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AUTHOR Gregg, Soleil; And Others
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ABSTRACT

West Virginia has been pursuing an approach to connecting students to the information highway that mirrors the model envisioned by the Telecommunications Act of 1996. This policy brief aims to help schools and state agencies understand the discounts provided by the Act. U.S. Senator Jay Rockefeller explains the provisions of the Snowe-Rockefeller-Exon-Kerrey Amendment that provides discounts to schools and hospitals for telecommunications hardware and services. State Superintendent of Schools Hank Marockie explains how departments of education can help school districts take advantage of the discounts. State Senator Lloyd Jackson enumerates ways that state government should coordinate agencies to assist schools and libraries in getting the discounts. Vice-president of Bell Atlantic-West Virginia, Ritchie Ireland, offers nine principles to help state and local agencies work with telecommunications providers. Consumer advocate Billy Jack Gregg describes the role that state public utility commissions play in telecommunications discounts and how state and local education agencies can work with them. Craig Howley of the ERIC Clearinghouse for Rural Education and Small Schools identifies seven issues facing rural schools, and suggests six steps rural school administrators can take to implement the Act. Billy Jack Gregg and Soleil Gregg give brief explanations of the discounts, types of services covered, eligibility, and the application process and requirements. The school discount matrix and 11 on-line telecommunications resources are included. (TD)

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THE TELECOMMUNICATIONS ACT OF 1996: A GUIDE FOR EDUCATORS

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For specifics on the school discount program, see School Discounts in a Nutshell—page 11

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INTRODUCTION

At a 1995 meeting of the National Association of State Utility Consumer Advocates that focused on telecommunications, it became increasingly apparent that West Virginia—through the coordinated efforts of key players—was ahead of other states in assembling all the necessary pieces to connect students to the Information Highway: negotiated discounts and regulatory support for Internet service, hardware and software, teacher training, curriculum development, and monetary and philosophical commitment by state agencies, government, and business.

Now, a year and a half later, the Federal Communications Commission (FCC)—in regulations to implement the Telecommunications Act of 1996[1]—is helping schools connect to the Internet through a similar integration of effort involving federal and state governments, state and local education agencies, public utility regulators, and business. Moreover, requirements in the regulations ensure that essential components are in place before schools can receive discounts for telecommunications services, including hardware and software, teacher training, curriculum development, and funding.

Since West Virginia's approach described in 1995 mirrors the model envisioned by the FCC, AEL asked key West Virginia policy makers and players to share their expertise to help schools and states understand and secure the school discounts provided by the Snowe-Rockefeller-Exon-Kerrey Amendment to the Telecommunications Act. Contributors responded to specific questions related to their individual areas of expertise. We thank the following leaders for contributing information and suggestions to help schools take advantage of this landmark

[1]The FCC's Universal Service Order of May 7, 1997, is Order Number 97-157. References to particular paragraphs within the Order will be presented as "FCC 97-157 ¶...." The regulations implementing the Order are found at 47 Code of Federal Regulations, Part 54, Subpart F, and will be referenced as "47 CFR§...."

legislation.

- The Honorable John D. (Jay) Rockefeller IV is West Virginia's U. S. senator and co-author and cosponsor of the Snowe-Rockefeller-Exon-Kerrey Amendment to the Telecommunications Act of 1996, meant to provide schools and libraries affordable access to the Internet.
- The Honorable Henry (Hank) Marockie is West Virginia's state superintendent of schools, president of the Council of Chief State School Officers (CCSSO), and chair of the CCSSO's Technology Committee.
- The Honorable Lloyd Jackson represents Lincoln and Boone Counties in the West Virginia Senate and chairs the Senate Education Committee.
- Ritchie Ireland is the vice president of Finance and External Affairs for Bell Atlantic-West Virginia and a key player in its World School℠ initiative, a program to connect classrooms to the Internet.
- Billy Jack Gregg, director of the Consumer Advocate Division of the Public Service Commission of West Virginia, has been involved in state negotiations to provide Internet access to schools.
- Craig Howley serves as director of the ERIC Clearinghouse on Rural Education and Small Schools at AEL and as a member of the Rural Policy Research Institute's Rural Telecommunications Expert Panel, which is studying the impact of Telecommunications Act in rural communities. ❖

The Snowe-Rockefeller-Exon-Kerrey Amendment

What are the provisions and intent of the Snowe-Rockefeller-Exon-Kerrey Amendment providing discounts to schools?

Senator Jay Rockefeller:

With the FCC's May 7 ruling to fully fund the Snowe-Rockefeller-Exon-Kerrey Amendment to the 1996 Telecommunications Act, students both in West Virginia and across the country are the big winners.

This historic decision will connect all students to the Information Superhighway, dismantling barriers like mountains and strained school budgets and allowing school children to learn foreign languages, explore distant countries and cultures, and take advanced science courses through the wonders of modern technology.

