

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
Schools and Libraries Universal)	CC Docket 02-6
Service Support Mechanism)	

Comments of Information Renaissance

1. Summary

Information Renaissance (Info Ren) respectfully submits the following comments in the above Notice of Proposed Rulemaking.

Info Ren makes the following major points:

1. The Federal Communications Commission (FCC or Commission) should allow schools and libraries to configure their networks to allow the community to use the capacity that is un-used in non-usage sensitive school and library purchases at any point in time. This can be accomplished through existing technology that prioritizes school and library traffic and allows the other traffic to use the school and library connection without impacting upon service or prices to the schools and libraries.

2. The FCC should clarify 47 CFR 54.501(d) to state that eligible entities can participate in consortia with ineligible entities (such as non-profit organizations) and still be eligible for E-Rate discounts.

2. Background: Attempts to Increase Access to High-Bandwidth Services in Pittsburgh, Pennsylvania.

The NPRM seeks comment on five broad facets of the E-Rate program -- Application Process, Post Commitment Program Administration, Appeals,

Enforcement Tools and Unused Funds -- and on several specific issues on these five facets. Info Ren submits comments on issues relating to the Application Process and Post Commitment Program Administration. The comments are submitted on issues that have impacted the efforts of schools, libraries and non-profits in Pittsburgh, Pennsylvania to increase the availability of high-bandwidth services for their organizations and the community. The comments that follow in section three are based upon this perspective.

Info Ren has been working with the school district, library system and dozens of non-profit organizations in Pittsburgh over the last three years to develop a high-bandwidth institutional network connecting the organizations to the Internet and to each other. The process began in the needs assessment period leading up to the renegotiation of the local cable television franchise for AT&T Broadband. The organizations articulated the need for a fiber optic institutional network that would serve them and requested the City to require in the new franchise agreement that AT&T install a dark fiber institutional network (I-Net).

The newly-issued franchise agreement contained a variant of the I-Net that the organizations requested. Instead of the dark fiber I-Net, the franchise agreement required the cable company to sell high-bandwidth services to the schools, libraries and community groups at the company's direct incremental costs.

The school district and library system used the franchise agreement to obtain high-bandwidth Internet and wide area network connections. The

organizations sought bids for service from all carriers in conformance with the E-Rate program requirements, and the cable company proposed favorable pricing pursuant to the new franchise agreement. The school district and library system awarded contracts to AT&T for 10 Mbps Internet connections and for 100 Mbps wide area network connections to each of their local sites.

The school district, library system and the non-profits explored a series of options in which the non-profit organizations could work with the existing contracts of the schools and libraries; but the E-rate rules on resale and consortia made such cooperation impractical.

Two of the options explored by the groups are impacted by the issues in this NPRM. First, section 54.501(d) of the E-Rate rules contains an apparently unintended restriction on the eligibility of schools and libraries for E-Rate discounts if the schools and libraries participate in consortia with non-profit organizations. We request that this rule be clarified. Second, existing non-usage sensitive Internet purchases by schools and libraries can be shared with the community without impacting costs to the E-Rate program and without impacting the services the schools and libraries receive. The sharing is enabled with simple network configurations that prioritize school and library traffic over the traffic of other organizations. This second change could substantially increase the public's access to high-bandwidth services; and, as discussed below, it is a logical and practical analogue to the waiver that the FCC notes it granted to the State of Alaska.

3. Comments

a. Application Process -- Consortia

Section 5 of the NPRM seeks comment on whether to clarify the FCC's regulation on consortia in 47 CFR 54.501(d)(1). The FCC notes that consortia and service providers have raised questions about this section since its adoption. The NPRM notes several of the questions that have arisen, but Info Ren raises an additional issue that it has discussed but not resolved with FCC personnel in the past.

A literal reading of section 54.501(d) of the E-Rate regulations may prohibit schools and libraries from participating in consortia with ineligible private sector entities, such as non-profit organizations. Subsection (d) expressly authorizes schools and libraries to participate in consortia with ineligible governmental entities and then states that, with one exception, schools and libraries "participating in consortia with ineligible private sector members shall not be eligible for discounts. It goes on to define the single exception as consortia where the pre-discount prices are "generally tariffed rates" of Incumbent Local Exchange Carriers (ILECs).

(d) Consortia.

(1) For purposes of seeking competitive bids for telecommunications services, schools and libraries eligible for support under this subpart may form consortia with other eligible schools and libraries, with health care providers eligible under subpart G, and with public sector (governmental) entities, including, but not limited to, state colleges and state universities, state educational broadcasters, counties, and municipalities, when ordering telecommunications and other supported services under this subpart. With one exception, eligible schools and libraries participating in consortia with ineligible private sector members shall not be eligible for discounts for interstate services under this subpart. A consortium may include ineligible private sector entities if the pre-discount prices of any

services that such consortium receives from ILECs are generally tariffed rates.

