.
2. This method of payment has been used by the CRTC for other communication services and is familiar to the TSPs.

##### Disadvantages of this option

1. This option would require the establishment of a new separate VRS fund that would need to be managed, and to which the TSPs would need to support with revisions to their fiscal and accounting practices.
2. This option would require all TSPs to educate their customers about the fees, and would require all TSPs to modify their customer billing processes. TSPs would prefer not to do these activities, which will take time, resources and money; and will also affect customer relations.
3. This option's fees would be applied equally to all customers. Some customers who can afford only basic TSP services would be paying the same amount as customers who purchase more expensive TSP service plans. The customers who have the minimum services may consider it unfair that they are paying a larger percent of their service costs for VRS.
4. Some TSP customers may consider their VRS fees to be personally challenging or politically offensive, and may dispute the fees with the CRTC directly, through the courts, through the

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<sup>53</sup> The TSPs currently recover the costs associated with TTY relay and IP relay through a rate collected from their general body of subscribers. The CRTC has set the rate at 13 cents per month per subscriber since the 1990s. The CRTC may elect to increase this amount to allow the provision of VRS through the same cost recovery mechanism.

media, or through their elected representatives. Such actions would at best necessitate a political and managerial response, and at worst would potentially put the VRS program at risk.

#### ***14.2.3.2. Provide funds from a CRTC mandated percentage of all TSP revenues***

In this option the CRTC would mandate that all TSPs must pay a percentage of their revenues based on market share into a national VRS fund. The percentage would apply only to the TSP portion of a company's total telecommunications operations revenue (i.e. two way communications). The CRTC may try to apply the percentage with parity by electing to establish the same percentage amount for all, or may order different percentages for different categories of TSPs, such as: market entrants vs. ILECs, or by size of company, or telecommunications vs. Internet providers, etcetera. The percentage assessment would not appear on customer invoices. Broadcast revenues would not be assessed since those services do not provide two-way communication.

##### Advantages of this option

1. This method of VRS program funding would share the costs over a broad spectrum of companies, and as a percentage of total revenues, would be seen as an extremely small amount. Politically this option would be more acceptable to the public and to the TSPs than new customer fees.
2. This method does not necessitate educating the TSP customers.
3. This method of payment has been used by the CRTC for other telecommunication services and is familiar to the TSPs.

##### Disadvantages of this option

1. This option would require the establishment of a new separate VRS fund that would need to be managed, and to which the TSPs would need to support with revisions to their fiscal and accounting practices.

#### ***14.2.3.3. Provide funds from a CRTC mandated percentage of all TSP profits***

In this option the CRTC would mandate that all TSPs must pay a very small percentage of their TSP profits into a national VRS fund. The assessment would not appear on customer invoices. Broadcast profits would not be assessed.

##### Advantages of this option

1. Companies that are not making a profit or are making less of a profit would pay less than those that are making more profit. This may be viewed by some stakeholders as less burdensome on struggling companies.
2. This method of VRS program funding would share the costs over a broad spectrum of companies, and as a percentage of profits, would be seen as an extremely small amount. Politically this option would be more acceptable to the public and to the TSPs than new customer fees.
3. This method does not necessitate educating the TSP customers.

### Disadvantages of this option

1. This option would require careful definition of what constitutes “profits”, and potentially would be subject to considerable disagreement of definitions by various TSPs.
2. The more profitable companies may complain that they are proportionately paying more than those which would have had a higher profit but they reinvested their income into facilities, research or development. It may be more difficult to achieve stakeholder consensus for this option.
3. This option could be more difficult to audit.
4. This option would require the establishment of a new separate VRS fund that would need to be managed, and to which the TSPs would need to support with revisions to their fiscal and accounting practices.

### **14.2.4. Interpreter training program expansion**

#### **14.2.4.1. No CRTC funds for interpreter training**

In this option, no CRTC mandated funds are used for interpreter training. Canadian ITPs would be required to respond to the need for expanded interpreter training based on their own funding sources, student demand and enrolment. Similarly, interpreting students would be required to fund their education in the same manner as they do presently.

### Advantages of this option

1. This option does not require establishing a new VRS interpreter training funding plan and managing its activities.
2. This option costs less by not providing additional VRS funds to colleges and universities.

### Disadvantages of this option

1. The ITPs are not financially provided an increase in revenue necessary to support the development of additional interpreters that will be necessary for VRS.
2. Without the necessary interpreters, VRS will not be able to meet the significant demand for service from VRS consumers.

