

**BEFORE THE CANADIAN RADIO-TELEVISION AND  
TELECOMMUNICATIONS COMMISSION**

**FINAL REPORT – TELUS' VIDEO RELAY SERVICES TRIAL**



**BY**

**TELUS COMMUNICATIONS COMPANY**

**March 14, 2012**

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## **I. Introduction**

1. TELUS Communications Company (“TELUS” or the “Company”) is pleased to submit its third and final report with the Commission after the completion of its 18-month video relay service (“VRS”) trial. In this report, TELUS will provide background to the trial, a description of the VRS service and summary statistics. TELUS will also offer its responses to questions posed by the Commission about the possible implementation of VRS in Canada on a national scale.
2. The Company has also received the *VRS Feasibility Study* (the “Feasibility Study”) dated February 24, 2012 that was prepared by Mission Consulting and filed with the Commission and interested parties on March 1, 2012. TELUS has reviewed the Feasibility Study and recognizes that it draws conclusions about how VRS could be implemented on a national scale in Canada. Having said that, TELUS has not changed any of its contents in this final VRS report as a result of the Feasibility Study because the VRS trial data was collected wholly independent of the Feasibility Study and most of the Company’s findings were made prior to its receipt of the Feasibility Study. TELUS’ VRS trial shows data regarding actual user experience and statistics of VRS services in a trial environment. These data, in conjunction with the research assessment from the Feasibility Study, provide information from different sources about VRS and any possible national implementation.

## **II. Background**

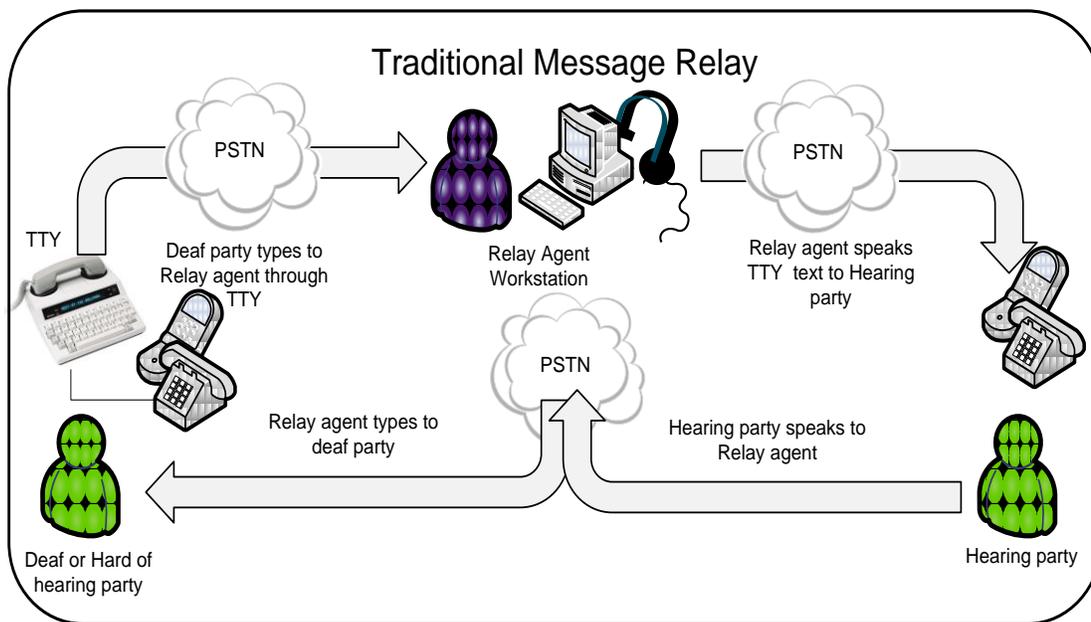
### **A. *Description of different types of relay services***

3. It is important to have a common understanding of the VRS service and how it compares with other relay services that are already available in the marketplace. In all types of relay services, there is an intermediary between the caller and the intended recipient of the call. However, the requirements to support the operation of each of the relay services differ greatly. As will be shown below, VRS represents a fundamentally different type of relay service, one that requires specialized skills, expertise and technology that is not associated with existing types of relay services.

**i. Traditional message relay service**

4. Traditional message relay service has been offered in Canada since the 1980s. Customers of any local exchange carrier (“LECs”), including wireless competitive local exchange carriers (“CLECs”), are able to access the service by dialing 711 from their telephones. A customer requires a teletypewriter device (“TTY”) to be plugged into their telephones to access the service. This TTY device enables a customer to communicate *via* text to the intermediary relay operator.
5. As shown in Table 1, in a traditional message relay call, a deaf or hard-of-hearing person transmits TTY-based text messages to the relay intermediary, and then the relay intermediary relays those messages to a hearing person *via* a voice conversation. As a result, the deaf or hard-of-hearing person communicates using text *via* a teletypewriter connected to a regular telephone line.

**Table 1 – Traditional Message Relay Service Diagram**

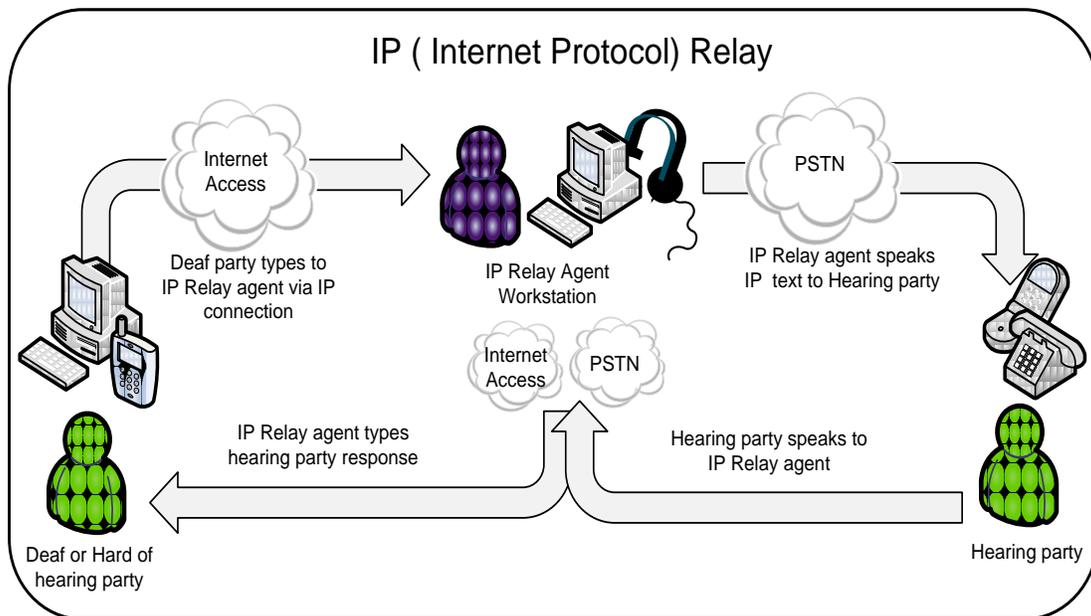


6. All wireline and wireless customers are charged a per-line fee for the provision of traditional message relay service. Incumbent local exchange carriers (“ILECs”) are all required to provide access to traditional message relay service throughout their territories, with CLECs paying per-line fees to the ILEC so that CLEC customers can access the service as well.

