

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of:)
)
Request for Review by)
Education Networks of America of)
Decision of Universal Service Administrator)
To: Common Carrier Bureau)

CC Docket No. 96-45
CC Docket No. 97-21
Application No. 18132

REQUEST FOR REVIEW OF
EDUCATION NETWORKS OF AMERICA

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Summary

Education Networks of America (ENA) is providing Internet access to nine hundred thousand school children in Tennessee (including over 750 schools located in rural school districts) at a higher service level and lower cost than virtually any other Internet Service Provider (ISP) anywhere in the country. Remarkably, however, the State of Tennessee has been denied funding for ENA's service. In a decision beset by misunderstandings, the Administrator found that the State was seeking discounts either for ineligible services or for internal connections (for which funding assertedly is not available).

This decision is plainly erroneous: ENA is providing Internet access (an indisputably eligible service) to schools in Tennessee in the same manner as any other ISP provides Internet access to its customers. It is charging the State for Internet access in the same manner as any other ISP charges its customers for Internet access. And, it is providing service in a manner that makes Internet access easy and fast for even the most remote and disadvantaged schools. Indeed, the efforts of the State Department of Education and ENA to bring the Internet to school children in Tennessee have been jointly recognized with the nomination of Al Ganier, the President of ENA, and Jacqueline Shrago, the Director of ConnectTEN, for the Computerworld Smithsonian Award. Further, Mr. Ganier has demonstrated his commitment to the education needs of children through his voluntary position as President of Connect Tennessee Students, an organization that has raised more than \$3 million in cash, goods, and services for school children in the State. Mr. Ganier also was recently

appointed by the United States Senate as a member of the Commission on Online Child Protection.

ENA believes the Administrator's error is due to the meritless challenges brought by the disappointed bidder in the State's procurement, ISIS 2000. Upon learning that the State had awarded the Internet access contract to ENA, ISIS 2000 immediately protested the award to the state – where its protest was denied in its entirety – and filed numerous pleadings at the Commission based primarily on groundless allegations of conspiracy and fraud. Notably, the Administrator properly rejected ISIS 2000's claims that it was the more cost-effective bidder. Nonetheless, ISIS 2000's strategy – to attack the eligibility of each physical component of ENA's network rather than acknowledging that ENA is providing an eligible service – clearly tainted the Administrator's analysis and led to the mistaken outcome that ENA is now forced to appeal.

As discussed in section II of this petition, the eligibility of ENA's service for funding is evident on the face of the State's Form 471. Lines one through ten of that form break out various charges for connection fees, transport, and enhanced features associated with Internet access. Notably – and contrary to the Administrator's finding – nothing in the Form 471 seeks reimbursement for equipment. ENA is charging the State for Internet access service, not for the routers, hubs, and caching servers used to provide that service.

In section III, ENA explains that the Administrator improperly disaggregated ENA's service into components (as ISIS 2000 did in its meritless protest). The only reason, however, that ENA ever broke down the structure of its network on a component-by-component basis was to satisfy State procurement requirements. Once

again, ENA is not charging the State for network components and the State did not seek reimbursement for network components. In addition, each of the components listed by the Administrator (and previously challenged by ISIS 2000) – the ConnectTEN routers, hubs, and caching servers – is (1) an integral part of ENA's Internet access service, and (2) a standard part of virtually any ISP's network. Throughout the procurement process, ENA diligently worked with the State in good faith to develop an Internet access service that fully satisfied the State's Request for Proposal.¹

Section IV rebuts the Administrator's finding that the State tried to avoid a rule barring discounts for pre-existing services and state networks by allegedly selling the ConnectTEN routers to ENA and then seeking reimbursement for ENA's supposed charges for such routers. This finding reflects a fundamental misunderstanding of the State's application. First of all, the State did not sell routers to ENA; rather, ENA obtained software from the State along with the right to use the routers in order to continue providing Internet access to Tennessee school children without disruption and as efficiently as possible. The Commission's rules cannot possibly be interpreted to require ISPs to use only equipment that was manufactured after January 1, 1998, although that is precisely the effect of the Administrator's decision. Moreover, the State did not seek reimbursement for any services provided before July 1, 1998, as is clear from the Form 471.

¹ For example, ENA's service was designed to accommodate the State's requirement that every school be served on the start date of the contract, and not later, after a long build out period.