#### **14.2.4.2. Interpreter training programs provide VRS**

In this option, the Canadian ITPs would be involved in the delivery of VRS, e.g., as functioning VRS call centers. They would receive payment from the VRS fund for their VRS calls, which they can use to expand their programs and/or to support their students.

### Advantages of this option

1. This option will provide VRS to consumers while simultaneously providing funds to ITPs for the development of their programs and students that is needed to support VRS.
2. This option will give ITPs, their directors, instructors, students and graduates with actual experience with VRS, so that all aspects of the ITPs benefit. For example: ITPs will develop firsthand knowledge of what the VRS interpreting challenges are, and how to address them in

their curricula; ITPs will need to develop video interpreter mentoring programs, and other creative facets of their VRS programs/services in order to ensure that video interpreter training is appropriate and the quality of service is sufficient.

3. ITPs can, from their own experience, become key participants in the development of national VRS program interpreter standards of competence for VRS that might be defined in CRTC regulation or contracts. For example, many stakeholders consider that simply graduation from an ITP does not guarantee that an individual may be professionally ready to interpret in a VRS setting.
4. On-campus VRS run by the ITPs will encourage quality students to stay with the program, and to not drop out to take community interpreting employment in the field.
5. The long term benefit of this option will be to expand and develop the ITPs resulting in a permanent and increasing number of interpreter graduates available for both community and VRS interpreting.

#### Disadvantages of this option

1. VRS calls will initially be handled by organizations that have no professional experience providing VRS.
2. ITPs may have little ability to handle typical non-VRS functions such as customer service or consumer technical support. These functions will need to be augmented by additional resources or will need to be provided by others. For example, the college information technology department or support staff may provide VRS technical support to the ITPs and potentially to VRS consumers.

#### ***14.2.4.3. Interpreter training is funded or offered by the VRS providers***

In this option the VRS providers would be required to sponsor or offer additional interpreter training. Such training may be either supplementary to interpreters who already have some level of expertise or experience and is in support of the unique requirements of VRS, or it may also offer a more basic level of interpreter training for people with little interpreting skills.<sup>54</sup>

#### Advantages of this option

1. This option does not require a separate funding mechanism and its consequential administrative overhead to support VRS interpreter training. The additional VRS interpreter training would be the responsibility of the VRS provider, not the VRS program in general or the ITPs.
2. VRS providers would be free to judge the additional level of training that they determine to be necessary in order to offer the VRS quality they deem appropriate for their customers.

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<sup>54</sup> For example, the largest U.S. VRS provider, Sorenson Communications, offers interpreter training to augment the skills of interpreters for use in VRS. It requires participants to sign a contract that obligates the participant to work for Sorenson and no other VRS provider. (As a standard employment practice, Sorenson requires exclusivity of all its interpreter employees with threatened consequences for non-adherence.)

#### Disadvantages of this option

1. Only the very largest VRS provider(s) would be able to afford to establish interpreter training programs, as they are not part of the current business practice of almost all existing VRS providers.
2. The requirement for VRS providers to offer additional interpreter training would not relieve the VRS program from interpreter training costs. It would only shift the costs to the VRS providers, who would need to include the cost within their VRS per minute or other form of reimbursement.
3. This option places the requirement for interpreter training on the business elements that typically have no, or very limited, expertise in interpreter training. They do not have the professional expertise and in-depth resources of the college and university ITPs.
4. The VRS providers are focused on profit, not interpreter training. They will only offer interpreter training to the extent that it will increase their profits resulting from their provisioning of services. They will not be intrinsically motivated to provide interpreter training at the highest quality standards of competence that many stakeholders may believe should be necessary for effective VRS.
5. VRS providers will not be capable of providing the long term development of interpreter training that is offered by college and university ITPs. At best they may only be able to provide augmentation of training to interpreters who already have attained a high level of competence through formal training and experience.

#### ***14.2.4.4. CRTC VRS funds support interpreter training programs***

In this option dedicated VRS funds mandated by the CRTC would be provided directly to the Canadian college and university ITPs for their expansion and development. This funding to these ITPs would be separate from funding to VRS providers.

#### Advantages of this option

1. This option would allow the ITPs to develop and expand their interpreter training programs for the short term and long term benefit of VRS consumers, regardless of whether an ITP may also elect to provide VRS.
2. The long term benefit of this option will be to expand and develop the ITPs resulting in increasing their capacity to graduate more students, who will become available for both community and VRS interpreting.