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Access to information on the Internet is as important today as rural electricity and basic phone service have been in the past.

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The FCC allocated more than $2 billion per year—enough to help every school in the country with both the internal connections they need to wire classrooms and the discounts they need to cover the monthly telecommunications costs of staying on line.

The nation's Chief State School Officers, who represent thousands of school districts across the country, hailed the news as "the most important federal initiative to advance education into the information age of the 21st century." They, and others, compare its importance to the GI bill, land grants, and other landmark legislation that have extended the opportunity for education in our country.

Early in 1995, Senator Olympia Snowe (R-ME) and I introduced the Snowe-Rockefeller Amendment to the Telecommunications Act to ensure that rural communities in West Virginia, Maine, and other states can make full use of the Internet and other vital education technology for learning. The FCC ruling on May 7 makes good on that commitment. Now, a student in Bluefield, West Virginia, will have the same learning opportunities as a student in Beverly Hills, California.

Remarkably, this historic event has gone almost unnoticed in the press. But it's a big deal, and it's a particularly big deal for states with large rural populations.

The FCC ruling delivers on the promise of the Telecommunications Act. All kids—no matter where they live or how much their parents earn—will have access to education technology. Students who attend small schools in remote areas will be able to connect by computer to the best libraries in the world or take advanced math and science courses offered in larger schools. Adults will be able to access the

Internet from their local public libraries.

Access to information on the Internet is as important today as rural electricity and basic phone service have been in the past. And like these earlier technological advances, recent computer breakthroughs will help our country ease the gap between the haves and the have-nots.

The FCC ruling also provides money for rural hospitals and clinics to use audio and video telecommunications technology to connect with major medical centers, allowing patients in rural areas to get the diagnoses and treatments they need without having to spend hours in the car traveling to see a specialist in person.

In the past few years, West Virginia has laid the foundation necessary to take advantage of the Snowe-Rockefeller-Exon-Kerrey Amendment on education technology. Thanks to an important partnership between the private and public sectors, 700 of the state's 867 schools are already connected to the Internet. Dennis Bone, West Virginia president of Bell Atlantic, made connecting schools a top priority, committing resources and know-how. Former Governor Gaston Caperton provided critical leadership. And Governor Cecil Underwood is working to expand access to more schools and more students.

The FCC ruling will complement West Virginia's efforts already underway and provides for all the nation's schools an extraordinary opportunity—one that we must seize immediately. We need to work with our schools and education leaders to make sure they know of the discounts available and wisely take advantage of this federal investment in education.

While growing numbers of schools now have some access to the Internet, in too many schools it's limited to the library or a computer lab, instead of classrooms. To take full advantage of education technology, we need to connect every classroom, and the Snowe-Rockefeller-Exon-Kerrey Amendment can get that done.

Education technology is not just important to improving the quality of education, it is essential to preparing our students to compete in the 21st century. By the year 2000, six out of ten jobs in the United States will require computer skills—skills that just 22 percent of our workforce possess today.

Fifty years ago, the GI bill helped put a generation of Americans through college, preparing them to compete in the postwar economy. Today, our nation's commitment to education technology can help us prepare a new generation for a new set of challenges. ❖

Advice for State and Local Education Agencies

What do state departments of education and school districts need to know and do to take advantage of the provisions and school discounts in the Telecommunications Act?

West Virginia State Superintendent of Schools Hank Marockie:

State departments of education and school districts need to understand the Telecommunications Act and specifically the Universal Service Fund (USF) that will provide telecommunications discounts to schools and libraries. State departments need to be working with schools to help them determine their technology needs that could be met under the Act and to create or update their school technology plans.

The Act provides discounts on telecommunications components and services. States are waiting for the application form from the FCC to see what will be required to participate in the program. Until we know these specific details, schools should be looking at their needs and how the Act may provide for discounts on such items as voice telephone lines, network wiring, servers, routers, maintenance, and Internet lines.

If schools have determined their needs and know what technology would help meet those needs, understand their options for obtaining services, and have their technology plans ready, then they should be ready to apply for the discounts. Since the discounts are based on a national first-come, first-served basis, it is critical that schools and libraries be ready to take advantage of the Act to reap the benefits of the discounts.

Because West Virginia is a small state with 55 districts, we have implemented technology from a stakeholder viewpoint. Stakeholders from local schools and communities have come together to develop recommenda-

tions for statewide implementation, so that each district does not have to reinvent the wheel. The group's consensus concerning telecommunications was for the state to file one application on behalf of all public schools but to ensure that each school receive its respective discount. This statewide approach will avoid duplication of effort in planning, yet account for the different needs in each school.

Because the FCC discounts do not provide for computers in the classroom, the Department . . . has worked with the state legislature to secure some funding for schools to purchase Internet-ready computers for telecommunications access.