ii. IP-Relay service

7. IP-Relay service is an evolution of traditional message relay services and has been made available to customers following the Commission's decision in Broadcasting and Telecom Regulatory Policy CRTC 2009-430, *Accessibility of telecommunications and broadcasting services* (the "Accessibility Policy"). Based on the Accessibility Policy, customers of any LEC (including a wireless CLEC) have access to IP-Relay services, and the service has been available throughout Canada since April 2011.
8. IP-Relay service differs from traditional relay services in that a deaf or hard-of-hearing customer uses an IP-enabled device to text their communications to the relay operator, rather than using a TTY-device. As shown in Table 2, in an IP-Relay call, the deaf or hard-of-hearing person transmits IP-based text messages to the relay intermediary, and then the relay intermediary relays those messages to a hearing person *via* a voice conversation.

**Table 2 – IP-Relay Service Diagram**



9. As shown above, the deaf or hard-of-hearing person communicates using text *via* the Internet and accesses the IP Relay service through the IP-Relay provider's Web page. IP-Relay service represents an enhancement from traditional message relay service in that it is less cumbersome to text messages using an IP-enabled

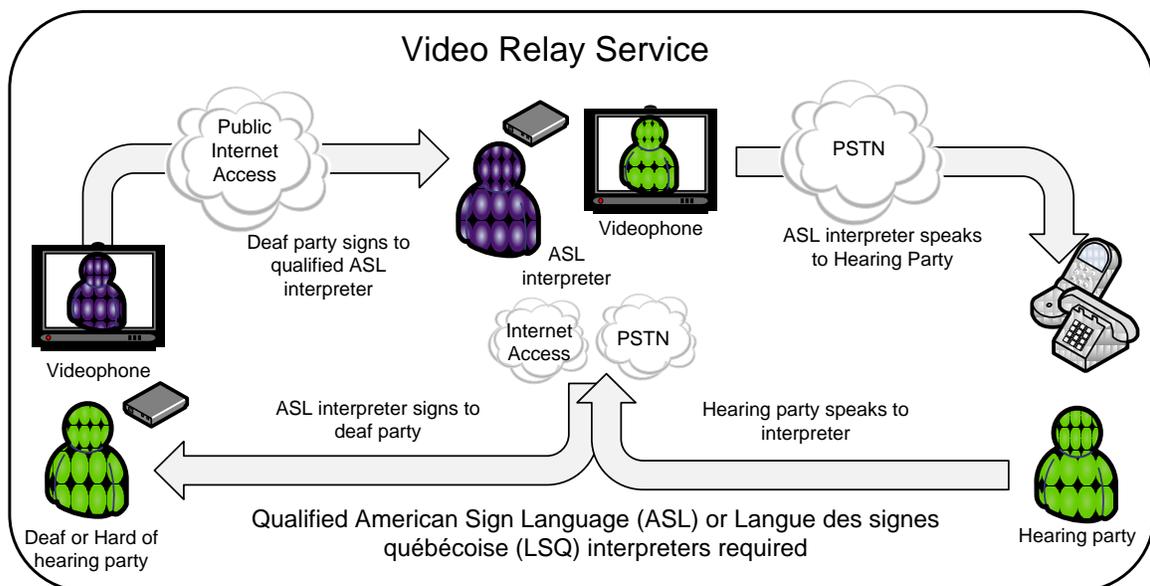
device than a TTY. Despite this important technical difference, both IP-Relay and traditional message relay services require that the deaf or hard-of-hearing person transmit messages to the relay intermediary using a text conversation.

10. IP-Relay service is offered without charge to the IP-Relay service user. The per-line charge associated with traditional message relay services also covers the cost of provision of IP-Relay services. This means that the per-line rate charged for relay services pays for the delivery of traditional relay service and IP-Relay service.

iii. VRS

11. A VRS call is very different from both traditional message relay and IP-Relay services. With VRS, the deaf or hard-of-hearing person<sup>1</sup> transmits messages via sign language to the relay intermediary, with the intermediary then relaying the message with a voice conversation with a hearing person. Transmitting messages via sign language with the relay intermediary is made possible by way of a videophone connected to the Internet.

**Table 3 – VRS Service Diagram**



<sup>1</sup> It is more common for persons conversant in sign language to be deaf rather than hard-of-hearing. Therefore, VRS services are used mainly by deaf persons.

12. VRS brings significant benefits to the deaf and hard-of-hearing community. Most importantly, it allows for the deaf person to communicate using sign language. Often, the native language for a deaf person is sign language, not English or French. Therefore, VRS allows deaf persons to converse using the language with which they are most comfortable. In addition, sign language reduces the delay often experienced in other relay services calls because those calls are affected by the ability of a party to type messages. In many cases, VRS calls are relayed instantaneously, effectively eliminating any communication delays, benefiting both the deaf/hard-of-hearing party and the hearing party.
13. The use of sign language is a fundamental and significant change from both traditional message relay service and IP-Relay service. In VRS service, the relay intermediary requires specialized sign language interpreter skills that involve years of training and the satisfaction of qualification standards. Of course, these sign language interpretation skills are not ones associated with traditional telecommunications operations. This is the reason why TELUS decided to outsource its VRS trial to Sorenson Communications Canada ("Sorenson"), an affiliate of a well-known U.S. based provider of a range of relay services and one of the major VRS providers in the United States. Service providers such as Sorenson have the requisite staff resources that have expertise in sign language interpretation. Even an experienced operator services provider such as TELUS is ill-equipped to provide VRS directly.
14. In the United States, VRS was recognized by the U.S. telecommunications regulator, the Federal Communications Commission ("FCC"), as a form of telecommunications relay services ("TRS") over a decade ago<sup>2</sup>. All telecommunications companies in the United States have to contribute into a national fund, the TRS fund, which is used to pay for telecommunications relay services. This fund ensures that providers can recover the costs incurred for providing relay services (including VRS) and incents relay providers to offer high quality, innovative services at reasonable cost.