#### Disadvantages of this option

1. ITPs will not gain invaluable knowledge and experience as a result of also providing VRS.

#### *14.2.4.5. CRTC VRS funds support students of interpreting*

In this option dedicated VRS funds mandated by the CRTC would be provided directly to Canadian students enrolled in Canadian interpreter training programs in the form of grants or student loans.<sup>55</sup> Funds would not need to be paid back to the extent that they worked for a VRS provider located in Canada providing VRS to Canadians for a specified period.

##### Advantages of this option

1. Students will be financially supported and encouraged to learn interpreting, and to work in VRS.
2. As a result of the VRS student aid program, more students will enter ITPs, graduate, and work in VRS, thereby increasing the ability of VRS to meet consumer demand for service.

##### Disadvantages of this option

1. The money provided to students will be spent by the students on all forms of student expenses (housing, general tuition, food, entertainment, etcetera.) Very little of the funds will be used specifically to support the college and university ITPs, which will need funds to hire teachers, expand their facilities, develop curriculum, etcetera.
2. ITPs will not gain invaluable knowledge and experience as a result of also providing VRS.
3. Many interpreting students, who may have received VRS student aid, will never obtain the competency necessary for interpreting regardless of the training, are unsuited to become interpreters, or they leave the program because they realize interpreting is too difficult.
4. Rules for the student aid program would need to be established, including a requirement that the student loans or grants would not need to be paid back if the students graduate and work for a number of years for Canadian VRS organizations. Obtaining repayments for not graduating and working in VRS could be problematic.
5. If this option does not simply allocate a portion of VRS funding to existing student scholarship or loan programs, new similar programs will need to be set up and managed by the college and university ITPs, potentially at a significant administrative expense.
6. The development of this student aid program could generate political interest, either in support of or against the program, which would need to be responded to, and which may potentially put the VRS student aid program at risk. For example, an argument may be made that if there will be plenty of VRS interpreting jobs for graduates, a student aid program specifically for VRS is not necessary; that existing student aid programs can meet interpreting students' financial needs.

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<sup>55</sup> This option has been adopted by New Zealand VRS since 2008.

### 14.3. Recommendation

For funding the different VRS program elements, the recommendations are:

#### VRS consumer devices

- No special CRTC mandated funding or subsidies for consumer video devices.

This option matches the other MRS programs, preserves limited VRS funds, and avoids the significant expense, delays, administration, and potential fraud associated with a VRS equipment subsidization program. Advocacy groups should look for non-CRTC funds and programs to help with VRS consumer device costs.

#### Consumer broadband services

- No special CRTC mandated funding or subsidies for consumer network services.

This option matches the other MRS programs, preserves limited VRS funds, and avoids the significant expense, delays, administration, and potential fraud associated with a VRS broadband network subsidization program. Advocacy groups should look for non-CRTC funds and programs to help with broadband VRS access and usage costs.

#### VRS provider services, VRS platform, VRS consumer technical support, and VRS program administration

- Provide CRTC mandated funds as a percent of all TSP telecommunications operations revenue.

This option will probably be the most acceptable by all stakeholders: TSPs, the public, and politicians. This method of funding has previously been used by the CRTC. An initial funding mechanism and amount will need to be established for the development of the program during the first phase of implementation (prior to full deployment) to ensure the program has the financial resources to form and carry out its responsibilities, including the grant research recommended in sections 16.2.3 and 16.3.

#### Interpreter training program expansion

- As an initial stimulus to increase the capacity and capability of the college and university ITPs, provide a VRS grant program that requires both program expansion and offering of VRS as a service to consumers. After a time certain, such as three to six years, when the ITPs are self sustaining and robust enough to meet the training needs for interpreters, discontinue the grant program.

This recommendation is a blend of the two options that provide revenue to the ITPs. It assumes that the strongest way to enhance the ITPs and attract and keep students will be for the ITPs to provide VRS to consumers and for the ITPs to receive funds for instructor and curriculum development, and as deemed appropriate by the ITPs for potential scholarships to their students who demonstrate ability and financial need. Once the programs are developed and student

enrollments and graduations are high, the VRS funds can be reduced or discontinued. Depending upon the VRS model selected, the ITPs may elect to continue to provide VRS as an augmentation to their programs.

## 15. Acquisition

VRS provider services must be acquired and paid for. The question is: What is the best way to procure or acquire the services?