The Administrator's decision, unless overturned, will undermine the level of service provided to almost one million school children in Tennessee and frustrate the Congress's and Commission's goal of hooking every classroom to the Internet. ENA, along with its teammates, BellSouth, Lucent, ISDN.net, and NCR has developed a means of providing ubiquitous Internet access at unprecedented service levels and extremely low cost. Under ENA's approach, each student will enjoy 3 hours of Internet connect time per week at 2 web pages per minute, at a cost of only \$2 per student each month. The Administrator's decision, however, would enable the State to support less than 20 minutes of weekly connect time or would degrade access to 1 web page per 5 minutes per each student – for all practical purposes effectively denying reasonable access to over 500,000 students.

By reversing the Administrator's legally indefensible decision, the Commission can assure that students in Tennessee benefit fully from the unique capabilities that ENA and its partners are poised to offer. Moreover, it will allow the State of Tennessee to ensure that its students are not denied a level of service being offered to children in other states and to mitigate the growing disparity between service among private and public schools in the State.

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**REQUEST FOR REVIEW OF
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Education Networks of America (“ENA”), by its attorneys and pursuant to Section 54.719 of the Commission’s Rules,² respectfully submits this Request for Review of the decision³ of the Administrator of the Schools and Libraries Division of the Universal Service Administrative Company (the “Administrator”) concerning the above-referenced Form 471 application filed by the Tennessee Department of Education.⁴

² 47 C.F.R. § 54.719.

³ See Letter from Debra M. Kriete, General Counsel to Schools and Libraries Division, Universal Service Administrative Company to William K. Coulter, Esq., Jeffrey S. Linder, Esq. and Ramsey L. Woodworth, Esq. (Feb. 26, 1999) (“Administrator’s Decision”) (Attachment 1). The Administrator’s Decision regarding the State’s above-referenced application is comprised of the following elements: (1) the Form 471 Funding Commitment Decisions Letter for Application No. 18132 and (2) the Administrator’s Explanation of Funding Commitment Decisions for Application No. 18132. See *id.* Citations to the Administrator’s Decision herein are to the page numbers on the Administrator’s Explanation of Funding Commitment Decisions, unless otherwise noted.

⁴ FCC Form 471 Application of the State of Tennessee Department of Education, Application No. 18132 (filed April 15, 1998) (“Application”) (Attachment 2 hereto).

In its decision, the Administrator granted in part and denied in part the State's request for schools and libraries discounts in connection with a contract awarded to ENA for Internet access service to all public K-12 schools in Tennessee. For the reasons set forth below, the denial of the State's request for discounts for ENA's Internet access service is contrary to the Commission's rules and sound policy, and thus, must be reversed.

I. INTRODUCTION

Education Networks of America was awarded a contract by the State to provide end-to-end Internet access service to all public K-12 schools in Tennessee.⁵ Under the contract, ENA will provide Internet access service through a point of presence in each school that uses a dedicated communications link to allow end users to dynamically share access and connect to the World Wide Web and other Internet applications. By assembling a team of leading providers -- BellSouth, Lucent, NCR, and ISDN-Net, Inc. - and building on its expertise in serving the educational community, ENA is able to offer a cost-effective, creative, and technically robust Internet access service to students and faculty. Notably, Al Ganier, ENA's President, has played a prominent role

⁵ The Tennessee procurement was conducted in strict accordance with all FCC and state procurement requirements, and the Department of Education (whose decision was affirmed by the State's Review Committee) found ENA's proposal clearly superior. The Review Committee consists of designees of the Comptroller of the Treasury, the Commissioner of Finance and Administration, the Department of General Services and, in this case, the Commissioner of Education. The bid was conducted under the management and auspices of the Department of Finance, which manages bids for services. The Department of General Services manages bids for equipment.

in helping the State develop its existing education network (ConnectTEN) and recently was nominated for the Computerworld Smithsonian Award, which recognizes vision, leadership and innovation in information technology across academia and other categories. Further, Mr. Ganier has served as President of Connect Tennessee Students,⁶ and was recently appointed by the United States Senate as a member of the Commission on Online Child Protection.

Implementation of ENA's service will provide exceptional benefits for the approximately 900,000 Tennessee school children and advance Congress's and the Commission's Universal Service goals. Specifically tailored to the unique needs of the State of Tennessee public schools, ENA's Internet access service is available to all students and teachers regardless of technical proficiency and school system resources. The service is designed to provide Internet access time at the rate of three hours weekly per student at two web pages per minutes, or 2.7 million hours of Internet access per week. It also permits the State to offer Internet access at a per-school cost that is proportionally lower than the costs of its prior service and the prices offered by other Internet access providers (many of whom have received funding). Accordingly, ENA's service is designed to enrich the educational experience of Tennessee students by helping to "open new worlds of knowledge, learning and education" and by providing

⁶ This organization has raised more than \$3 million in cash, goods, and services, and is responsible for the provision of most of the software, including browsers and protection from pornography, to all K-12 schools.