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<sup>2</sup> 2000 TRS Order, 15 FCC Rcd at 5152-54, para. 21-27, where the FCC recognized VRS as a form of TRS).

15. The 2011 approved FCC's monthly compensation for VRS service providers varied from \$5.0668 US per billable VRS minute to \$6.2390 US per billable VRS minute, depending of volume call ranges. TELUS is not aware of the details included in the economic studies that are in support of these FCC approved rates for VRS funding. However, costs associated with sign language interpreters are, without doubt, the largest expense in the provision of VRS. Other costs, such as installation, customer care, call center infrastructure, are either fixed or scaled directly or indirectly with the number of users served.
16. According to the FCC, as of March 2012, ten companies<sup>3</sup> are eligible for reimbursement for VRS services from the United States TRS fund. The authorized VRS providers are American Networks, ASL Services Holdings, LLC, Communication Axess Ability Group, Convo Communications, LLC, CSDVRS, Hawk Relay, LLC, Healinc Telecom, LLC, Purple Communications, Inc., Snap Telecommunications Inc. and Sorenson Communications, Inc. TELUS notes that prior to January 2012, there were two traditional telephone carriers, namely AT&T<sup>4</sup> and Sprint<sup>5</sup> that also provided VRS Service. Both traditional carriers chose to stop offering VRS Service because of an FCC rule change requiring that providers not use sub-contractors for the offering. Even before this change, the vast majority of VRS minutes in the United States were handled by companies that specialize in offering relay services, such as Sorenson, not by traditional telecommunications companies.

**B. Regulatory Decisions About TELUS' VRS Trial**

17. TELUS' VRS trial was initially approved by the Commission in Telecom Decision CRTC 2008-1, *Use of deferral account funds to improve access to telecommunications services for persons with disabilities and to expand broadband services to rural and remote communities* ("Decision 2008-1"). The Commission recognized that TELUS' VRS trial could provide information

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<sup>3</sup> <http://www.fcc.gov/encyclopedia/trs-providers>.

<sup>4</sup> <http://apps.fcc.gov/ecfs/document/view?id=7021748462>.

<sup>5</sup> <http://apps.fcc.gov/ecfs/document/view?id=7021749239>.

- pertaining to “cost, user market size and projected use” of the service, important factors to consider prior to any national implementation of VRS.<sup>6</sup>
18. Consistent with Decision 2008-1 and the Accessibility Policy, TELUS' VRS trial was launched on July 1, 2010. The trial was originally planned to take place over the course of 12 months, ending on June 30, 2011.
  19. On March 1, 2011, TELUS filed an application with the Commission requesting, amongst other things, a six-month extension for the VRS trial, extending the total duration of the trial from a 12-month period to an 18-month period. TELUS submitted that the extended trial period would enable it to provide the Commission with data that better reflect the reality of the market because trial users would have more time to familiarize themselves with the service and the VRS technology and would therefore have more opportunities to effectively integrate the service into their regular ways of communicating.
  20. TELUS' request was approved by the Commission in *TELUS Communications Company - Request for a further drawdown from its deferral account for accessibility initiatives*, Telecom Decision CRTC 2011-384 (“Decision 2011-384”). In addition, the Commission directed TELUS to include the following information in its final VRS report to the Commission:
    - the data previously requested by the Commission<sup>7</sup> for the additional six-month period;
    - TELUS' views on all the potential mechanisms or approaches<sup>8</sup> involved in providing VRS that the company considers would appropriately manage the associated cost while maintaining service quality, and the advantages and disadvantages of each; and
    - TELUS' views on whether VRS should be implemented in Canada and, if so, in what manner and whether regulatory intervention would be required for cost recovery.

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<sup>6</sup> Accessibility Policy, para. 26.

<sup>7</sup> As requested by the Commission in its letter dated July 21, 2009.

<sup>8</sup> For example, provide TELUS' view on the impact of limiting the hours of operation to hours of peak use.

***C. Consultation with User Groups During the Course of the Trial***

21. Consultation and collaboration with advocacy groups, trial participants and other interested persons took place before and during the 18-month trial. These consultations took place with the Company, its third-party VRS provider, Sorenson, trial users and groups representing the Deaf and hard-of-hearing persons in Alberta and British Columbia. At all consultation points, TELUS and Sorenson provided sign language interpreters to ensure all communications were made in a manner that respected the specific needs of meeting participants.
22. The Company held town hall meetings in Vancouver, Edmonton, and Calgary, the three main locations for the VRS trial, in June 2010, prior to the beginning of the trial. These initial townhall meetings were presented by TELUS and Sorenson and were attended by potential participants of the trial and other interested persons. The parameters and objectives of the trial were explained to attendees, including the trial period, the geographic availability of the service and any service terms and conditions. Attendees were given the opportunity to register for the trial and were provided TELUS contact information for follow-up.
23. During the course of the trial, the Company continued its consultative process, both on an informal and formal basis. All advocacy groups were given direct TELUS contact persons whom they could reach if they had any questions during the course of the trial. The trial users also had access to a dedicated electronic mailbox to send VRS messages about any the service during the trial. In addition, technicians from both TELUS and Sorenson were available to answer queries during the home visits when participants were receiving their videophones and other necessary equipment was being installed.
24. Town hall and teleconference sessions took place on four occasions during the VRS trial. Such sessions were held with two advocacy groups, the BC VRS Consultative Committee and the Alberta Association of the Deaf, during the trial. These sessions garnered direct feedback from some trial participants to assist TELUS and Sorenson to make any necessary changes to the trial and also allowed the Company to provide any trial updates. Three sessions were held in August 2010, March 2011 and September 2011 with audio and video conference facilities set up that connected participants meeting at TELUS facilities in Edmonton,

- Calgary and Vancouver, and sign language interpreters were available at each meeting location. TELUS and Sorenson provided service information and any trial updates and questions were fielded from the trial participants. Specific TELUS contact persons were identified for any questions that required follow-up or for on-going VRS trial support.
25. Trial participants were notified in November 14, 2011 *via* American Sign Language (“ASL”) video message, email notification and a mailed postcard of the planned turndown of the trial in January 2012. Final townhall sessions were held in November / December 2011 in each of Vancouver, Edmonton and Calgary. All trial participants were invited to attend the session in their city. At these final town hall sessions, TELUS and Sorenson gave full instructions to trial participants as how the trial turndown was to occur. Trial participants were also given the opportunity to provide feedback as to their specific experiences with the VRS service. The vast majority of the feedback from the trial participants was positive. It was made clear that the trial had provided significant benefits to the participants and, of course, many were disappointed that the service trial was not continuing.
26. Though the trial has been completed, trial participants were not required to return the Sorenson videophone equipment that was installed at their homes and provided at no charge. Therefore, even though the VRS trial has ended, former trial users can still place point-to-point videophone calls by dialing the call recipient's videophone IP address.