### 15.1. Desired Outcomes

The optimum desired outcomes for acquisition of VRS provider services should:

- Result in a combination of lowest costs and best services
- Be a fair acquisition methodology
- Provide contracts and services that are responsive to the needs of all parties

### 15.2. Options

The options under consideration are:

1. Acquire VRS as a CRTC regulated service based on a providers' allowed costs plus profit
2. Acquire VRS as a competitively bid, single vendor fixed rate service
3. Acquire VRS as a competitively bid, multi-vendor flexible rate service
4. Acquire VRS as a competitively bid, multi-vendor service at a pre-established rate

In addition to these options for VRS acquisition, it is assumed that other potential procurements will be necessary for other services, and these will be acquired using best procurement and contracting practices most suitable to the duration and type of service being acquired. For example program grants may have a different RFP process than solicitations for technical services. Many of these additional acquisitions will be dependent upon other aspects of the VRS model that are selected. For example, if it is determined that a single VRS platform is desired, it will probably be best if the platform is not owned by a VRS provider, but is owned or leased by the VRS program (such as by the third party administrator entity) and licensed for use by the VRS providers. Such licensing arrangements would have their own unique assignment and contract process.

#### 15.2.1. CRTC regulated, cost-plus

In this option the CRTC would establish VRS provider reimbursement rates based on the allowed costs submitted by VRS providers. Costs would be a weighted averaging of forecast and actual costs. The CRTC would need to define what costs are allowable and what percentage of profit is allowable. Providers would need to submit auditable cost data, which would remain confidential. Provider services

could be acquired by allowing all vendors who meet minimum CRTC requirements to be certified to offer VRS and to receive CRTC reimbursement. This regulatory cost-plus model is the U.S. FCC approach.

This option would need to be adjusted to comply with CRTC rules and processes, and align to the rest of the selected components of the VRS model. For example, if VRS were to be under the jurisdiction and administration of the individual TSPs, the CRTC may elect to use a tariff rate setting process. In this process the TSPs would submit tariffs for rate reimbursement (which they could pass on to their contracted VRS providers) for CRTC approval through an established CRTC tariff process.

#### Advantages of this option

1. As a regulatory function, the CRTC would have an established process already in place.

#### Disadvantages of this option

1. As a “cost plus” process, providers are only incented to increase allowable costs, since the reimbursement rate will be set based on the level of costs.
2. This option could be a labour intensive practice for the CRTC.
3. The process in the U.S. has resulted in very high rates, an inability to audit costs, and excessive fraud and waste.

#### **15.2.2. Competitively bid, single vendor fixed rate service**

In this option, an entity such as the third party VRS administrative program manager would develop a Request for Proposal (RFP) and solicit services and reimbursement rates from VRS vendors.<sup>56</sup> The award and rate would be made based on “best value” – a combination of best proposed services and costs. The award would be to either a single national provider or to one ASL-English provider and one LSQ-French provider.<sup>57</sup>

#### Advantages of this option

1. This option will award to the bidder with the blend of highest capabilities and lowest costs. Therefore consumers are theoretically assured that they will receive the best possible service at the best program cost.
2. This acquisition methodology can result in excellent competitive proposals when there are multiple bidders qualified and capable of providing the requested services.

#### Disadvantages of this option

1. Canada is a large and diverse country. There may be only three or fewer entities with the resources necessary to serve the country. Not all may choose to bid, and the results could be more expensive than desired, particularly if the bidders rely upon their U.S. cost models as their fiscal basis for bidding rates for Canada.

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<sup>56</sup> See section 4, *Type of Providers*, for a discussion of the possible different types of VRS providers.

<sup>57</sup> See section 5, *Number of Providers*, for a discussion of the possible different numbers of VRS providers.

2. This option also has the disadvantages listed for single providers in section 5, *Number of Providers.*, subsections 5.2.1 and 5.2.3.

### 15.2.3. Competitively bid, multi-vendor flexible rate service

In this option, an entity such as the third party VRS administrative program manager would develop an RFP and solicit services and reimbursement rates from VRS vendors. Awards would be to multiple vendors. In a single platform, networked vendor design, the award of VRS rates and traffic might be tied to the best value determination of each awarded provider and their ongoing quality of service. In a non-networked design the allowed reimbursement rates for all awarded providers might be the lowest rate bid that meets minimum technical and operational requirements.<sup>58</sup>

#### Advantages of this option

1. This option will allow more competition by awarding to smaller multiple vendors that will share the load of VRS calls.<sup>59</sup>
2. Depending upon the procurement details, it may be possible to award different reimbursement rates for different providers with this type of acquisition.
3. This option also includes the advantages of multiple vendors identified in section 5, *Number of Providers*, subsections 5.2.4, 5.2.5, and 5.2.6.