Because we have implemented technology on a statewide basis, the information we already have on file will help local schools evaluate technology needs and understand how to integrate technology with the curriculum. This will help secure student access to the Internet, since most of our schools do not have a technology coordinator.

In West Virginia, we plan to apply the discounts to existing state contracts. This will help us speed the process of implementing technology plans, since we will not have to rebid for some services. Other states with statewide bid contracts are looking at this same type of model.

West Virginia has been very fortunate in working with the Public Service Commission's consumer advocate and will continue to work with him to correlate the federal and state discounts for K-12 utilization. In 1994, the consumer advocate helped us devise the plan to connect all schools in Bell Atlantic territory (over 80 percent of the state's schools) to the Internet through the World School℠ program. We are now working with other providers in the state to secure the same type of connections for the remaining schools.

Because the FCC discounts do not provide for computers in the classroom, the West Virginia Department of Education's Office of Technology has worked with the state legislature to secure some funding for schools to purchase Internet-ready computers for telecommunications access. We have also integrated the SUCCESS (Student Utilization of Computers in Curriculum for the Enhancement of Scholastic Skills) program in middle, junior, and high schools to coordinate with the FCC discounts.

In addition to hardware and telephone-service issues, we already have in place a cadre of teachers to help train others how to use the various technologies and how to integrate the Internet into the curriculum for improved student achievement.

From the beginning, West Virginia has worked with Senator Rockefeller's office to reinforce the need for telecommunications discounts on a statewide basis. Equity is a major issue in providing students in West Virginia and every state access to all of the educational options that telecommunications offers—both today and in the future. ❖

State Government's Role

What is the role of state government in implementing the Telecommunications Act, and how should schools work with government agencies to maximize benefits?

West Virginia Senator Lloyd Jackson:

The role of state government in implementing the Telecommunications Act is to coordinate involved agencies to provide assistance to schools and libraries so they may take advantage of the FCC Universal Service Fund (USF) discount rates. Depending on a state's structure, state agencies can assist schools in the following ways:

State departments of education can

- provide information to schools about the Telecommunications Act;
- provide technical assistance in developing a school technology plan;
- provide instructional assistance on how to integrate the technology into the classroom;
- prepare administrators and teachers to take advantage of all the components of the Act;

- assist schools in completing the FCC application whenever it becomes available;
- keep schools posted on the status of the Universal Service Fund;
- provide opportunities to aggregate services;
- assist schools in utilizing existing state technology contracts, if appropriate; and
- provide information about other state agencies to schools.

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The state public utility or public service commission can

- work with the state department of education to provide support for the above activities,
- pass the necessary state ruling to comply with the federal act in order for schools to receive the discounts,
- assist all agencies in working with local telecommunications providers,
- provide guidance to educational agencies about how to maximize the effects of the Universal Service Fund,
- coordinate components of the state universal service fund with the Act, and
- assist in determining rural and urban school districts.

The state telecommunications agency and/or state infrastructure backbone provider can

- provide the option for schools to purchase from appropriate state contracts,
- provide assistance in preparing new bids or negotiating new contracts, and
- provide technical expertise to aggregate services when appropriate.

The state legislature can

- support adequate funding for computers and other technology components not covered by the Act,
- support funding for staff development,
- encourage the formation of partnerships and consortia to maximize available resources, and
- provide opportunities for agencies to report progress to legislative committees. ❖

Working with Service Providers

How can state and local education agencies best work with telecommunications providers to get the most for their money?

Ritchie Ireland, Vice President, Bell Atlantic-West Virginia:

Bell Atlantic is delighted by the results of the successful campaign to help America's students gain affordable access to the Internet and other telecommunications. Now we stand ready to offer our resources to help schools take advantage of that hard-won battle—in ways that educators and local communities want and deserve.

The next phase of this effort, connecting students in classrooms to the Internet, moves away from Washington and into the local schools. The challenges ahead may seem daunting to educators, but as a telecommunications provider, Bell Atlantic is committed to providing the best in telecommunications and candid, competent advice when it is sought. We offer the following principles to help educators gain the maximum advantage from the available discounts.

- **Be bold.** Drive your planning based on strategies known to encourage active learning and boost productivity. The Universal Service Fund is intended and designed to help you achieve the best program possible. Don't be limited by the status quo; take a fresh look at what pedagogical thinking reveals, and what experiences have proven to be worthwhile. Be bold, but be sure to operate from strength based on research and proven results.
- **Build on your existing progress.** Revitalizing school classrooms is a process and, in most cases, your school has already made progress toward implementing meaningful, productive, learning technologies. Your technology plan

should chart this evolution toward the desired end, rather than focus on a seemingly impossible end point where everything is different, new, and costly. You are also eligible for discounts on existing negotiated contracts for telecommunications, provided they were in place before November 1996.