“the ability to browse library collections, review the collections of museums, or find new information on the treatment of illness . . . through schools and libraries.”⁷

In response to the State of Tennessee’s above-referenced Form 471 application, the Administrator of the Schools and Libraries program issued a decision on the eligibility of the State’s request for discounts. That decision also considered the issues raised by an unsuccessful bidder, ISIS 2000, which submitted to this Commission and the Schools and Libraries Division an Objection⁸ to the State’s application and filed bid protests with relevant state procurement agencies. These protests have been dismissed as without merit, and the relevant state contracting authorities have upheld the award to ENA.⁹

In its decision, the Administrator correctly affirmed the eligibility of ENA’s Internet access service in several respects. First, the Administrator “confirmed that the state

⁷ Joint Explanatory Statement of the Committee of the Conference, H.R. Rep. No. 458, 104th Cong., 2d Sess. at 132-33.

⁸ Objection to Application and Request for Expedited Declaratory Ruling, filed by Integrated Systems and Internet Solutions, Inc. (April 3, 1998) (“ISIS 2000 Objection”). On April 20, 1998, ENA filed its Opposition to the ISIS 2000 Objection. See Opposition of Education Networks of America, CC Docket No. 96-45 (April 20, 1998) (“ENA Opposition”).

⁹ In particular, on March 30, 1998, ten days after the announcement of intent to award, ISIS 2000 filed a protest with the Commissioner of Education. ENA responded, and on April 2, the Commissioner denied ISIS 2000’s protest and issued a written finding that included a detailed report from the RFP coordinator. ISIS 2000 appealed the Commissioner’s decision to the State Review Committee, which is statutorily created to determine such protests. A full five-hour hearing was held on April 6, and the Review Committee denied ISIS 2000’s protest and confirmed the award to ENA, determining that ISIS 2000’s protest was without merit and that ENA had met all the requirements of the RFP. See ENA Opposition at 9.

and local processes for competitive bid procurement [were] followed” and declined to revisit anew ISIS 2000’s claims that “the ENA bid was not the most cost effective bid.”¹⁰ Second, the decision upheld support for ENA’s proposed “Partners Program,” which provides technical support and maintenance in connection with its service, subject to the requirement that “facilities that are being maintained are eligible for discounts.”¹¹ Third, the Administrator correctly held that a federal discount should apply to the ISDN circuits provided as part of ENA’s Internet access service.¹²

However, the Administrator also denied eligibility for ENA’s Internet access service. In doing so, the decision fundamentally erred in disaggregating the integrated components of ENA’s Internet access service and concluding that these individual components did not themselves constitute “Internet access service.”¹³ Specifically, the Administrator disallowed discounts for ENA’s Education Hub Sites, caching servers, and ConnectTEN routers.¹⁴ Indeed, with regard to the first two components, the Administrator relied upon the misguided rationale that, while the item in question was

¹⁰ Administrator’s Decision at 2.

¹¹ *Id.* at 6.

¹² *Id.* at 7.

¹³ *See id.* at 5.

¹⁴ The Administrator disallowed discounts for the purchase and use of ConnectTEN network equipment not only because it characterized these components as non-Internet access, but also because it improperly found that these items were ineligible as pre-January 1998 services. *See id.* at 2-3.

used to provide Internet access, “this purpose does not convert these facilities into Internet access service.”¹⁵

ENA respectfully submits that this error results from confusion and misunderstandings engendered by the baseless assertions made by ISIS 2000. Throughout the decision, the Administrator takes as a given claims made by ISIS 2000, when in fact those claims twist reality beyond all recognition. For example, the Administrator’s decision frames the issue of the ConnectTEN equipment eligibility by relying on a flatly wrong factual assertion made in ISIS 2000’s objection (that ENA was seeking to recover almost \$8 million that was allegedly paid to purchase routers from the State, when no such purchase took place and ENA imposed no such charge). Moreover, the decision fails to acknowledge that its (that is, ISIS 2000’s) characterization of the transaction between ENA and the State is wholly unsupported by the State’s Form 471. Simply put, the Administrator profoundly misconstrues the State’s application, based upon ISIS 2000’s fanciful and reckless pleadings, which undoubtedly were filed to coerce the State into canceling its contract with ENA.