***D. Specific characteristics of the TELUS VRS trial***

27. As noted above, TELUS' VRS trial was launched on July 1, 2010 and ended on January 15, 2012, for a total duration of 18 months. The service was offered in ASL to participants located in the greater Vancouver<sup>9</sup>, Edmonton<sup>10</sup> and Calgary<sup>11</sup> areas. There were 306 total participants, 163 users were located in Vancouver, 50 users were located in Calgary and 93 users were located in Edmonton. 277 trial

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<sup>9</sup> Vancouver, Burnaby, Abbotsford, Richmond, New Westminster, Surrey, North Vancouver, Coquitlam, Maple Ridge, Port Moody, Aldergrove, Langley, Nanaimo, Delta, Port Coquitlam, White Rock and Mission.

<sup>10</sup> Edmonton, Spruce Grove, Stony Plain, St-Albert, Leduc, Ardrossan and North Battleford.

<sup>11</sup> Calgary and Okotoks.

- users were residential customers and 29 users accessed the VRS service as part of businesses or institutions. The VRS trial required the support of approximately 90 qualified ASL interpreters who were based out of Sorenson VRS call centers in Edmonton and Vancouver.
28. Trial participants were given access to the VRS service *via* a Sorenson videophone installed at their premises. The installed videophone has a value of approximately \$400.00 but was provided free of charge to trial participants.
  29. Trial participants were also able to make “point-to-point” calls (*i.e.* direct video calls to another videophone user,<sup>12</sup> without a sign language interpreter required) 24 hours a day for the duration of the trial. All local and North American<sup>13</sup> long distance calls made with VRS were included free of charge during the trial, with unlimited minutes of usage provided.
  30. No international long distance calls were permitted using the VRS service because such calls would present significant challenges regarding how those calls were to be billed. In addition, trial participants were informed that they should not use VRS for 911 emergency calls, arising from safety concerns in case the call were to be dropped and the lack of a call-back number or automatic location identification information.
  31. Because VRS service requires a high speed Internet connection, trial participants were required to subscribe to TELUS' high speed Internet services, at a minimum of 256 kbps of bandwidth upstream and downstream. Some participants were TELUS high-speed Internet customers at the time of the trial commencement, while others became TELUS high-speed Internet customers to access the VRS trial.
  32. As approved by the Commission, TELUS paid Sorenson a rate of \$6.64 CDN per billable VRS minute from July 1, 2010 to June 2011 and at a rate of \$6.24 CDN from July 2011 to January 15, 2012. These rates equate to the approved FCC compensation for billable VRS minutes from the United States' TRS fund for these periods. The VRS rates paid by the Company to Sorenson include all

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<sup>12</sup> Trial participants could make point-to-point videophone calls to any other person with a videophone, irrespective of whether the other person was a trial participant or had a Sorenson videophone.

<sup>13</sup> North American long distance calls includes calls within Canada and the United States.

- external costs such as; customer premise equipment for participants, call centre operations (facilities, connectivity and operating costs), sign language interpretation; technical support, equipment installation, customer support, 1-800 access numbers, interpretation support for public meetings, North American Long Distance costs, administration, billing and recovery on investment in VRS platform and supporting infrastructure in for the VRS trial. These costs were recovered from TELUS' deferral account fund dedicated for accessibility services.
33. Other costs incurred by TELUS include costs associated to the administration of the trial, analysis and reporting of the trial results, management of the communications with the groups and the trial users including the town hall sessions, interpretation resources, and vendor management. These were identified by TELUS as direct costs for the trial. Other internal costs, such as employee salaries and other administrative overhead are not reflected as operating costs but were incurred as part of the trial.
34. Trial participants were able to use the videophone to place VRS calls at certain defined times of day. From July 1, 2010 to September 6, 2010, VRS was available from 6 AM to 10 PM<sup>14</sup> from Monday to Friday, then starting from September 7, 2010 VRS was available at the same time but for seven days a week. VRS was offered on a full time 24/7 basis starting from February 1, 2011.
35. On July 15, 2011, TELUS advised the Commission about a change in the hours of operation of its VRS trial that was going to be introduced in August 1, 2011. From August 1, 2011 to the end of the trial, VRS was not offered to the trial users during the 5-hour period from 12 AM to 5 AM, each day. Consequently, the VRS service was available to its trial participants for 19 hours, every day, from August 1, 2011 to the completion of the trial on January 15, 2012. The Company had introduced this reduced VRS availability because very low VRS call volume<sup>15</sup> had been experienced during that 5-hour period. This low call volume did not justify the costs to maintain service availability for those hours. Sorenson's costs did not have a direct impact on TELUS because, as explained above, TELUS'

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<sup>14</sup> Pacific time.

<sup>15</sup> June 2011 data showed that less than one call per day was received during that period. These calls averaged approximately 5 minutes each.

- payments to Sorenson were fixed based on VRS billable minutes. However, TELUS decided to limit the hours of operation to maintain a good relationship with its vendor and to be able to evaluate how the trial users would react when VRS was not available on a 24/7 basis.
36. Two weeks prior to the change of hours on August 1, 2011, TELUS sent an ASL video message through their videophones to all VRS trial participants, notifying each of them of the reduced hours of VRS trial. TELUS also sent communication *via* ASL video message to all VRS trial participants on January 2012 to inform them of the pending completion of the trial on January 15, 2012.
37. Table 1 below displays the hours of operation of the service during the total 18-month duration of the TELUS' VRS trial.

**Table 4 – VRS Trial Hours of Operation**

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Jul-10 Aug-10	6am - 10 pm PT Monday to Friday (July 1st - September 6th)					VRS unavailable	
Sep-10 Oct-10 Nov-10 Dec-10 Jan-11	6am - 10 pm PT 7 days a week ( September 7th - February 1st)						
Feb-11 Mar-11 Apr-11 May-11 Jun-11 Jul-11	24/7 access ( February 1st - July 31st)						
Aug-11 Sep-11 Oct-11 Nov-11 Dec-11 Jan-12	Service available from 5:00am to 12:00am PT ( August 1st - January 15th)						

### III. Information requested by the Commission

#### A. VRS Trial Data previously requested by the Commission

38. In this section, TELUS provides the data requested by the Commission. These data reflect the results for the total duration of the VRS trial.
39. The Company submits in Table 5 the total costs incurred for the trial, the number of VRS trial users (installed participants and active users) as well as detailed information on VRS calls through the duration of the trial. Direct costs for the trial are reported as operating costs for the trial. Other internal costs, such as employee salaries and other administrative overhead are not reflected as operating costs, but they were included as part of the recovery from TELUS' deferral account fund for accessibility services.