- **Work with your state's department of education.** For more than a year, West Virginia experts and those from other states have been advising the FCC and Congress on how to make the system of discounts work. A lot of the emphasis on rural affordability is directly attributable to efforts from West Virginia. As in our state, departments of education nationwide have been looking ahead at technologies that show promise or are proven to deliver educational value. Take advantage of their hard work, analytical investment, and leadership in providing information to schools.

- **Establish standards-based, application-driven technology plans** that will ensure interoperability within the K-12 community and seamless migration to new technologies. It is critical that new technologies integrate with those in use across the state and that learning systems work together smoothly, based on common technical standards.

- **Seek advice from service providers.** We at Bell Atlantic have expertise not only on what has proven to work well in West Virginia, but we can also draw on our experience with almost 30,000 schools and libraries in Bell Atlantic's new service area of 13 states. Ask us about specific problems you want to solve. Ask about others' experiences with telecommunications, inside connections, or Internet access. Chances are we have not one answer but several that cover the full range of problems or options you'll encounter.

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Everyone's payoff is the improvement in learning experienced by the children and adults who take advantage of the new technologies.

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- **Look for genuine gift horses.** Over the years, organizations like the Telephone Pioneers of America, Tech Corps, local civic groups, and Bell Atlantic have made contributions of time, materials, and money to support novel projects, disparate needs, and outstanding performances by students, teachers, and schools. Our interest in helping our communities has not been dampened by Universal Service discounts. Instead, we will redouble our efforts in areas not covered by the discounts. Your wise use of telecommunications in pursuit of better learning opportunities for students may spur additional enthusiasm from local groups. Success can be contagious; plan for it and cash in.

- **Partner with other buying coalitions.** The discounts can make much of what you want affordable, but you can gain even more advantage from discounts that sheer buying volume earns. The regulations permit you to partner with rural, nonprofit, health care providers and municipalities. Together, your purchases can earn volume discounts—a win-win situation for all.

- **File your plans and proposals complete and on time.** You will encounter some administrative requirements in applying for discounts. We are already working with representatives of the education community to make those procedures as sensible and painless as possible. But your effort to comply, on time and completely, is important. Invest the effort to get your plans approved quickly; don't waste time with unneeded back and forth requests to the fund administrator. In the same vein, keep school lunch eligibility records up to date, and at least annually check the Goldsmith Modification list for rurality, especially if you are unclear of your site's classification (see Footnote 3, p. 11).

- **Finally, keep the target in mind.** Everyone's payoff is the improvement in learning experienced by the children and adults who take advantage of the new technologies. Dealing with the administrative requirements may at times seem grueling, but it's a challenge well worth undertaking. ❖

Working with Public Utility Commissions

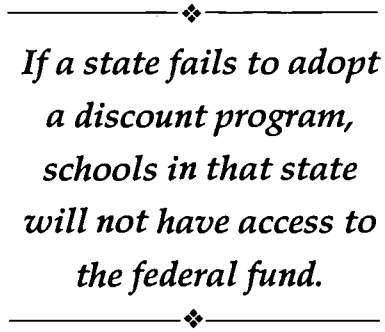
What role do the states' public utility commissions (PUCs) play in telecommunications discounts and how should state and local education agencies work with their PUCs?

Billy Jack Gregg, West Virginia Consumer Advocate:

State utility commissions were created 100 years ago to regulate monopolies providing essential public services. During most of the past century, utility regulators and educators have existed in different worlds and have had little occasion or reason to interact. Now in the 1990s, deregulation of the telecommunications industry is about to throw the two groups into a long-term relationship.

The Telecommunications Act of 1996 aimed to remove barriers to competition in all areas of telecommunications and to provide a road map for the transition from regulation to the free working of market forces. Unlike previous attempts at deregulation in the fields of trucking, airlines, railroads, and natural gas, the Act attempted to remove regulation and introduce competition, while at the same time explicitly guaranteeing "just, reasonable, and affordable rates" in all parts of the country. This concept is known as "universal service." Moreover, as a result of the Snowe-Rockefeller-Exon-Kerrey Amendment to the Telecommunications Act, this guarantee of universal service has been expanded to include provision of advanced telecommunications services and price discounts to socially beneficial institutions such as schools, libraries, and hospitals.

Under rules recently promulgated by the FCC, schools and libraries throughout America are entitled to discounts—ranging from 20-90 percent—on telecommunications services of their choice (see 47 CFR §§54.500 - 54.517). However, for schools to be able to avail themselves of these discounts, the public utility commission in each state must first adopt a program of discounts for schools and libraries at least as generous as the federal program. If a state does so, then the state's entire program of discounts, on both interstate and intrastate services, will be paid from the $2.25 billion federal Universal Service Fund. **If a state fails to adopt a discount program, schools in that state will not have access to the federal fund** [47 CFR §54.506(e)(1)]. States may also adopt programs that are more generous than the federal program, although funding for discounts in excess of federal levels must come from state sources.