Apart from its faulty approach, the Administrator’s decision is most troubling because of the harm it will work on the students and State of Tennessee. The loss of eligibility for universal service discounts will reduce, by a significant amount, the level and availability of services to the State’s students. A summary of these specific harms is as follows:

¹⁵ See *id.* at 6.

	With Schools and Libraries Support	Without Schools and Libraries Support
Total Number of Students	900,000	900,000
Students With Effective Internet Access	900,000	200,000
Students Without Effective Internet Access	0	700,000
Computers With Effective Internet Access	90,000	20,000
Computers in Urban Districts With Effective Internet Access	54,000	12,000*
Computers in Rural Districts With Effective Internet Access	36,000	8,000*

* Assumes proportionate reduction in computers served.

This chart puts into perspective the harm of the Administrator's decision as it affects Tennessee school children and the State's ability to provide Internet access. The schools have purchased the necessary computers. The schools have completed the necessary internal wiring and connections in order to bring Internet access service to their classrooms from ENA's point of presence. In short, they have taken the necessary steps in relying on the promise of eligible and supported Internet access service.

Allowing the decision to stand will erase the benefits of ENA's service offering and put the State back to square one, thereby denying effective Internet access to the State's students. It also will prevent the State from mitigating the growing disparity between service among private and public schools in Tennessee.¹⁶ This result flatly

¹⁶ Even more disturbing is that ENA is aware from the Schools and Libraries Division Reports that several private schools in Tennessee (with much lower discount rates than the public schools have received) have been funded for Internet access services. There is little doubt that the ISPs serving these schools use the same sort of
(Continued...)

contradicts Congress's Universal Service mandate that schools and libraries not be "barred from benefiting from the power of the Information Age"¹⁷ and undermines the Commission's prime directive to bring technology into the schools and libraries that need it most.¹⁸

II. ENA WAS AWARDED A CONTRACT FOR INTERNET ACCESS SERVICE THAT IS PLAINLY ELIGIBLE FOR DISCOUNTS AND REIMBURSEMENT.

A. ENA's Service Meets The Criteria Of The Commission's Rules And Is Consistent With The Agency's Interpretation Of "Internet Access."

Contrary to the Administrator's decision, ENA's service comports with the Commission's definition of "Internet Access," as set forth in the agency's schools and libraries eligibility rules. Specifically, Section 54.5 of the Commission's rules provides:

Internet access includes the following elements: (1) The transmission of information as common carriage; (2) The transmission of information as part of a gateway to an information service, when that transmission does not involve the generation or alteration of the content of information, but

(...Continued)

equipment and use a cost structure similar to that used by ENA.

¹⁷ Joint Explanatory Statement of the Committee of the Conference, H.R. Rep. No. 458, 104th Cong., 2d Sess. at 133.

¹⁸ Indeed, Chairman Kennard has specifically identified the critical role that the schools and libraries program plays in improving opportunities for all school children, particularly those in rural and poor urban areas. See, e.g., Remarks by William E. Kennard, Chairman, to the "Connecting All Americans" Conference, 3 (Feb. 26, 1998) (remarks as prepared for delivery) (emphasizing that the Commission must "wake up and realize the importance of information technology to the rural, poor urban and disenfranchised and to our country" and "make sure that the schools and libraries that most need help take advantage of the universal service support.").

may include data transmission, address translation, protocol conversion, billing management, introductory information content, and navigational systems that enable users to access information services, and that do not affect the presentation of such information to users, and (3) Electronic mail services (e-mail).¹⁹

In its *Universal Service Order* adopting this definition, the Commission made clear that discounts are available for “basic ‘conduit’ access to the Internet,” which may include so-called information service functions, but excludes content services.²⁰ In doing so, the agency acknowledged that Internet access service necessarily involves more than use of pure transmission capacity or dial-up access.²¹ The Commission further recognized the “essential” nature of including the data link and associated services that traditionally were classified as “information services” (such as protocol conversion, information storage, and e-mail) within its Internet access definition.²² As the agency explained, “without the use of these ‘information service’ data links, schools and libraries would not be able to obtain access” to the Internet and the types of information contemplated by Congress.²³

Similarly, in its *Universal Service Report to Congress*, the Commission identified Internet “access providers” (also referred to as Internet service providers) as entities

¹⁹ 47 C.F.R. § 54.5 (Internet access) (internal quotations omitted).