**Table 5**

Month	Costs			Call data for month					
	External Vendor costs	Internal TELUS Costs	Total Operating cost	Installed Participants	Active users	VRS Call Volume	Interpreting Minutes	Avg Call Length (Minutes)	Avg Calls per user
Jul 2010	\$ 77,700	\$ 24,061	\$ 101,761	117	101	2,085	11,170	5.36	21
Aug 2010	\$ 96,068	\$ 4,376	\$ 100,444	167	138	2,685	15,577	5.80	19
Sep 2010	\$ 139,331	\$ 2,827	\$ 142,158	216	184	3,512	21,249	6.05	19
Oct 2010	\$ 146,080	\$ -	\$ 146,080	235	199	4,057	22,449	5.53	20
Nov 2010	\$ 167,935	\$ -	\$ 167,935	249	206	4,162	22,968	5.52	20
Dec 2010	\$ 154,508	\$ 3,943	\$ 158,451	264	217	4,309	23,129	5.37	20
Jan 2011	\$ 162,595	\$ -	\$ 162,595	275	221	4,598	23,941	5.21	21
Feb 2011	\$ 182,600	\$ -	\$ 182,600	283	240	5,468	28,106	5.14	23
Mar 2011	\$ 198,613	\$ 4,135	\$ 202,748	297	254	6,410	32,743	5.11	25
Apr 2011	\$ 190,694	\$ -	\$ 190,694	302	243	5,888	27,384	4.65	24
May 2011	\$ 186,629	\$ 5,472	\$ 192,101	306	243	5,832	28,064	4.81	24
Jun 2011	\$ 171,665	\$ 760	\$ 172,425	311	239	5,631	26,895	4.78	24
Jul 2011	\$ 163,311	\$ 760	\$ 164,071	309	240	5,076	24,032	4.73	21
Aug 2011	\$ 162,752	\$ 304	\$ 163,056	307	251	5,560	27,591	4.96	22
Sep 2011	\$ 160,630	\$ -	\$ 160,630	311	244	5,448	27,429	5.03	22
Oct 2011	\$ 183,013	\$ 614	\$ 183,627	306	251	5,248	26,368	5.02	21
Nov 2011	\$ 150,184	\$ 5,493	\$ 155,677	306	243	4,710	25,844	5.49	19
Dec 2011	\$ 165,786	\$ 5,997	\$ 171,783	306	227	4,600	24,092	5.24	20
Jan 2012 & Windup	\$ 102,882	\$ 9,260	\$ 112,142	306	220	3,140	17,477	5.57	14
<b>Total</b>	<b>\$ 2,962,976</b>	<b>\$ 68,002</b>	<b>\$ 3,030,978</b>			<b>88,419</b>	<b>456,508</b>	<b>5.16</b>	<b>21</b>

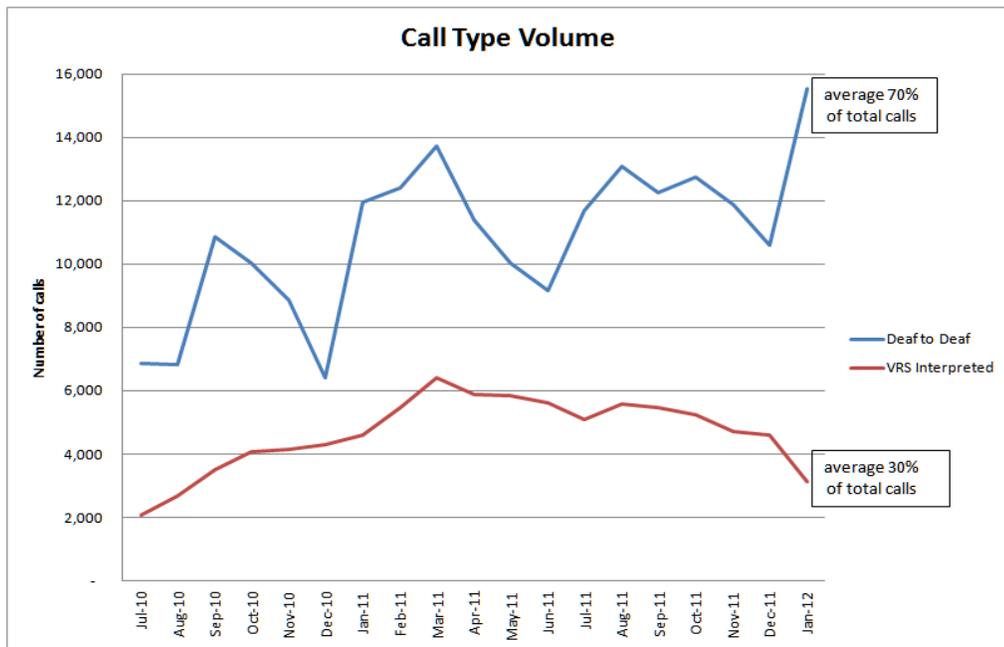
40. Based on the above cost information, the average monthly direct cost per trial user for the service was \$729.00.
41. It is important to note that the external vendor costs were based on the approved FCC rate for VRS services in the United States. TELUS' VRS trial used the U.S. VRS costs as a proxy for Canada. However, these costs do not necessarily represent the costs of actually providing the VRS services in Canada. While this trial is informative to some degree about general costs of providing the service,

- TELUS cautions against making correlations between the trial costs and a national implementation of VRS in Canada. Other major cost variables arise from the fact that Canada's population is spread across a vast geography, encompassing major centres, smaller cities and rural and remote communities and any national VRS service will need to operate in two sign languages.
42. In addition, high-speed Internet service in the trial areas is generally available from TELUS and the Company has an ample supply of service technicians to serve these cities. Therefore, the trial is indicative of costs for the delivery of VRS service in large metropolitan cities in Canada. It is not indicative of the associated costs and necessary logistics to deliver VRS services in smaller communities or in rural and remote areas in Canada. It is unknown whether these factors would cause costs that are greater than those experienced in the United States.
  43. TELUS was able to measure the volume of VRS-interpreted calls that were made by trial participants.<sup>16</sup> On average, VRS trial users made 21 calls per month, with each call being just over 5 minutes in length. This computes to an average of 108 minutes per month per user, or approximately 1300 VRS minutes per user per year. As can be expected, the number of calls actually varied widely by user. There was a range from a low of 1 call per month to a high of 436 calls per month for a single user.
  44. As noted above, once a trial participant was equipped with a videophone, the participant was able to make interpreted calls (calls that require sign language relay interpretation) and point-to-point calls (direct video calls between parties that would use sign language to each other). Point-to-point calls are not "billable" VRS calls, meaning that those calls did not incur per minute charges payable to Sorenson.
  45. Tables 6 and 7 provide monthly detailed information of the distribution of calls between Deaf to Deaf and VRS interpreted calls.

