Digital Divide Bridging Blocks—A Statewide Telecommunications Initiative for All West Virginia Schools

Title of Nomination: Digital Divide Bridging Blocks—A Statewide Telecommunications Initiative for All West Virginia Schools

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2001 NASIRE Recognition Awards Program Nomination

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Executive Summary

West Virginia has been implementing statewide educational technology programs since 1990 on a “turnkey” basis. The programs include the planning, hardware, software, local area networking, initial and ongoing staff development, maintenance and evaluations to meet the educational, legislative and state policy stipulations. On a statewide level, economy of scale advantages of a program are realized as well as equity for all recipients. These two factors have an increased importance when considering affordable telecommunications access to the Internet and for distance learning resources. West Virginia schools were in dire need of this access.

When the FCC created the rules and regulations for the Telecommunications Act of 1996, a component included telecommunications discounts for schools to access the Internet. The West Virginia Department of Education (WVDE), Office of Technology and Information Systems (OTIS), under the coordination of Phyllis Justice, began the planning meetings and determined the approach to take advantage of the telecommunications benefits and make one more piece of our “turnkey” solution bridge the various divides for our students, educators, communities and citizens.

Realizing the intricate details of the program and acknowledging that the rural, deprived areas that needed the benefits the most would be the ones that would be least likely to participate, a statewide approach was developed. Therefore, the Office of Technology and Information Systems assumed the task of completing an application for EVERY school in the state. This not only allowed for all schools to participate in the E-rate program, but it also ensured that the schools with the highest need would be included. In addition, the statewide process would help address the Digital Divide concerns for all students and locations.

The benefits of the statewide approach have provided over $26.5 million in E-rate discounts for West Virginia schools; therefore, enhancing learning opportunities, creating cost savings, providing connections to all schools, improving planning, updating acceptable use policies, addressing filtering and improving capacity at the district and school levels to understand telecommunications issues.

The return for the state will be seen in the improvement in education and the tie to economic development. Having the knowledge to use today’s tools is a must, and that knowledge leads to academic improvement, IT training, business partnerships, and an investment in our state’s best resource—our people!
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West Virginia, a very rural and economically challenged state, is in need of the resources to bridge the Digital Divide. Although the state’s average income is one of the lowest in the nation, the state ranks 17th in its support of public education. This investment, supported by the Governor’s Office, Legislature, West Virginia Board of Education, other state agencies and citizens, has included educational technology programs to provide the academic achievement and lifelong learning to produce positive economic change in the state.

West Virginia has been implementing statewide educational technology programs since 1990 on a “turnkey” basis. The programs include the planning, hardware, software, local area networking, staff development, and maintenance to meet the educational, legislative and state policy stipulations. On a statewide level, economy of scale advantages of a program are realized as well as equity for all recipients.

Description of Project:

When the FCC created the rules and regulations for the Telecommunications Act of 1996, a component included telecommunications discounts for schools to access the Internet. There was much to do from the federal level in order to ready the schools to apply for the discounts. The West Virginia Department of Education (WVDE), Office of Technology and Information Systems (OTIS), under the coordination of Phyllis Justice, held many conversations with FCC attorneys, federal program administrators, and other state departments of education. These conference calls and planning meetings determined the approach to realize the telecommunications benefits and make one more piece of our “turnkey” solution bridge the various divides for our students, educators, communities and citizens.

National consensus was to organize a small number of state representatives as an ongoing advisory and feedback committee to the federal group. West Virginia has been involved from the beginning of the program planning, which was five years ago. The WVDE Office of Technology lead the West Virginia statewide effort to have every school participate in this program. Therefore, Phyllis Justice participated in weekly conference calls with the national committee and federal E-rate program administrators to gather information and directions for state use.

Realizing the intricate details of the program, the rural, deprived areas that needed the benefits the most would be the ones that would be least likely to participate due to lack of staff and other circumstances. Therefore, the Office of Technology assumed the task of completing an application for EVERY school in the state. This not only allowed for all schools to
participate in the E-rate program, but it also ensured that the schools with the highest need would be included.

State and regional conferences with regional and local educators were held to explain the E-rate program and the application process. Notebooks were developed that took the E-rate legal jargon and translated it into understandable needs collection in order for the state to complete every application on behalf of the schools. Where appropriate, the state combined applications at the state level and facilitated other consortium partnerships when applicable. It was a major undertaking but worth every hour of it for the benefits reaped.

This is the fourth year of the e-rate application process (in addition to the first year of planning). In the first year of the application program, every public school in West Virginia applied for E-rate discounts in order to make access to the Internet an affordable option. **The WVDE accomplished this by completing each application for every school.** This was also the process for the second year. In application years three and four, the WVDE assisted the schools in the application process for local costs and continued to complete the applications on behalf of the schools for statewide programs and costs. The program became too large to continue to complete all of the applications at the state level, but the first two years helped to build local capacity and had prepared the local staff to complete some of the applications.