²⁰ Federal/State Joint Board on Universal Service, FCC 97-157 (rel. May 8, 1997) at ¶ 437 (“Universal Service Order”).

²¹ *Id.* at ¶ 441.

²² *Id.* at ¶ 437.

²³ *Id.*

that “combine computer processing, information storage, protocol conversion, and routing with transmission to enable users to access Internet content and services.”²⁴ In turn, these access providers permit end-user information requests to reach application and/or content provider server destinations on the World Wide Web through backbone networks that connect access provider facilities.²⁵ Therefore, put simply, an Internet access provider is any entity “that provides its customers with the ability to obtain on-line information through the Internet.”²⁶

The Internet access services described above are precisely the type of offerings made available by ENA to Tennessee school children. As specifically described in the State's Form 471 application, ENA's service is designed to provide a user-friendly interface to maximize student access to important education sites and offer secure e-mail capabilities.²⁷ This access service will be accomplished by providing dedicated bandwidth to individual schools using a combination of scaled Connectionless Data Service (an advanced form of frame-relay service provided by BellSouth), dedicated T-1 lines, and dual ISDN lines. Along with this transmission service, ENA has proposed to

²⁴ Federal/State Joint Board on Universal Service, Report to Congress, FCC 98-67, ¶ 63 (rel. Apr. 10, 1998) (“Universal Service Report to Congress”).

²⁵ *Id.*

²⁶ Inter-Carrier Compensation for ISP-Bound Traffic, FCC 99-38, ¶ 4 (rel. Feb. 26, 1999) (“Reciprocal Compensation Order”). Moreover, the Commission has noted that it “anticipates that Internet service providers may subcontract with IXCs and LECs that were not already providing Internet access to begin to provide such access to the Internet, and we encourage small businesses to form such joint ventures.” Universal Service Order at ¶ 449.

²⁷ ENA is not providing content-based additions to its underlying access service.

establish a point of presence at each school whereby end users may establish a seamless connection over a dedicated connection to ENA's network facilities. These facilities (like the network of any other ISP) consist of network routers, hub sites, and caching servers that ultimately enable "users to access Internet content and services."²⁸ In short, ENA's Internet access service is a wholly eligible service entitled to discounts under the Schools and Libraries program.

B. The State's Form 471 Application Clearly Demonstrates The Eligibility Of ENA's Service.

A plain reading of the State's Form 471 Application demonstrates that ENA is providing an eligible Internet access service.²⁹ Put simply, the items listed on the application represent different levels of Internet access service that are to be implemented over time, as requested by the State of Tennessee in its procurement.³⁰ They do not represent and may not be legitimately tied to individual equipment purchases or specific network elements. Led astray by ISIS 2000's meritless assertions, the Administrator made a fundamental error in characterizing these line items as corresponding to particular network equipment.

²⁸ Reciprocal Compensation Order at ¶ 4.

²⁹ As cited herein, references to particular application line numbers correspond to the lines on the "Form 471 Services Ordered Worksheet" (Supporting Documentation for Item 15) included in Attachment 2.

³⁰ Moreover, as the Commission should recognize, it is standard practice in ISP networks to phase-in capacity and network upgrades, based upon changes in technology and customer demand.

For example, Lines 1-3 of the Application describe ENA's "basic" Internet access service offering, which includes delivery of World Wide Web pages to the individual school site. This service includes the functions and services typical with establishing any ISP service, such as the transfer of registration, routing, configuration, domain name service, and electronic mapping and monitoring of each site, and underlying telecommunications.³¹ The bandwidth supported by Lines 1-3 will allow ENA to deliver approximately 2 million web requests per day to the schools. Contrary to the Administrator's decision, these lines do not represent the purchase of pre-1998 ConnectEN equipment, or any other state-operated network. Nor do they seek reimbursement for pre-1998 service, again contrary to the decision.³²

Line Four describes ENA's "enhanced" Internet access service offering, which is designed to provide more robust and higher capacity service to the State. With this service, ENA has been able to satisfy approximately 400% more web site requests per day to the schools, which equates to roughly 8 million web requests per day as compared to the approximately 2 million daily web requests received under ENA's basic Internet access service covered by the first three line items. The enhanced service also

³¹ The costs for telecommunications listed on Line 3 represent the direct costs for services obtained by ENA and are passed through to the State without any additional charges.