#### Disadvantages of this option

1. It may be difficult for most smaller bidders to successfully compete against the potentially lower costs of large established VRS vendors. The result may be that few awards are made.
2. The establishment of awarded rates may be complicated. It can be done, but the outcome of this type of bid is not easy to predict. Bidders may not accept their intended awards if the awarded rates are too divergent from their bid rate.
3. This option also includes the disadvantages of multiple vendors identified in section 5, *Number of Providers*, subsections 5.2.4, 5.2.5, and 5.2.6.

### 15.2.4. Competitively bid, multi-vendor service at a pre-established rate

In this option, the CRTC (with possible support from a third party VRS program administrator) would establish a reimbursement rate based on its best analysis of expected VRS provider costs for the services required. This rate could be either a per minute rate or a fixed annual or monthly amounts.<sup>60</sup> The third party VRS program administrator would develop and issue an RFP and award services to vendors that are then certified for reimbursement. The awards would be based on an evaluation of competitive

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<sup>58</sup> These kinds of detailed choices are typically worked out in an operational design and RFP process.

<sup>59</sup> The method of sharing, either networked or standalone, would be defined in an operational design and RFP process.

<sup>60</sup> See section 8, *Provider Reimbursement*, for a discussion of these options.

proposals for service, and may be provided to all entities that meet the minimum standards detailed in the RFP, or may be limited to a fixed number of specific types of vendors.<sup>61</sup>

#### Advantages of this option

1. From a pricing perspective, smaller bidders will be able to successfully compete against large established VRS vendors. The result may be that many awards may be possible.
2. This option has the strong advantage of keeping program costs at a set and affordable level that can be budgeted, without changes in program costs due to unpredictable rate changes.<sup>62</sup>
3. Awarded VRS providers, regardless if a single provider or multiple providers, are discouraged from forcing the program to accept increasing rates over time, and are incented to control their costs to match the rates offered.
4. The selection of bidders for award of services is primarily based on proposed plans, capabilities, and quality of service. Cost may or may not be a factor in evaluation, (for example if cost is not evaluated all bidders would agree to offer services at the rates stipulated. Therefore, the selection and award can be to the companies that will offer the best services at a pre-established affordable price.

#### Disadvantages of this option

1. The pre-established rate may not be the lowest rate based on actual competitive market conditions.

### **15.3. Recommendation**

For consideration of the potential acquisition models for VRS, the recommendation is:

- Initially award VRS provider services as part of a competitively bid RFP for multiple grant awards based on the evaluated value of the offered VRS research and services.<sup>63</sup> During the research phase determine if a fully deployed VRS services would best be competitively acquired through an adjusted fixed rate, multi-vendor RFP, or by a multi-vendor flexible rate RFP.<sup>64</sup>

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<sup>61</sup> See section 4, *Type of Providers*, and section 5, *Number of Providers*. These kinds of detailed choices are typically worked out in an operational design and RFP process.

<sup>62</sup> See this study's phase 10, *Cost Variables and their Forecasts*, for the U.S. example of extreme VRS rate changes and program costs over time.

<sup>63</sup> See section 16, *Implementation*, for additional discussion and recommendations.

<sup>64</sup> At present the assumption is that due to the wide variance of potential providers' cost estimates for untested services and the probability of large VRS firms eliminating competing small vendors through a low bid process, a fully deployed service following an initial research phase will best be acquired through a pre-established or a competitively established rate for interpreter time, or for per conversation minute reimbursement rate for relayed calls. Awards for fully deployed services would be offered to providers qualified by a competitive RFP, either to all interested and qualified bidders or to a set maximum number of bidders. The awards could be for a fixed duration, or could contain continuance provisions and the potential for other entities to receive awards at later dates. The  
*[footnote continues on next page]*

## 16. Implementation

Implementation of a VRS program will require careful multi-step, coordinated planning and execution requiring the cooperation and commitment of many stakeholder organizations. Implementation is a process not an event. The VRS provider part of the implementation is only one part of many that are all necessary for program success. The orientation will need to be on total program development, not simply VRS provider services.

### 16.1. Desired Outcomes

Some of the primary desired outcomes of a successful implementation process are:

- A process that is timely and not delayed by lack of participation or poor communication
- Carefully planned stages of implementation with clearly defined goals and responsibilities
- Cooperative participation and consensus throughout among the involved stakeholders
- Participation and leadership by the stakeholders representatives, including the CRTC

### 16.2. Options

The options associated with implementation have to do with the degree of commitment to planning and management and the development of a VRS program that is tailored to the needs and conditions in Canada. The primary options are:

1. Order fully deployed services and let the VRS providers determine the implementation process.
2. Order fully deployed services, and put controls in place to manage the vendors and the program.
3. Order an initial research phase of services and other matters, put controls in place, and based on the research results, plan for and award fully deployed services.