As can be seen, it is important that educators contact their state utility regulators as soon as possible to implement a state universal service fund to provide discounts to schools and libraries. The need for quick action is made even more critical by the FCC's decision to make the discounts available for the 1997-1998 school year, on a first-come, first-served basis. Under the FCC's rules, schools may apply (as soon as applications become available and the necessary administrative infrastructure is in place) for funding to begin January 1, 1998 [47 CFR §54.507(c) and (d); FCC 97-157, ¶¶606-607]. Even if state educators are ready to use the FCC discount program immediately, failure to interact with the state utility commission could delay or prohibit that state from participating in at least the first year of the program.

So, how can educators be most effective in working with state utility commissions? Because the issues related to the telecommunications discounts are common to all schools in a state, it will probably be most effective for the department of education in each state to take the lead in approaching the commission. Moreover, the state department will have access to an attorney, which will be necessary to initiate action to implement the telecommunications discounts.

Regardless of who takes the lead in your state, the first step is to make personal contact with the key players within the regulatory process to discuss the discount program. Every commission has a staff of legal and financial analysts who prepare cases for presentation to the commissioners and who are available to meet with the public at any time. Educators should schedule a meeting with the heads of both the telecommunications and

the legal divisions of the commission to explain their specific technology plans and to ask questions about how they can establish a discount program most expeditiously.

Most states also have a consumer advocate office or division of the attorney general's office, whose job it is to represent residential utility customers. A meeting should be held with the director or head of telecommunications of this office as well. Finally, educators should contact the dominant telephone companies in their states to discuss the telecommunications discounts and explain the need to establish a state universal service fund.

Educators should not be discouraged by indifference or negativity from any of these players. The goal of these meetings is not only to solicit advice, but also to make others aware that educators are now key players in telecommunications.

The introduction process is merely the start of a long-term relationship between the regulatory community and educators created by the Telecommunications Act of 1996. Like all good relationships, it must be established and maintained by forthright—and continuing—communication. ❖

Issues Facing Rural Schools

What issues do rural schools face with respect to discounts and the Universal Service Fund?

Craig Howley, ERIC Clearinghouse for Rural Education and Small Schools:

For the first time in history, schools enjoy a special standing in telecommunications policy. The Universal Service Fund (USF) provided for in the Telecommunications Act of 1996 supports school and classroom access to the full array of commercially available services, in accord with locally determined need.

The Act, through the Snowe-Rockefeller-Exon-Kerrey Amendment, recognizes that access to telecommunications by schools is an important public good. Securing such access, however, is not to be free of charge, but rather to be discounted from the lowest available market price, with discount level determined by two dimensions: (1) disadvantage and (2) rural location. Disadvantage is determined by a school or district's school lunch participation rate. Rural location is defined as being outside a Metropolitan Statistical Area (MSA) but with a provision—the Goldsmith Modification—for rural areas within large metropolitan counties (see Footnote 3, p. 11).

The particular issues facing rural schools[1] suggest steps school administrators can take to prepare their schools and districts for implementation.

- **Who's on first?** The Act applies specifically to individual schools and classrooms, yet school districts typically wield fiscal and purchasing authority. To reduce the burden on schools and to acknowledge administrative reality, the FCC ruling requires "the procurement officer of the district or state to certify to the [federal] universal service administrator the percentage of students in each of its schools that are eligible for the national school lunch program.... The school district or state may decide to compute the discounts on an individual school basis or it may decide to compute an average discount; in either case, the state or school district shall strive to *ensure that each school receives the full benefit of the discount to which it is entitled*" [emphasis added] (FCC 97-157, ¶ 523). How this issue evolves will be a matter of continuing concern.
- **Falling through the Net.** Internet access is not always a local call. The discounts will help schools pay for expensive long-distance tolls to ac-

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While it may be the best available measure, free-lunch participation is likely to undercount low-income students in rural areas, since rural people typically access social services at lower rates than urban residents.

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[1]The rural issues related to the implementation of the Universal Service Fund are wider than those considered here (see RUPRI, 1997a, for a look at the full range of issues).

cess the Internet, but the issue of toll charges remains a particular concern for rural schools, especially island systems in the Pacific.