³² See Administrator's Decision at 4. Relying in part upon incorrect facts raised in the ISIS 2000 Objection and without explaining how its determination related to the State's application, the Administrator summarily concluded that Lines 1-3 should be denied "because the delivery date of the service is prior to January 1, 1998." *Id.*

allows teachers to take greater advantage of the computers that have been added to the network since the State's application was filed.³³

Lines 5-10 set forth ENA's response to the State's request to provide equitable Internet access to all students irrespective of their geographic location or their district's financial resources. This works by establishing a technical performance benchmark and ensuring that all schools, regardless of size and resources, have comparable service on a per-student (rather than per-school) basis.³⁴ These are not different service levels or charges for equipment. Instead, they accommodate the State's need to phase-in service to a specific benchmark level for all students in a way that minimizes or eliminates the impact to students during school hours.³⁵

Importantly, the rate structure detailed in the application is wholly consistent with the types of charges assessed by other ISPs. In a dedicated access environment (which is the case with the State's network), ISPs typically assess both one-time and

³³ The network now serves 100,000 computers, compared to 40,000 a year ago.

³⁴ In particular, ENA agreed to provide a standard technical benchmark to all schools (in this case, a standard 2 Web screens per minute per computer standard) and the funding amounts listed on Lines 5 through 10 meet this benchmark over time for all students as service is deployed.

³⁵ Such an arrangement was deemed necessary by the State because the network in place prior to ENA's contract had the same Internet bandwidth capacity, but failed to deliver comparable *service levels* to each school. This was so because larger schools with greater numbers of computers did not have proportionately more access service than schools with fewer computers. Under the equitable arrangement required by the State, ENA's system is designed to give a large school with 2000 students and 200 computers proportionately more Internet access capacity, as compared to a smaller school with 200 students and 20 computers, in order to reach a equitable service level on a per-student (rather than the typical per-school measure) basis.

non-recurring charges. As an ISP, ENA has used a comparable rate structure,³⁶ which is not associated with the purchase of any specific equipment at the customer location, but rather is intended to recover up-front service costs.³⁷ The fact that the State's Form 471 reflects a one-time charge for certain line items does not change this conclusion.

III. THE ADMINISTRATOR IMPROPERLY DISAGGREGATED ENA'S INTERNET ACCESS SERVICE INTO COMPONENTS.

A. Internet Access Should Be Viewed As A Whole When Considering Eligibility.

In considering the eligibility of the State's Form 471, the Administrator erred by failing to recognize that: (1) ENA provides an "end-to-end" Internet access service and (2) the State is seeking funds for service, not specific pieces of equipment. Instead, it examined each component of the network used to provide ENA's Internet access service and denied eligibility by considering whether that component, standing alone, constituted "Internet access service."³⁸ Indeed, while acknowledging that the education hub sites and the ConnectEN equipment were used to provide Internet access, the

³⁶ Indeed, AT&T and Telalink (ISPs providing a comparable service to ENA) have represented to ENA that their Internet access service using dedicated facilities includes both a one-time fee and recurring charge.

³⁷ *Compare* Administrator's Decision at 2-4 (repeating ISIS 2000's mischaracterization of the one-time charge as a fee for purchasing routers or other equipment).

³⁸ Administrator's Decision at 2-6.

Administrator illogically concluded that “this purpose does not convert the classification of these facilities into Internet access service.”³⁹

This “deconstructionist” approach to eligibility for Internet access service flatly contradicts the practical reality of how the Internet operates and how users obtain Internet access. Put simply, this interpretation would make it impossible for any Internet access provider to offer efficient and cost-effective service to a school or library. The Commission has aptly described the Internet as “a loose interconnection of networks belonging to many owners.”⁴⁰ End-users may access the Internet through a variety of network architectures provided by Internet access providers – ranging from traditional dial-up access to dedicated access in the form of a leased communications facility, wireless connection or cable operator facilities.⁴¹ These architectures rely upon different combinations of network transmission facilities and equipment to provide end-to-end, transparent connectivity to end users.⁴² Therefore, any attempt to examine these individual network components is neither warranted under the Commission’s eligibility rules, nor workable as a practical matter.

³⁹ See *id.* at 5-6. Further, such action is not within the Administrator’s authority; that entity is tasked with carrying out the FCC’s instructions, not making policy.

⁴⁰ Universal Service Report to Congress at ¶ 63.

⁴¹ See Application for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc. to AT&T Corp., FCC 99-24, at ¶¶ 64-74 (rel. Feb. 18, 1999) (AT&T/TCI Merger Order”).