47 CFR 54.501(d) (Emphasis added).

FCC staff have acknowledged in informal discussions that the section was not intended to so narrowly restrict mixed consortia -- that the section was not intended to prohibit mixed consortia with CLECs and other non-ILEC service providers. Its purpose was to buttress existing requirements that utilities with tariffs not charge preferential, non-tariffed rates, thereby violating prohibitions against rate discrimination. The specific purpose of the section was to ensure that ineligible private sector entities do not receive tariffed services at below-tariffed rates. Info Ren requests that the restrictions (i.e., the last two sentences of section 54.501(d)(1)) be deleted or modified to more clearly achieve their purpose.

Further, Info Ren also requests that the first sentence of section 54.501(d)(1) be amended to reflect that eligible schools and libraries may form consortia with otherwise ineligible non-profit organizations. The sentence currently authorizes consortia involving schools, libraries, eligible health care providers and "public sector (governmental) entities" including, but not limited to, state colleges and state universities, state educational broadcasters, counties and municipalities." It does not appear to authorize consortia with other ineligible entities such as non-profit organizations. Info Ren requests that the section be amended to include non-profit organizations.

b. Post Commitment Program Administration -- Use of Excess Service in Remote Areas.

The Commission notes a recent waiver issued to the State of Alaska that allows communities in remote, rural areas to use the Internet connections of schools and libraries during the schools' and libraries' off-hours when the schools and libraries are closed. (NPRM, paras. 37-43). The NPRM seeks comment on whether and how the waiver in Alaska might be extended to similar situations.

The FCC found that the waiver maximized the use of the non-usage sensitive purchases made by the Alaskan schools and libraries, did not increase costs to the E-Rate program, did not interfere with the schools' and libraries' use of their purchases, and furthered the goals of universal service and the extension of access to advanced telecommunications services. The waiver was made subject to five conditions: (1) that local or toll-free dial-up Internet access not be available in the affected community; (2) that schools and libraries not request more services than are necessary for educational purposes; (3) that the shared purchases involve non-usage sensitive contracts; (4) that local community usage be limited to hours in which the school or library is not open; and (5) access to the unused capacity be made available in a neutral manner without charge. 66 Fed.Reg. 67112 (December 28, 2001).

The FCC found that "nearly 75 percent of rural Alaskan communities do not have Internet access via a local dial-up or toll-free connection" and that the waiver, therefore, would provide access both to low- and high-bandwidth services, "consistent with the Commission's efforts to encourage access to advanced telecommunications and information services." *Id.* at 67113. In

addition, the FCC found that the waiver promotes the goal of preventing waste. The non-usage sensitive purchases of the schools and libraries are unused during the off-hours and hence wasted. The sharing prevents waste, does not increase the costs to the E-Rate program and does not interfere with the school and library use of the connections.

The NPRM seeks comment more broadly on the types of situations that might warrant use of unused capacity obtained through the universal service mechanism for schools and libraries when the services are not in use by the schools and libraries for educational purposes. The NPRM asks whether the commission should revise its rules to expressly address such situations and whether such revisions would further the goals of improving program operation, ensuring a fair and equitable distribution of benefits and preventing waste, fraud and abuse. (NPRM para. 41).

Info Ren requests that the FCC allow non-profits to use the unused capacity in school and library purchases at any time -- not only during the school and library off-hours. Internet use is, by its nature, burstable. Except for streaming technologies and video-conferencing, most Internet use lasts for seconds at a time. The burstable, intermittent use leaves unused a discrete block of bandwidth for substantial periods of time. Others can, therefore, use the unused services even during the normal hours of operation.

The sharing is technically and administratively simple. Modern networks can be configured to prioritize traffic. School and library traffic can be assigned priority over the traffic of all other users. School and library users will have the

full amount of the bandwidth purchase available to them at all times without interference. Other community users will have access to the service when not in use by the schools and libraries. The necessary network configurations can be performed by school and library personnel or by their service providers.

Such a change would make a tremendous advance in the Commission's efforts to spread the deployment of advanced telecommunications services. Most residential and non-Central Business District-based commercial areas in the United States have the same level of access to affordable *high-bandwidth* services as the remote rural areas of Alaska have to affordable *low-bandwidth* services. Prices for low-bandwidth Internet services were unaffordable for remote, rural Alaskan communities given the lack of local ISPs and the high prices required to use toll-based long-distance connections to reach more distant ISPs. Similarly, residential users in most neighborhoods in the United States lack access to truly high-bandwidth services (at T-1 and greater rates) at affordable prices. The necessary infrastructure and services are simply not available.

The use of the unused portion of the high-bandwidth purchases of schools and libraries would extend the availability of high-bandwidth services into most residential neighborhoods. Unlike resource-rich businesses that locate in Central Business Districts and office parks with access to high-bandwidth infrastructure and services, schools and libraries are widely distributed throughout the country's residential neighborhoods, where the schools and libraries are the only entities with access to high-bandwidth services. Schools and libraries are designed to be

close to where people live. This proximity, in turn, would enable residential users to gain access to high-bandwidth services purchased by the schools and libraries.