- Costing out the real costs. The school discounts do not apply to computers, software (content), professional development, or systems operation—items that represent approximately 80 percent of the cost of using telecommunications well. Impoverished communities may need to coordinate other public and private sources of funding to cover these nonreimbursable expenses before they can apply for discounts. The Act establishes the National Education Technology Funding Corporation and the Telecommunications Development Fund to stimulate private investment in telecommunications infrastructure and to promote delivery of telecommunications services to underserved areas (see sections 706-708 of the Act and FCC97-157, ¶¶601-605).
- **Benchmarking the prediscount price.** The FCC has established procedures for securing competitive bids in rural areas, where lack of competition is a factor in creating historically higher costs.[2] Although other provisions of the Act are intended to foster wide competition, it remains to be seen if rural areas will benefit.
- Discount structure. Although the discount structure adopted by the FCC will improve the affordability of advanced telecommunications, it does not equalize costs to schools. Inequities may persist, with rural schools continuing to pay more, proportionately, than comparable urban schools and districts. Studies will be needed to assess the effects of the discount structure on disadvantaged schools, both rural and urban.
- No free lunch? While it may be the best available measure, free-lunch participation is likely to undercount low-income students in rural areas, since rural people typically access social services at lower rates than urban residents. In addition, high schools usually exhibit lower participation rates than their feeder elementary and middle schools.
- Consorting with the competition. Although the Act encourages the formation of consortia to attract competitive bids for services, rural communities may have too few institutions to create sufficient aggregated demand. Schools in such locations should investigate forming consortia with other eligible and ineligible entities.[3] However, if consortia include ineligible entities, the FCC rules require appropriate accountability mechanisms to prevent "illegal resale (of services) through the extension of discounts to services used by ineligible entities" (FCC97-157, ¶568).

Although all service options are open to local schools, discounts apply only to those services for which schools can provide professional development, hardware, software, and systems management. For budgeting purposes, administrators need to remember that such costs are likely to be four times the prediscount cost of services.

[2]That is, competition—which is more characteristic of densely populated urban and suburban locales—tends, when it operates fairly, to drive prices down toward the actual costs of providing a product or service.

[3]Libraries, K-12 schools, and health care providers are eligible for USF support. Mixed consortia might, for instance, aggregate the service demands of ineligible colleges and municipalities with eligible K-12 schools and libraries.

Suggested Steps for Rural School Administrators

Not only is the Act the first major change in telecommunications policy since 1934, power and fortune hinge on how it is implemented. What ought rural school administrators do now to prepare to implement the Act?

- Rural educators and communities should become better informed about USF provisions and changes as they emerge.
- District and school administrators would be wise to negotiate among themselves suitable ways to represent the needs of local schools for USF support. Good planning now will pay off by permitting the schools in a district to secure funding in the first round of disbursements, or before available funds are exhausted.
- Although all service options[4] are open to local schools, discounts apply only to those services for which schools can provide professional development, hardware, software, and systems management. For budgeting purposes, administrators need to remember that such costs are likely to be four times the prediscount cost of services. Schools should decide why and how they will use telecommunications, so that scarce resources can target expenditures that the USF does not support but which are necessary for effective use of desired services.
- Rural administrators should canvas other local organizations and agencies, including libraries and local governments, to determine the feasibility of aggregating demand in a consortium. Funding of USF discounts will begin to flow in January 1998, so these conversations need to take place simultaneously with other planning efforts.
- Rural school administrators should begin to develop relations with likely service providers. Conversations could include questions about the companies' possible plans to expand services or meet new demands; technologies and services already in place; and the nature of any emerging school plans for using telecommunications.
- Rural school administrators should immediately ensure that all students eligible to receive free and reduced-price meals do participate. Under the FCC ruling, districts have the option of using a districtwide or school-level rate, but the FCC is equally clear that benefits should match the level of need in particular schools.

Brave New World?

The world is being remade by electronics, perhaps to the same extent it was remade by steam and electricity during the 19th and 20th centuries. The wise use of technology requires restraint as well as passion. But the fact that technologies are changing the world is certain to mean that they—and, more particularly, the social, political, and economic changes they are part of—will change education as well. These changes are now upon us.

The Telecommunications Act of 1996 gives educators a chance, once again, to exercise that combination of restraint and passion known to generations as "wisdom." The result is not likely to be all that one could desire, but, with sufficient forethought, it is not likely to be all that one might fear, either.

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[4]The FCC ruling allows schools to be supported to purchase *any commercially available service that suits their needs*: for instance, telephones in every classroom; locally based networks; Internet; and a full range of distance learning services (full-motion video, two-way audio, one-way video, etc.). See the McKinsey report for a conception of school- and classroom-based implementation models (McKinsey, 1996).

School Discounts in a Nutshell

The Snowe-Rockefeller-Exon-Kerrey Amendment to the Telecommunications Act of 1996[1] aims to provide K-12 classrooms access to affordable telecommunications services to "help open new worlds of knowledge, learning, and education to all Americans—rich and poor, rural and urban. This universal access will ensure that no one is barred from benefitting from the power of the Information Age" (FCC 97-157, ¶426).[2]

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About the Discounts

The FCC regulations to implement the Act provide discounts—from 20-90 percent of the prediscounted price of telecommunications services, internal connections, and Internet access—to eligible schools. The amount of discount depends on schools' economic disadvantage (as determined by percentage of students eligible for the national school lunch program) and location (i.e., rural or urban). A total of $2.25 billion a year will be available to schools on a first-come, first-served basis. Applications for discounts may be filed each year beginning July 1 for funding the following January. For this first year only, schools can file applications as soon as they become available and the web site established to receive and post applications from schools and libraries is open. Funding will begin January 1, 1998. Discounts will be based on the matrix below.