⁴² This is analogous to the Commission’s treatment of Internet traffic as an end-to-end service for purposes of reciprocal compensation. See Reciprocal Compensation Order at ¶¶ 9-17.

Similarly, the Commission's characterization of Internet access service reflects the integral relationship between the applications that comprise Internet access and the underlying data transport architecture. For example, in rejecting the notion that Internet access may be disaggregated into component services with distinct legal treatments, the Commission acknowledged that Internet access service involves both data transport and information-processing elements that offer "end users information-service capabilities inextricably intertwined with data transport" elements.⁴³ In sum, the agency explained that "[t]he service that Internet access providers offer to members of the public is Internet access. That service gives users a variety of advanced capabilities."⁴⁴

Lastly, such an approach undermines the Commission's stated principle of competitive neutrality and creates a profound disincentive to the adoption of new technology. The competitive neutrality principle requires that the Commission's "universal service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one

⁴³ Universal Service Report to Congress at ¶ 80. Along similar lines, the Federal-State Universal Service Joint Board recommended that the transport and information processing not be separated for purposes of eligibility for support as "[a]ny attempt to disaggregate the network transmission component of Internet access from the information service component could serve to undermine the competitive forces that currently characterize the Internet access market at this time." Federal-State Joint Board on Universal Service, Recommended Decision, 12 FCC Rcd 87, 323 (1996).

⁴⁴ Universal Service Report to Congress at ¶ 79. For example, "[i]nternet access providers typically provide their subscribers with the ability to run a variety of applications, including World Wide Web Browsers, FTP clients, Usenet newsreaders, electronic mail clients, Telnet applications, and others." *Id.* at ¶ 76.

technology over another.⁴⁵ Essentially, the Administrator's decision favors established ISPs with already amortized networks, over new ISPs, even where the new ISPs can provide more cost-effective service.⁴⁶ Likewise, the Schools and Libraries Division's disaggregation approach will seriously deter any ISP from incorporating new technology into its network, given the need to justify every decision to upgrade or add equipment to provide better service.

Plainly, eligibility determinations cannot be based upon individual components of a network-based offering. Contrary to the Administrator's methodology, end-to-end Internet access service must be viewed as a whole for purposes of determining eligibility and critical components used in providing such service should not be denied on a piecemeal approach. The Administrator should be legitimately concerned only with whether a particular service is eligible, and leave decisions as to the types of technology used in providing that service to the ISPs, which have far greater expertise in such matters, and the state applicants, which define their technology needs through the state procurement process.

⁴⁵ Universal Service Order at ¶ 47.

⁴⁶ Indeed, ENA is not aware of any other instance where an Internet access provider – such as America Online, Prodigy, or others – has been required to itemize costs and eligibility for each piece of equipment and transmission link comprising its network; nor would there be any basis to do so. Further, the decision also may discourage the type subcontracting arrangements between ISPs and LECs and undermine the Commission's stated goal of encouraging "small businesses to form such joint ventures." Universal Service Order at ¶ 449.

B. The Components Listed By The Administrator Are Typical Parts Of Virtually Any ISP's Network And Are Integral To ENA's Internet Access Service.

In light of the above, the Administrator mistakenly characterized the education hub sites and ConnectTEN routers used by ENA in providing Internet access service as either "internal connections" or Wide Area Network elements, rather than recognizing that they are integral to ENA's ability to meet the State's level-of-service requirements.⁴⁷ The Administrator further improperly failed even to explain why the caching servers were not components of Internet access service; instead, it summarily asserted that the caching servers were "not eligible internal connections."⁴⁸ As set forth below, these items are critical elements of ENA's service offering and are necessary to provide Tennessee school children with an efficient, rapid, robust and cost-effective Internet access service.

Moreover, the network components used by ENA – but disallowed by the Administrator – are standard components used in the networks of virtually all ISPs. Indeed, as the Commission itself recognized in its Digital Tornado Report, traffic handled by ISPs is typically received through a "modem bank or a remote access server, and the data is sent out through routers over the packet-switched Internet."⁴⁹ More recently, in describing @Home as an ISP, the Commission noted that "@Home

⁴⁷ See Administrator's Decision at 5-6.

⁴⁸ See *id.* at 6.