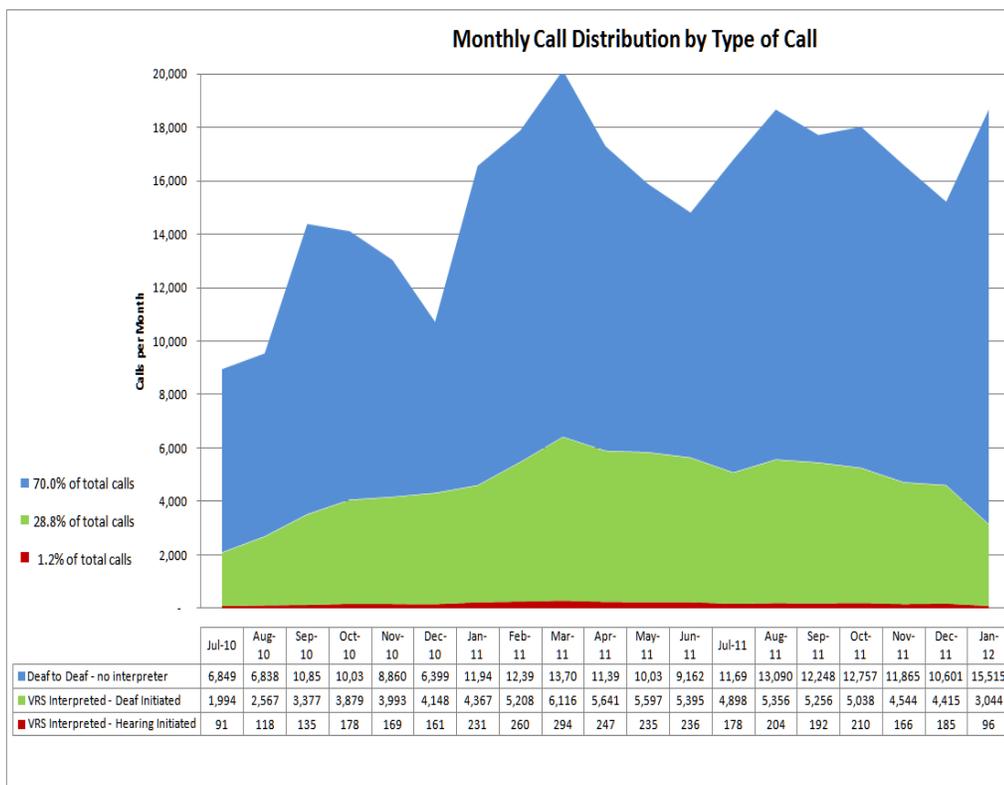
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<sup>16</sup> TELUS was able to measure the call volume of both interpreted and point-to-point calls, but the call data included in Table 5 represents only VRS interpreted calls.

**Table 6**



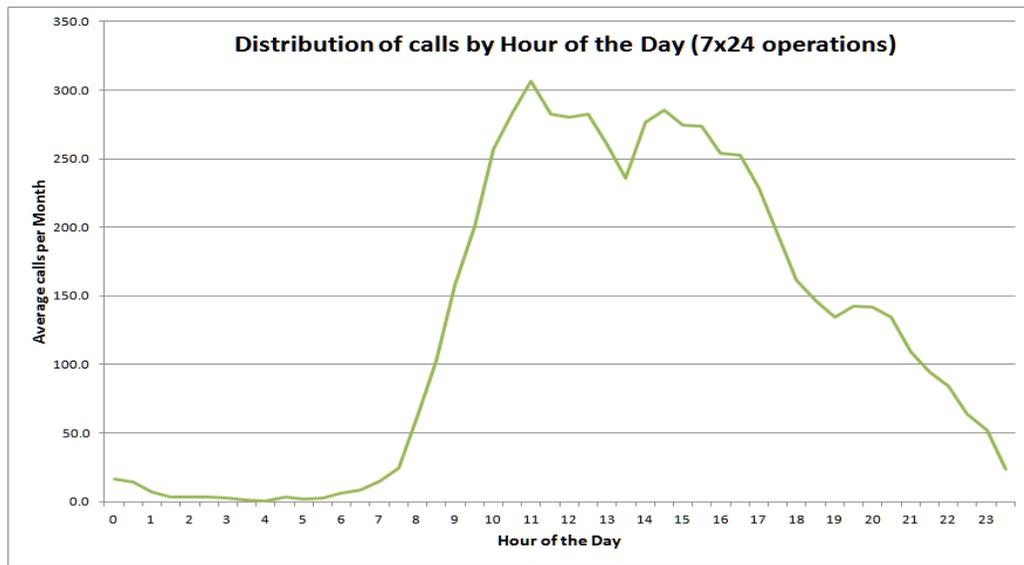
**Table 7**



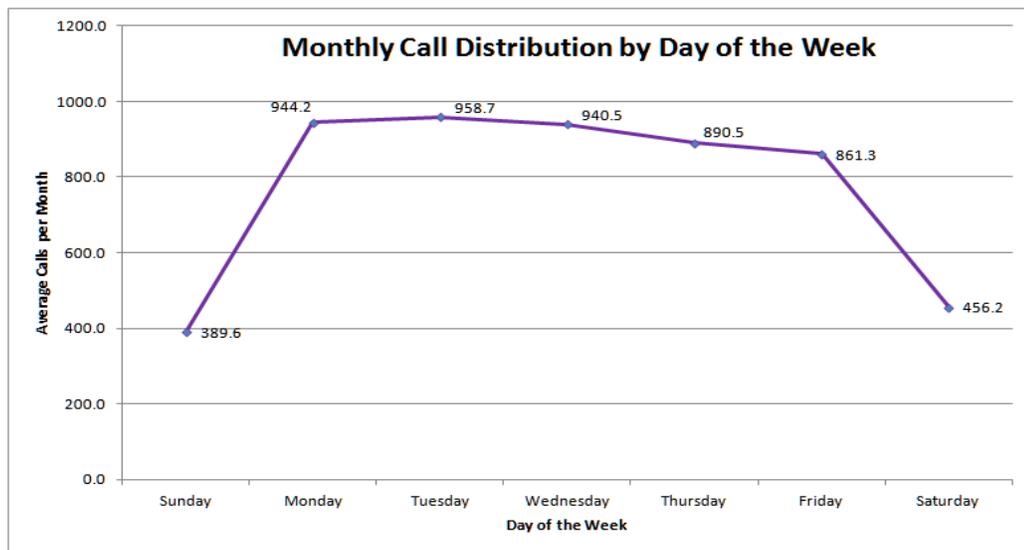
46. As shown in Table 7 above, through the duration of the VRS trial, the majority of the calls made were free of charge because 70% were point-to-point calls between deaf or hard-of-hearing videophone users that did not require any sign-language

