Report: The Learning Network of Vermont (LNV)

1. What distance-learning technology do you currently use?

The Learning Network of Vermont (LNV) is school-based videoconferencing system in over 200 sites around the state. These sites are mostly schools, but also include the Agency of Education; The Vermont Legislature; the Department of Disabilities, Aging, and Independent Living; adult learning centers and career and technical centers. This system allows students, teachers, and others to collaborate with experts in distant locations; communicate with other students in Vermont, the nation, and world; combine resources; take "virtual" field trips to locations around the U.S. and Canada; and have meetings with colleagues without leaving their desks.

The LNV takes educational videoconferencing to the next level, using the public internet to connect the videoconference rooms of Vermont schools to each other and the world. LNV members can include outside sites anywhere on the internet in their LNV meetings.

The LNV is actually 3 different systems combined: 1) a videoconferencing camera and television monitor; 2) a user's PC or Mac and webcam that currently uses Scopia Desktop to connect to other participants; and 3) iView, a web-based meeting scheduler and controller. These three parts "talk" to each other via the internet.

2. What are/were the start-up costs for such technology and what are the total/projected ongoing operational and maintenance costs?

To date, around $900,000 of mostly Title II D federal funds was spent in establishing the LNV system, including establishing camera grants to schools and other locations around the state. This cost also included between $60,000 - $120,000 per year to Vermont-based Northeast Computer Systems for technical support to the larger system (head end). In 2008, some funding, (slated to expire) from Title IID was used to establish the content dollar bank with The Center for Interactive Learning and Collaboration (CILC) to fund free virtual field trips to LNV users. This content bank is slated to run out by the end of the current school year. There are no plans for its renewal.

3. What technology do you plan to offer in the future and at what cost?

The AOE has no plans to further enhance the LNV system. For the past few years the AOE has maintained the contract for tech support and made some upgrades in software systems. The

AOE continues to use the LNV with Scopia Desktop to connect to schools and the system also is used regularly with other desktop videoconferencing tools that now exist in many of our schools, i.e. Google Hangout, GoToWebinar, etc. Some schools have brought on other camera systems through their individual USDA (Rural Utility Services Grants--RUS) teleconferencing grants and those systems have been "neighbored" with LNV. The AOE is not purchasing any more cameras for schools in the future.

4. What technology, if any, have you offered but discontinued? (Why was it discontinued and how much was invested?)

Because of state budget cuts, the AOE has recently decided to discontinue technical support to schools; at this date it is only funding the Scopia Desktop license (roughly $13,000/year), which is paid for through 2016. The AOE has continued to provide support for the system in the form of professional development. Various groups have been trained in its use and schools continue to use the content bank.

5. Who are the current (past, future, as applicable) users of your technology and what are (were or will be, as applicable) the user costs of the technology?

There are over 200 LNV sites around the state, and in addition, any school or classroom with an internet connection can connect to the LNV via Scopia Desktop. All schools in the state are eligible to access the CILC funds for free virtual field trips for its students. The following are statistics from the last LNV data collection:

- During a recent school year, there were 2,851 calls placed over the LNV system. These calls were both point-to-point and multipoint, and were comprised of meetings between individuals and groups, virtual field trips to content providers around the country, and collaborations between Vermont students and students in other states and countries.
- There are more than 400 registered users of the LNV system. These users include classroom teachers, tech integration specialists, educational technology directors, DOE staff, Vermont Virtual Learning Collaborative teachers, and adult education staff.
- Of these users, about 90% have participated in some form of LNV training conducted by DOE staff.
- During a recent school year, Vermont students participated in over 200 virtual field trips with experts from museums, historic sites, NASA, and other organizations around the country.

Past connections, still viable, still potential for future:

- Prior to LNV, the system was known as the Interactive Learning Network (ILN), and was run out of Vermont Institutes, a non-profit serving needs of schools often in partnership with AOE. The ILN had partnerships with some state museums, the Lake Champlain Maritime Center and Mystic Aquarium and created content for schools to be used interactively. State museums and sites have continued to have an interest in the possibilities herein.
- The ILN also engaged state authors and poets from across Vermont and provided interactive sessions with schools with these individuals. Again, interest in this could be reinvigorated into the future.
- Over the years there have been classes shared via the LNV, for example high school algebra in collaboration with VIT. Currently a school has used the CILC funds to support Chinese language instruction at their school.

User costs are hard to estimate as currently there are no charges for using the system. It would be very difficult to isolate a cost of videoconferencing alone on any school network. From our records at AOE, we see most all schools having sufficient bandwidth to videoconference at this time.

Until Spring 2015, technical support for LNV sites was funded by the AOE. At this time schools are expected to contract on their own for technical support. This cost could run anywhere from hundreds of dollars to tens of thousands depending on the number and age of devices in the school.