As can be seen, the level of discount for each school is based primarily on the percentage of students eligible for the national school lunch program, as modified by the school's location. Schools located in counties included in a Metropolitan Statistical Area (MSA) are deemed to be urban, while schools in counties not included in an MSA are deemed to be rural[3] [47 CFR §54.505(b); FCC 97-157, ¶504]. Generally, rural schools are given a slightly greater discount under the matrix. However, when a school has a large disadvantaged student population (50 percent or more eligible for the school lunch program), the urban or rural location of a school makes no difference in the level of discount. If school districts, counties, or states are applying for discounted services on behalf of a number of schools within their jurisdiction, the discounts applicable to individual schools may be aggregated (FCC 97-157, ¶¶476, 523).

School Discount Matrix*

How Disadvantaged? (% of students eligible for national school lunch program)	% Discount Level Urban Discount	Rural Discount
<1	20	25
1-19	40	50
20-34	50	60
35-49	60	70
50-74	80	80
75-100	90	90

*The matrix is found at 47 CFR §54.505(c). See also, FCC 97-157, ¶522.

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Type of Services Covered by Discounts

The discounts apply to commercially available telecommunications services, Internet access, and installation and maintenance of internal connections

[1] 47 USC 151 *et seq.* The Snowe-Rockefeller-Exon-Kerrey amendment is found in 47 USC 254.

[2] The Federal Communications Commission (FCC) Report and Order in CC Docket No. 96-45 of May 7, 1997, Order No. 97-157, otherwise known as the "Universal Service Order," will be cited as "FCC 97-157, ¶...." The regulations implementing the FCC Order will be cited as "47 CFR §...."

[3] Counties included in MSAs are published annually by the federal Office of Management and Budget (OMB). Rural portions of urban (MSA) counties can be considered rural under the "Goldsmith Modification," also published by OMB (FCC 97-157, ¶504). The Goldsmith Modification is meant to apply to very large counties—those whose land area is greater than 1,250 square miles—and, thus, has more impact in western states. Current MSA and Goldsmith Modification lists are available on the Internet at http://www.fcc.gov/healthnet.

(within schools). This includes cabling, routers, hubs, file servers, and wireless LANS (local area networks). The point of the legislation is to provide Internet access to *classrooms*—not just school buildings. The discounts do not apply to classroom computers, modems, fax machines, educational software, or teacher training (FCC 97-157, ¶¶450 - 460).

The Act provides schools flexibility to determine their own telecommunications needs and to choose whatever services meet those needs. Discounts apply to the prediscount price of services, which must be determined by competitive bidding[4] [47 CFR §54.504(a); FCC 97-157, ¶480]. However, schools that negotiated telecommunications contracts prior to the effective date of the FCC rules (November 7, 1996) may apply the discounts to prices set forth in those contracts [47 CFR §54.511(c); FCC 97-157, ¶545]. This exemption from the competitive bidding requirement does not apply to voluntary extensions of existing contracts.

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Eligibility

Federal funding discounts will be available only to schools in states that have adopted a matching system of discounts (FCC 97-157, ¶550). Eligible schools must meet the statutory definition of an elementary school or secondary school as defined in the Elementary and Secondary Education Act of 1965. For-profit schools and schools with endowments over $50 million are excluded from the discounts (FCC 97-157, ¶554).

To attract competitive bids from service providers, schools can form consortia with other schools and/or districts. State education agencies can also receive discounts on behalf of schools for schools' direct use, such as through state networks. Schools can form consortia with eligible and ineligible parties such as libraries, universities, health care providers, and municipalities. Schools seeking to form consortia with these partners should carefully consider stipulations in the regulations pertaining to consortia [47 CFR §54.501(d)].

Schools must keep records of telecommunications-related purchases and make them available upon request to auditors appointed by state departments of education or the Universal Service Fund[5] administrator. Schools must also agree to random audits of purchased services and their use (FCC 97-157, ¶581).

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Application Process

The National Exchange Carrier Association (NECA) will administer the Universal Service Fund, including school discounts. The administrator will select a subcontractor to manage school applications for services. The subcontractor will disseminate applications for discounts to schools and receive and review all requests for services (FCC 97-157, ¶571).

The subcontractor will post schools' requests for services on a web site to attract competitive bids. The subcontractor will let schools know when their requests have been posted. Service providers will send their bids for services directly to the school or consortia submitting the request, not to the subcontractor.