- interpretation, and 30% being VRS-interpreted calls. TELUS was not surprised by this call distribution because it reflects the fact that many deaf and hard-of-hearing persons welcomed the opportunity to communicate directly with each other using sign language. TELUS notes that point-to-point video calls of this sort could take place independent of any VRS service, because all that is required is an IP-enabled device that is capable of transmitting live video.
47. Table 7 also shows that the majority of the VRS interpreted calls were initiated by the deaf and hard-of-hearing party with a small number initiated by the hearing party. TELUS notes that hearing party initiated calls are probably lower in the VRS trial than what is normally expected in a public VRS service. This can be explained by the fact that VRS access for hearing parties during the trial involved calling a 1-800 access number and then providing the name or reference number for the VRS user trial deaf and hard-of-hearing party. Therefore, the VRS trial did not provision direct dial 10-digit telephone numbers for each videophone, as VRS is actually provisioned in the U.S. In addition, in TELUS' VRS trial setting, access numbers for hearing parties were not published or advertised and VRS access numbers were only known if VRS trial participants provided them to a hearing party.
48. However, the call distribution should not be taken as an indication, one way or the other, of a need for VRS service itself. The number of VRS-interpreted calls compared to the number of point-to-point video calls does not say anything about the relative importance of the VRS service and it should not minimize the utility and convenience of having VRS service available to the deaf and hard-of-hearing community.
49. Most of the VRS calls were placed during day time, between 8 AM and 10 PM, from Monday to Friday, as shown in Table 8 and 9, provided below. These data are not surprising.

**Table 8**

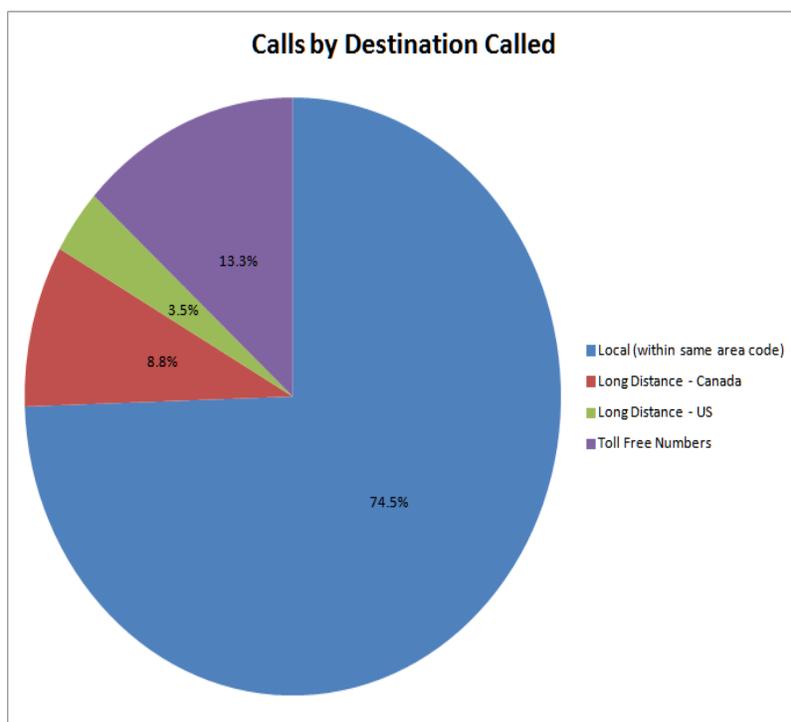


**Table 9**



50. Table 10 shows that the vast majority of the VRS calls (almost 75%) were local calls within the same area code. Long distance costs for long distance calls made in Canada and in U.S. were covered in the per call rate.

**Table 10**



51. Finally, TELUS conducted a customer satisfaction survey<sup>17</sup> during the VRS trial. The results, filed in Appendix A to this report, show that overall appreciation of the service was very high. Most of the surveyed trial users were satisfied about the quality of the service, the quality of the sign-language interpretation from Sorenson and the quality of the technology used (videophones) during the trial. The vast majority of them also appreciated their VRS call experience, highly enjoyed the service and would definitely recommend it to others.

***B. Potential mechanisms or approaches involved in providing VRS in Canada***

52. TELUS' experience with the VRS trial has shown that there is significant merit in having VRS service available in Canada. Our participant feedback obtained during the course of the trial has been unequivocal that the trial participants valued the service and that the service was a step-level improvement from traditional message relay and IP-Relay services.

53. TELUS also has the following observations based on its trial experience. First, VRS is, at its heart, a sign-language interpretation service available from a call

<sup>17</sup> This survey was designed and conducted by TELUS in November 2010. A total of 98 trial participants were included in the survey. Details can be found in Appendix A.

- centre. The Internet connection facilitates that communication in the same manner any another Internet-based application. As a result, there is no reason why any particular telecommunications service provider should be mandated to provide VRS directly, because the service involves skills that are outside the normal domain of telecommunication service providers.
54. Second, it is clear that VRS will have an impact on the available of sign language interpreters in the community. In addition, TELUS' trial was based only on ASL sign language, and therefore, the Company cannot comment on the availability of Langue des Signes Québécoise ("LSQ") interpreters. As a result, any implementation of VRS should be scaled at the outset to take into account the available stock of interpreter staff. Perhaps this will mean that VRS service could be implemented on a restricted basis (such as something other than 24/7 hours of availability) at the outset, with a gradual move to a 24/7 service over time, if such availability were to be warranted.
55. Limiting the availability at certain times of day does make sense based on the data collected by TELUS. TELUS notes that it gradually moved to a 24/7 service over the course of the trial, only to restrict the service's availability to the hours from 5:00AM to 12:00AM Pacific time near the end of the trial. This modification of service hours was implemented because the very small number of calls that were being interpreted in the very early morning hours of each day causing higher relative costs to maintain the call centre availability because it was not a national service offered on a 24/7 basis.
56. There have been suggestions that other restrictions be examined, such as limiting the number of calls or interpreting minutes per VRS user. In TELUS' view such restrictions would be far more difficult to enforce. For example, it would require a VRS service provider to tally each VRS user's usage in a given month, and to send alerts when the limit was being approached, causing technical requirements and administrative costs. In addition, it could be onerous on customers who have reached their monthly limits but still wish to make additional calls. This could be especially problematic should customers use VRS service as part of their professional or employment duties.