**Significance to the Improvement of the Operation of Government:**

The significance of the E-rate program for West Virginia is huge. It is imperative that education in West Virginia continues to progress, that the Digital Divide concerns are addressed and overcome, and that provisions are made for our students and educators to have the electronic tools to help prepare them for lifelong learning. This also applies to the parents and school communities.

One of the components for economic development is having an educational system that serves the needs of all learners at all ages. Because of the digital access improvement via the E-rate program, various government agencies will benefit directly and indirectly. Citizens will become knowledge navigators and be able to take advantage of the many government services now being offered via the web development.

Because schools also share a statewide electronic administrative information system via the same telecommunications lines, other agencies may also acquire appropriate data from the schools/state in a more timely manner, and to hopefully avoid data collection duplication. Without the benefit of the E-rate discount program, many schools would not have been able to continue current access with their local declining budgets, improve bandwidth to access new resources, and participate in other statewide programs.

The Internet access for all schools has also been improved by having the access fees to the points of presence to the Internet paid at the state level on behalf of the schools. This consolidation of services has been in conjunction with WVNET, the K-12 provider.
One of the most significant benefits is that the legislative and local appropriations for technology was not only used to match the E-rate requirements of having the computers, networks, electricity and staff development in place, but allowed the state investment to be expanded to take advantage of pricing on state contracts, and provide more to the districts with the higher free and reduced lunch rate. To make all of these pieces fit, the program became a focal point for other state agencies to assist the WVDE in the application process. The Public Service Commission, Consumer Advocate, was tremendously helpful in guiding the WVDE in telecommunications issues and agreements with telecommunications companies.

Benefits Realized:

The service recipients, taxpayers, and state agencies--due to the way the E-rate program was implemented on a statewide basis--have realized many benefits and improvements. The following are just a few examples:

1. The E-rate program bridged the other statewide and local technology initiatives and allowed all of the “turnkey” components of those projects to advance the installations with Internet connections. (See access.k12.wv.us)
2. Every school now has a local area network connected to the Internet via a high speed connection. The bandwidth varies based on the number of students and needs of a school.
3. Due to the internal connections discounts through the E-rate program, West Virginia now has 83%+ of the classrooms with Internet access, in addition to 100% of the schools having access. The classroom percentage grows every day with each new installation.
4. During the first semester of 2000-2001, over 220 K-12 students were able to take online courses that were not otherwise available to students in the rural schools.
5. Local school/county technology budgets were improved with the federal discounts.
6. Infrastructure at the schools was improved.
7. At least 8 schools were able to install larger bandwidth connections to improve student access to live, interactive distance learning courses within the county/district.
8. At this time, West Virginia has a huge shortage of teachers, and this bandwidth provision allowed schools to share teachers and courses.
9. The E-rate application data provided the school, county/district and state an accurate record of school and classroom access and inventories. This information has been used to apply for other grants and continue yearly technology planning updates.
10. The improved access provided opportunities for the state to obtain partnerships with others, including the WorldCom Foundation, to provide resources to schools.
11. Teachers, students and parents have access to juried lesson plans and curriculum content through the state Reinventing Education project and other partnerships. (See wvde.state.wv.us/lessons/).
12. The West Virginia Legislature passed legislation last year that created the West Virginia Virtual School. With increased bandwidth, more students will have the opportunity to access courses.

13. Access via the Internet has also provided the opportunity to expand the Information Technology (IT) training to areas of the state that would not have otherwise been able to participate.

14. Other benefits through the statewide coordinated programs may be found at access.k12.wv.us.

Return on Investment:

In this case, all of the ROI is difficult to calculate, because this project will provide learning opportunities/knowledge for students to utilize throughout lifelong situations. The hours spent on planning, checking data, coordinating state projects and completing the applications for all schools was worth over $26.5 million in E-rate discounts for West Virginia classrooms. Before this year’s applications were submitted, 35% of the state’s schools had T1 or larger connections and the remaining had 56kb. The current applications requested to upgrade many of those, based on student population and curriculum needs.

An access avenue is now available to schools to provide the content needed for students and educators to learn on a “just-in-time,” “any place, any pace” or other scheduled time frame. It also provides a new way to communicate with all of the stakeholders, especially the parents and community. More and more schools are creating web pages, using the communication tools of email and electronic lists, and accessing quality content that they never had before.

Benefits have been derived at the state level to help offset the costs for the schools to access the Internet. It has also provided a partnership opportunity with WVNET and other state agencies to increase the coordination of their services to the schools. Because of the E-rate program, the WVDE has been able to maximize the legislative funding and utilize taxpayer dollars for other business, industry, foundation and federal grant matches.

The return for the state will be seen in the improvement in education and the tie to economic development. Having the knowledge to use today’s tools is a must, and that knowledge leads to academic improvement, IT training, business partnerships, and an investment in our state’s best resource—our people!