#### 16.2.1. Fully deployed services with the VRS providers determining implementation

In this option the CRTC orders permanent fully deployed VRS, either directly or through an RFP, and the awarded VRS providers determine the implementation process and details. This is a typical “hands-off” implementation in which the awarded firm is totally responsible for their success. This follows the U.S. model.

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RFP would not be expected to contain the additional non-call services included in the initial research phase, such as testing and evaluation, consumer surveys, evaluation and recommendation of interpreter standards, etc. All these types of details should be determined during program design and RFP development. Information gained from the initial research phase can assist in making these decisions.

### Advantages of this option

1. This approach offers the fastest way to get VRS up and running.
2. This approach initially requires minimal planning or management time by any oversight bodies.

### Disadvantages of this option

1. This type of implementation carries the highest risk of significant problems or failure.<sup>65</sup>
2. Oversight bodies, i.e., the CRTC, and stakeholders will always be playing catch-up, trying to mitigate program problems after they occur.
3. It is very difficult to get the vendors to change inappropriate or damaging practices without first establishing carefully planned expectations, reporting relationships, and controls. Without such management involvement it is often not apparent that there is a problem until after the damage has already occurred.<sup>66</sup>
4. In this option the focus of the VRS providers will be to set up their service and generate revenue. They will not be concerned or proactive with the many management and stakeholder needs that are not directly related to the providers' profits. These issues will likely receive minimal provider resources and attention.

### **16.2.2. Fully deployed services with management controls**

In this option the CRTC establishes overall program goals and requirements, but also establishes a third party administrative entity to plan and manage the VRS program. This entity then plans for and awards fully deployed VRS, including all necessary VRS program components, and it also maintains program control over the contractors.

### Advantages of this option

1. This option establishes the VRS program planning and management function so that VRS can be designed and implemented in a manner that offers a higher level of success and a lower level of risk compared to simply turning the program over to the VRS providers.
2. This option provides a means to consider, plan and control the many different aspects of the VRS program that should be managed for success.
3. This option results in a fully deployed service when VRS becomes operational.

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<sup>65</sup> Most new major initiatives for program services or systems fail in the implementation stage (not in the procurement stage) as a result the concept that upon award implementation becomes the contractor's responsibility.

<sup>66</sup> Examples of awareness of damage after the fact would be the hiring of most existing interpreters away from community interpreting, or the distribution of non-interoperable consumer video devices.

### Disadvantages of this option

1. This option takes longer to implement and takes more money to manage.<sup>67</sup>
2. This option initiates a permanent fully deployed service without first determining optimum or perhaps necessary requirements based on the results of a programmatically planned and controlled research phase.

### **16.2.3. Initial research phase of services with controls, followed by fully deployed services**

In this option the CRTC establishes overall program goals and requirements, but also establishes a third party administrative entity to plan and manage the VRS program. This entity acquires a VRS platform and registration database and plans for and awards a multi-year initial research phase of VRS (for at least three years). The research phase investigates a wide variety of program elements while also providing limited VRS services. During the research phase the third party administrator works with all stakeholder groups through selected representatives to develop the final detailed program design (inclusive of all necessary VRS program components) and RFP(s). The third party administrator also maintains program control over the contractors.

### Advantages of this option

1. This option establishes the VRS program planning and management function so that VRS can be designed and implemented in a manner that offers the highest level of success and the lowest level of risk.
2. This option provides a means to consider, plan and control the many different aspects of the VRS program that should be managed for ongoing success.
3. A well designed research phase will provide the information that is needed for the completion of a final detailed program design and requirements, such as: consumer registration and preferences, call flow and networking, VRS interpreter qualifications, reporting, minimizing opportunities for fraud and waste, interface with 9-1-1 and necessary interpreter training, platform suitability, consumer education, provider cost projections, usage factors and forecasts, contract requirements, etc.
4. If implemented as recommended in section 5, *Number of Providers*, subsection 5.3, this option can also have the benefit of stimulating the development of more interpreters for VRS and community interpreting.