57. TELUS also does not believe that reducing the quality of service standards would be a viable means to implement VRS services. Any customer that wishes to obtain VRS services should be able to do so with minimal delay. As such, call centres should be staffed with relay agents that are able to handle demand without forcing customers to wait for many minutes in a queue. Throughout the VRS trial, TELUS provided a high-service level to the VRS trial participants with 96.3% of calls answered within 120 seconds and an average speed of answer of 21.1 seconds, which resulted in only 6.4% of calls being abandoned. Details are provided in Table 11.

**Table 11 – Statistics on Call Answer Performance**

	<b>Answer Performance</b>		
	<b>% Answered in 120 Sec</b>	<b>% of Abandoned Calls</b>	<b>Average Speed of Answer (In Seconds)</b>
Jul-2010	97.3%	8.4%	15.7
Aug-2010	92.4%	13.3%	32.1
Sep-2010	90.1%	13.8%	40.7
Oct-2010	94.1%	7.1%	25.5
Nov-2010	96.1%	6.7%	20.9
Dec-2010	95.6%	6.4%	21.8
Jan-2011	96.6%	6.9%	21.1
Feb-2011	97.4%	5.6%	17.2
Mar-2011	97.2%	5.8%	18.3
Apr-2011	96.9%	5.2%	19.1
May-2011	96.8%	4.8%	18.6
Jun-2011	95.7%	4.7%	22.3
Jul-2011	97.8%	4.8%	16.4
Aug-2011	97.5%	4.4%	16.8
Sep-2011	97.2%	5.9%	19.1
Oct-2011	97.5%	5.0%	17.9
Nov-2011	98.0%	4.0%	15.3
Dec-2011	98.4%	3.7%	15.3
Jan-2012	97.1%	4.5%	26.4
<b>Trial Average</b>	<b>96.3%</b>	<b>6.4%</b>	<b>21.1</b>

58. As noted earlier in this Report, TELUS' VRS trial did not include access to 911 services *via* VRS communication. In TELUS' view, this restriction makes sense because of public safety and cost concerns. Traditional telephone access to 911 has been designed so that automatic location and number identification of the caller is presented to the emergency public safety answering point (the "PSAP"). This means that even if the call were to be dropped or if the caller cannot communicate the location of the emergency, emergency services will still be deployed. Just as importantly, the 911 access system also automatically routes any 911 telephone call to the correct PSAP in the serving location. Therefore,

once the call is received by the PSAP, the PSAP employee is assured that the caller is within the boundaries of the locale served by that PSAP.

59. Because VRS is initiated by an Internet connection to the VRS relay intermediary, none of these inherent safety features in the 911 system would be available without further development. As a result, no automatic number or location information would be presented to the VRS relay intermediary. In addition, the VRS relay intermediary would be forced to determine which PSAP to direct the 911 call, which requires significant interaction between the relay intermediary and the caller to determine location and the nature of the emergency, and then will have to place the 911 call to the appropriate PSAP. These additional steps will waste crucial time in an emergency and are prone to error.
60. As such, TELUS believes that any VRS service implementation not include access to 911 until the development issues can be addressed. Deaf and hard-of-hearing customers would be told that any calls for emergency services should be made *via* the voice 911 system. TELUS also notes that the Commission is already engaged in a trial of a text-to-911 service for deaf and hard-of-hearing customers.

***C. Should VRS be implemented in Canada***

61. TELUS' VRS trial was implemented on a limited basis, almost exclusively focused on its three largest metropolitan areas in Alberta and British Columbia. The purpose of the trial was to experiment with a new service for a limited number of trial participants to collect data on service usage, cost variables and potential marketplace interest. The intention of the trial was one for data collection to inform the Commission of a VRS service, but it was never intended to be a pilot for a potential national implementation by TELUS.
62. Having said that, the VRS trial has revealed that there is significant customer interest in VRS services in Canada and the services would provide meaningful and lasting benefits to Canadians. However, the question of whether VRS should be implemented in Canada is a complex one that has many considerations.

63. The most important question is how the service will be funded. The existing per network access service line tariffs collected for the provision of traditional message relay services and IP-Relay services would be insufficient to recover a national VRS service in Canada. As a result, if the Commission were to use such a tariff, it would have to explore what amount would be required and whether the additional fee would continue to make telephone service affordable for all Canadians. A rate that exceeds a few cents per line could become an onerous additional fee upon many telephone subscribers.
64. As a result, TELUS asks that the Commission explore whether a funding model such as drawing an amount from the National Contribution Fund is feasible. This would entail a review of the *Telecommunications Act* to ensure that such a funding model is permitted. TELUS believes that such a model would be far more equitable than forcing local telephone customers to pay directly for VRS service out of a per network access service line tariff.
65. Another major consideration is the impact of implementing a national VRS service on the availability of sign language interpretation staff in Canada. Any national VRS will require dedicated sign language interpreters to act as relay intermediaries. These interpreters, of course, will not be available to conduct community interpretation when they are working at the VRS call centre. Any implementation must take into account that the possible impact of available interpreters for community activities.
66. In addition, the VRS trial was not offered to participants using LSQ. As a result, no conclusions can be drawn from the trial for markets that includes communities where LSQ is the language used. Any implementation plan would need to be outlined as to how a suitable stock of LSQ interpreters will be made available to handle a VRS service to serve French customers. Such a plan might include a restricted hours of service for LSQ VRS service for a period of time, growing to a wider available service over time as the number of trained LSQ interpreters grows.

#### **IV. Conclusion**

67. TELUS is proud of its efforts with its VRS partner Sorenson to deliver the VRS trial to participants. TELUS thanks the Commission for its approval of the trial as part of the deferral account funding because the trial certainly improved accessibility to telecommunications for the deaf and hard-of-hearing community. Trial participants have told TELUS that the VRS service provided in the trial was an outstanding product and dramatically changed the manner in which they could communicate. The trial has proven to be valuable for trial participants and has given TELUS and the Commission significant information about VRS service and its possible implementation.
  
68. It is clear that many questions remain about how VRS can be implemented in Canada. TELUS asks that the Commission initiate a public consultation to make determinations on these questions so that VRS might be implemented in Canada.

\* \* \* End of document \* \* \*