Schools must wait at least four weeks after bids are posted on the web before contracting with a service provider. Factors other than price may be considered when selecting a provider. Once schools accept a bid and sign a contract, they must send a copy of the contract to the subcontractor with a purchase order estimating the funds they will need for the current and following funding years. If funds are available to meet the request[6], the subcontractor will commit the funds to the school or consortia and notify them that the request has been approved (FCC 97-157, ¶579).

After the purchase order has been approved, schools or consortia will notify the service provider to begin service. Once services are provided, schools must notify the administrator to release funds to the provider

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[4]In areas where there is no competition, the prediscount price can be no higher than the lowest price charged to similarly situated nonresidential customers for similar services ("lowest corresponding price") (FCC 97-157, ¶484).

[5]The $2.25 billion earmarked for schools and libraries is part of a larger fund known as the "Universal Service Fund."

[6]Once annual financial commitments reach a "trigger" level, a system of priorities takes over to ensure that the most disadvantaged schools are not left out. The trigger level is reached within any calendar year when only $250 million remains in the fund [47 CFR §54.507(f)]. See also FCC 97-157, ¶¶539 - 541.

(FCC97-157, ¶580). The provider—not schools—will be responsible for seeking compensation from NECA to cover the discounted portion of services. Schools will be responsible for paying the nondiscounted portion of the price (FCC 97-157, ¶586).

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Application Requirements

In return for receiving Universal Service Funds, Congress requires accountability from schools. To get the discounts, the regulations require schools to (1) conduct an internal assessment of components needed to effectively use the services they order, (2) describe services sought in sufficient detail to allow service providers to formulate bids, and (3) certify to certain information.

Applications must include the following:

(1) an **inventory/assessment of the technology that schools have in place** or have budgeted for purchase during upcoming years, to the extent that the information is applicable to requested services. The inventory must address

- computer equipment and modems (including speed of modems),
- internal connections,
- network software,
- staff experience and training in using equipment to be connected to the telecommunications networks,
- maintenance contracts to maintain computers, and
- the capacity of the school's electrical system to handle planned services (FCC 97-157, ¶572).

In addition, schools need to develop a specific plan for how the technologies will be used now and in the future, and how they will be integrated into the curriculum. Technology plans must be approved by an independent party, such as the state agency regulating schools. Plans that have been approved for other purposes, such as Goals 2000 and the Technology Literacy Challenge, need no further approval. Finally, schools must have funds committed during the current funding year to cover both the financial obligations set forth in their technology plans and the nondiscounted portion of requested services (FCC 97-157, ¶¶ 574, 577).

(2) **The application must describe services sought in sufficient detail to allow service providers to formulate bids.** Applications should provide the following specific school information for use by potential bidders and the USF subcontractor:

- the school's zip code,
- the number of students in the school,
- the number of buildings in the school, and
- the percentage of students in the school eligible for the national school lunch program (FCC 97-157, ¶576).

(3) **A school or consortia's request for services must be signed by the person authorized to order telecommunications.** This person must certify the following under oath:

- that the school or library is eligible for discounts;
- that the requested services will be used exclusively for educational purposes;
- that the services will not be resold;
- if part of a consortia, the identity of the other parties and the portion of aggregated services being purchased by the school;
- that all necessary funding to pay for components specified in the technology plan (including required training in the use of services) and the nondiscounted portion of services has been budgeted;
- that the request is in compliance with all state and local procurement processes;
- that the school consents to cooperate in random audits of compliance with the discount program (FCC 97-157, ¶581);
- the percentage of students eligible for the national school lunch program (FCC 97-157, ¶522); and
- that the school has a technology plan approved by the state or designated agency [47 CFR 54.504(b)(2)(vii)].

Schools must reapply for funding of discounts every year, even if a school's telecommunications service has been previously approved for multiyear funding [47 CFR §54.507(d). See also FCC 97-157, ¶537]. ❖

On-Line Telecommunications Resources

Benton Foundation
http://www.benton.org/

Council of Chief State School Officers
http://www.ccsso.org/

EdLiNC
http://www.itc.org/edlinc/discounts/

Federal Communications Commission (FCC)
http://www.fcc.gov/learnet
888/CALL-FCC

National Exchange Carrier Association (NECA)
http://www.neca.org

NetDay
http://www.netday.org

Public Broadcasting System
http://www.pbs.org/learn/als/programs/live/erate.html

Rural Policy Research Institute (RUPRI)
http://www.rupri.org/telecomm/index.html

Smart Valley, Inc.®
http://www.svi.org/netday/info/guidebook

Tech Corps®
http://www.ustc.org/

U. S. Department of Education
http://www.ed.gov/Technology
800/USA-LEARN

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AEL
APPALACHIA EDUCATIONAL LABORATORY, Inc.
PO Box 1348
Charleston, WV
25325-1348

Address Correction Requested

Telephone:
304/347-0400
800/624-9120
Fax: 304/347-0487
E-mail: aelinfo@ael.org
http://www.ael.org

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