### Disadvantages of this option

1. This option takes longer to implement and initially takes more money to manage. (However, a correctly designed and implemented program based on needed information should be less expensive in the long run, i.e., for fully deployed services.)<sup>68</sup>

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<sup>67</sup> See phase 10 *VRS Cost Variables and Forecasts* section 5.4.2 or phase 12 *Final Report* section 7.3.1 for estimated costs; and see phase 12 section 7.1.1 for a potential one-and-a-half year timeline of administrator tasks before VRS begins.

### 16.3. Recommendation

The primary implementation process recommendation is:

- Order an initial research phase of the services and other VRS matters, put controls in place, and based on the research phase results, plan for and award fully deployed services.

Suggested general implementation steps associated with this recommendation are:

1. CRTC VRS public proceeding from which the CRTC orders:
  - a. The establishment of the VRS program with general goals, requirements, responsibilities and processes.
  - b. The establishment of a third party VRS program administrative authority within a time certain, e.g., four months.<sup>69</sup>
  - c. A program revenue process, spending and accountability process, and an initial budget.
  - d. A multi-year (three or more) initial VRS research phase and its associated requirements.
  - e. Periodic progress reports by the third party VRS program administrator to the CRTC, including an initial program design, an RFP for the research phase, and ongoing findings.
2. The formation of the third party VRS program administrative entity and its operations:<sup>70</sup>
  - a. Committee charter, membership, operational policies and processes, etc.
  - b. Hiring an Executive Director and staff.
  - c. Acquiring and provisioning a permanent office location.
  - d. Develop public information and a website.
  - e. Development of the first stage of VRS program design for the initial research phase and with consideration for potential fully deployed services.
  - f. Development of the RFP for VRS research phase grants, approval of the RFP by the CRTC, and award of the grants.
  - g. RFP development and procurement (ownership, lease or license) of a VRS platform for use by the research phase (and potentially for fully deployed services), including a consumer registration system.
3. Establishment of the initial VRS research phase, including:
  - a. A minimum of an ASL-English awardee and an LSQ-French awardee, both Canadian college or university interpreter training programs (ITPs).<sup>71</sup>

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<sup>68</sup> See phase 10 *VRS Cost Variables and Forecasts* section 5.4.2 or phase 12 *Final Report* section 7.3.1 for estimated costs; and see phase 12 section 7.1.1 for a potential one-and-a-half year timeline of administrator tasks before VRS begins.

<sup>69</sup> As suggested in section 13, *Program Governance and Management*, especially subsection 13.2.3, *Managed by a third party administrator*.

<sup>70</sup> See section 13, *Program Governance and Management*, especially subsection 13.2.3, *Managed by a third party administrator*.

<sup>71</sup> The LSQ relay and research center would need to be located in Quebec, preferably in Montreal. Preliminary discussions have been held with the LSQ ITP at L'Université du Québec à Montréal (UQAM) and with the ASL ITP at George Brown College of Toronto. Both ITP representatives were extremely positive about the possibility of a VRS research phase with their organizations.

- b. Appropriate timeline and duration (at least 3 years from grant award dates).
  - c. Potential expansion of the research phase to additional ITPs and interpreter agencies.
  - d. Awardee functions to include:
    - i. Expansion and development of their interpreter training program for application to VRS.
    - ii. Consumer registration services for the research phase participants.
    - iii. Limited operational VRS call centers (limited by hours and interpreter staffing).
    - iv. Use of the VRS platform acquired by the third party administrator.
    - v. Collaboration with other research phase awardees.
    - vi. Collaboration with other ITPs for development information and support.
    - vii. Collaboration with interpreter agencies for qualified interpreters and staffing support as necessary.
    - viii. Collaboration with Deaf advocacy groups for consumer education and outreach.
    - ix. Consumer research phase participant surveys and feedback.
    - x. Consumer technical support in sign language, text and voice.
    - xi. Employment of people who are Deaf.
    - xii. Assessment and recommendations for VRS interpreter qualifications and proficiency standards.
    - xiii. Assessment and recommendations for VRS interpreter working conditions, schedules and productivity.
    - xiv. Coordinated trial development and testing of other related services as requested by the third party administrator, including 9-1-1 interface.<sup>72</sup>
    - xv. Measurement, forecasts and reporting of operational costs.
    - xvi. Measurement, forecasts and reporting of consumer demand, minutes of use, and other usage and performance factors in a scientific and neutral manner.
    - xvii. Development, assessment and reporting of factors associated with VRS quality of service.<sup>73</sup>
    - xviii. Regular reporting to the third party administrator.
4. Third party administrator follow up activities:
- a. Monitor and collaboratively contribute to the resolution of issues raised during the research phase.
  - b. With ongoing research phase results, develop the second stage of VRS program design for fully deployed services.
  - c. Obtain CRTC approval of the design.
  - d. Develop an RFP for fully deployed VRS, and obtain CRTC approval of the RFP.
  - e. Conduct the RFP procurement and awards. Obtain CRTC approval of the awards.
  - f. Develop plans for consumer education and outreach, and as appropriate support the plans.<sup>74</sup>
  - g. Coordinate VRS technical solutions with vendors.<sup>75</sup>

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<sup>72</sup> See section 12, *Other Related Services*.