Info Ren agrees that the rules could be conditioned on the five criteria proposed in paragraph 42 of the NPRM. First, the FCC could, under this new option, condition the community's use on the school or library requesting only as much discounts for services as are reasonably necessary for educational purposes. The schools and libraries will still be responsible for the cost of the services to the upstream service providers, and, since the schools and libraries would not be able to charge downstream users for the shared connections, there would be no incentive for the schools and libraries to seek a greater connection than is needed for their purposes.

Second, the FCC can require that the additional use not impose any additional costs on the schools and libraries program. The technological prioritization of traffic will simply make more efficient use of existing non-usage sensitive purchases.

Third, we agree that the option can be limited to non-usage sensitive contracts. Prices for schools and libraries under such contracts are not impacted by the shared use, and the school and library use is similarly unaffected.

Fourth, we agree that the shared use can be properly limited to times when the school or library is not using the services. We would not limit the use to specific hours, however. We would limit the permitted periods of use to the

moments -- at any time of the day -- when the Internet connection is unused and available for use by others.

The fifth condition is a little unclear. As stated in the NPRM, it would require that "the excess services [be] made available to all capable service providers in a neutral manner that does not require or take into account any commitments or promises from the service providers." NPRM, para. 42. The NPRM states that the latter requirement means that the services be provided by the schools at no charge.

Under the plans explored by the groups in Pittsburgh, the non-profit user organization or a group of non-profit organizations would have installed a wireless or fiber connection between their groups and the local school or library and received the service over that connection. In that regard, the "capable service providers" referenced in the FCC's suggested condition should be expanded to include capable users as well as service providers.

As for the condition that the services be shared at no charge by the school or library, we presume that the schools and libraries could be reimbursed for the one-time costs they would incur with respect to the collocation of user or service provider facilities required to share the services. The prohibition against resale would only apply to the assessment of charges for the recurring costs of the service.

4. Background on Information Renaissance

Information Renaissance and its founding personnel have experience in three areas relevant to this proceeding: (1) the establishment of community

networks serving community groups, non-profit organizations and residents in urban neighborhoods; (2) the establishment of networks in urban schools; and (3) the conduct of online seminars related to the Universal Service Schools and Libraries discount program. Our experience has given us familiarity with the needs of actual residential users and users who gain access through community schools, libraries and other community access sites.

Our experience stems from Information Renaissance's three categories of programs – programs that provide access through community networks, programs that advocate regulatory policies to improve access and programs that encourage the development of online resources. The overall mission of Information Renaissance, which was formed as a not-for-profit corporation in January 1996, is to promote the development of network infrastructure in support of education, community development and economic revitalization.

a. Access through community networks.

Information Renaissance was formed as an outgrowth of Common Knowledge: Pittsburgh, a pioneering school networking effort in the Pittsburgh Public Schools, funded by the National Science Foundation. Common Knowledge explored methods to establish a metropolitan area network among the Pittsburgh Public Schools, to connect these schools to the Internet and to make use of networking technology in the classroom. Subsequently, in Bridging the Urban Landscape, a program funded by the Department of Commerce's Telecommunications and Information Infrastructure Assistance Program, we helped extend this access to community groups. The Bridging the Urban

Landscape program involved community access sites, online resources for educational use and research into connectivity options.

The current work of Information Renaissance extends high-bandwidth networking infrastructure and services to users otherwise unable to afford it, i.e., to small non-profits and to commercial and residential areas outside the Central Business District. We developed the Smart Building project, which uses public infrastructure, a bulk upstream Internet connection and an on-site support staff to make high-bandwidth Internet access available to non-profits at affordable prices in a 30-floor office building. We are also using a high-bandwidth wireless backbone to extend the Smart Building's connectivity into the community.

The efforts are intended to help bridge the Digital Divide and, more generally, to promote the goal of section 706 of the Telecommunications Act of 1996 to expand the availability of advanced telecommunications services.

An essential thread in each of the projects is affordability and sustainability. We regularly aggregate demand through shared infrastructure to achieve physical and economic scales of efficiency. We also train residents to operate and maintain the systems and to develop new community-based applications.

b. Access through improved regulatory policies.

We have also been active in the development of Universal Service policies on the state and federal levels. In 1996, we conducted an on-line seminar for teachers and librarians to review and comment on the FCC's proposed rules for Universal Service. The seminar educated the participants about the FCC's proposals and the underlying issues and obtained, organized and submitted their

comments to the agency. In the Fall of 1997, we conducted a similar seminar on behalf of the Governor's Office of Information Technology and presented the results to the Pennsylvania Public Utility Commission. The FCC seminar involved 500 participants representing 50 states and Puerto Rico. The Pennsylvania seminar included 400 registrants, representing 56 of Pennsylvania's 67 counties.

c. Access to content.

Our third and related work area involves the creation of online resources. These include a variety of educational and governmental resources. As part of the Universal Service seminars, we helped encouraged the online placement of relevant government documents, which would have otherwise been largely unavailable to the public. These materials are available at <http://www.info-ren.org>

Respectfully submitted,

Ashley C. Schannauer
Attorney
Information Renaissance
425 Sixth Avenue
Suite 1880
Pittsburgh, PA 15219
(412) 471-4636
(412) 471-1592 FAX

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