<sup>73</sup> See this study's phase 7, *Quality of Service*.

<sup>74</sup> See section 11, *Education and Outreach*.

<sup>75</sup> See section 10, *Consumer Technical Support*.

5. Awarded VRS providers offer VRS services as contracted.
6. Third party administrator manages the ongoing VRS program and its contractors, reporting to the CRTC.
7. The CRTC makes changes in the program requirements as necessary.

## 17. Summary Recommendations

The recommended VRS model for Canada includes the following recommended elements. Please see the recommended text in each section for more descriptive information.

### Types of providers

- Limit the potential VRS providers to organizations with experience in ASL or LSQ interpreting.

### Number of providers

- Begin in a research phase with multiple interpreter training programs only, then expand the research phase to include multiple interpreter agencies, and then after the research phase when regular VRS is deployed, allow multiple interpreter training programs, interpreter agencies, and experienced VRS providers to contribute to VRS in Canada.

### Location of providers

- For the long term benefit of consumers who will rely upon both community interpreting and VRS, select a model that emphasizes VRS provided from locations within Canada.

### VRS platform and interoperability

- Require all VRS providers to use the same interoperable platform during an initial research phase and monitor results to determine if one platform is suitable for VRS.

### Provider reimbursement

- Adopt a payment methodology that initially uses a fixed amount for a specific time period, such as an initial research phase. For a full deployment phase, consider paying vendors for each hour of contracted VRS interpreter's time, or paying vendors based on relayed conversation minutes.

### Consumer costs

- Consumers are responsible to obtain their own VRS equipment or software, and pay for their broadband access to VRS. There is no additional cost to consumers to use VRS, i.e., outbound calls are free.
- Non-relayed VRS calls are free to consumers.

### Consumer technical support

- The providers of each part of the service are responsible to offer their own consumer technical support.

### Education and outreach

- Different organizations to offer education and outreach according to their expertise and constituents.

### Other related services

- Do not allow VRI except to extend the VRS platform licensing for VRI use by authorized VRS providers in a cost neutral manner.
- Video mail should be a normal part of VRS.
- All of the forms of visual communication discussed, including VCO, HCO and supporting real-time text, should be included in VRS.
- All of the specialized interpreter functions should be allowed.
- French-ASL and English-LSQ translation should not be included within VRS.
- Relaying of emergency calls to 9-1-1 call centers should be a CRTC mandated requirement of VRS.

### Program governance and management

- Manage the VRS program by a third party administrator.

### Funding

- No special CRTC mandated funding or subsidies for consumer network services.
- No special CRTC mandated funding or subsidies for consumer video devices.
- Provide funds as a percent of telecommunications operations revenue of all TSP as mandated by the CRTC, for VRS provider services, VRS platform, VRS consumer technical support, and VRS program administration.
- As an initial stimulus to increase the capacity and capability of the college and university ITPs, provide a VRS grant program that requires both program expansion and offering of VRS as a service to consumers. After a predefined term, such as three to six years, when the ITPs are self sustaining and robust enough to meet the training needs for interpreters, discontinue the grant program.

### Acquisition

- Initially award VRS provider services as part of a competitively bid RFP for grants for, multi-vendor service at a pre-established fixed annual amount for a research phase of VRS services. During the research phase determine if fully deployed VRS services would best be competitively acquired through an adjusted fixed rate, multi-vendor RFP, or by a multi-vendor flexible rate RFP.

### Implementation

- Order an initial research phase of the services and other VRS matters, put controls in place, and based on the research results, plan for and award fully deployed services.

## 18. Conclusion

VRS is highly feasible. The recommendations presented provide the optimum VRS model for Canada, given the variety of circumstances and issues affecting any potential video relay service. Not every recommended choice of VRS model element will be the choice of every stakeholder. With thoughtful planning it will be possible to establish an affordable and sustainable VRS that offers all Canadians a flexible and quality video relay service.