⁴⁹ Kevin Werbach, *Digital Tornado: The Internet and Telecommunications Policy*, 54 (March 1997).

provides the servers, routers and other Internet access support facilities and manages the use of the cable network for data delivery services.”⁵⁰ Accordingly, it follows in this context that the Administrator cannot ignore the fact that components – such as those provided by ENA and integrated with end-to-end offerings – are necessary to provide reliable Internet access service.⁵¹

1. Education Hub Sites

The Administrator’s determination that the five “Education Hub Sites” are ineligible for discounts as Internet access service evidences a failure to understand the nature and importance of these hubs in providing efficient Internet access (and, to reiterate, ignores the fact that the State’s Form 471 seeks funding for service, not equipment).⁵² There is simply no basis for the Administrator’s stated rationale that,

⁵⁰ AT&T/TCI Merger Order at ¶ 32.

⁵¹ Moreover, these components are used by virtually all ISPs to provide efficient and cost-effective end-to-end service. For example, in describing its WorldNet® “Managed Internet Service,” AT&T notes that end users will be connected to the company’s “world-class IP backbone, with its high reliability standards, managed state-of-the-art hardware and software, smart routing capability, and constant performance monitoring.” See <<http://www.ipservices.att.com/worldnet/mis/index.html>>.

⁵² See Administrator’s Decision at 5. Instead, the Administrator characterized this equipment either as an “internal connection” (if located on school premises) or as wide area network components (if located outside of a school’s premises). *Id.* In doing so, the Administrator’s decision misinterprets the Commission’s rule concerning ownership and operation of a wide area network (WAN). See 47 C.F.R. § 54.518 (“[t]o the extent that states, schools, or libraries build or purchase a wide area network to provide *telecommunications services*, the cost of such wide area networks shall not be eligible for universal service discounts provided under this subpart.”) (emphasis added). This rule plainly does not apply to ENA’s service since its network is providing Internet access, not *telecommunications service*.

“while the installation of these hub facilities is for the purpose of providing Internet access, this purpose does not convert these facilities into Internet access service.”⁵³

Contrary to the Administrator’s characterization, the Education Hub sites clearly fall within the definition of Internet access because they are essential to the “transmission of information as part of a gateway to an information service” and are a part of the “navigational system[] that enable users to access information services.”⁵⁴ These network components will reside in five of the state’s LATAs (and contain two large routers and accompanying server equipment), and they are critical to route Internet access traffic and provide access to web-based e-mail capabilities, virtual reserve desks, and custom security. Because these components will be part of ENA’s network and provide critical gateway and e-mail functions expressly allowed by the Commission’s rules, their use in providing eligible Internet access service cannot reasonably be questioned.⁵⁵

2. Caching Servers Used To Provide More Efficient Transmission

Along similar lines, the Administrator erred in finding that ENA’s caching servers (that is, information storage and retrieval devices) are not eligible parts of ENA’s Internet access service.⁵⁶ While the Administrator’s decision did not offer a specific

⁵³ See Administrator’s Decision at 5.

⁵⁴ 47 C.F.R. § 54.5.

⁵⁵ *Id.*

⁵⁶ See Administrator’s Decision at 5-6.

rationale, its decision nonetheless reflects a grave misunderstanding about the critical role that information storage and retrieval plays in providing efficient access to the Internet.

The caching servers are a key component of ENA's network, as they would be in the network of any ISP providing cost-effective and responsive service to schools. ISP network design inherently involves trade-offs between transmission, on the one hand, and storage and retrieval, on the other. That is, depending upon the nature of the use of the ISP's network, an ISP will balance the bandwidth of its transmission links and the use of intermediate storage and retrieval devices. Internet access by K-12 students and teachers typically involves repeated visits to the same, relatively content-stable sites. For example, sites offering information about U.S. or Tennessee history, or about basic biology, may be accessed hundreds of times a day. The content of these sites, however, may be updated relatively infrequently. In contrast, a business user might access a site containing stock quotes or market information several times a day, but that information must be updated constantly.

Given the nature of K-12 usage, the most efficient way for ENA or any other ISP to provide Internet access is to store the most frequently visited sites on caching servers.⁵⁷ Bringing the information closer to the students and teachers enables more responsive and timely access by avoiding Internet congestion. At the same time, it allows ENA to provide a high level of access without over-engineering its transmission

⁵⁷ ENA therefore proposed caching servers at several traffic aggregation points in order to enhance network transmission efficiency and minimize costs for the State.

pipes, and permits the network to enhance throughput for real-time web services and non-cached requests, such as video and audio. This produces direct and substantial cost savings for the State and the fund.

In short, the caching servers allow for the most efficient possible “transmission of information as part of gateway to an information service,” as expressly included within the Commission’s definition of Internet access.⁵⁸ Such a conclusion is supported by the Commission’s own understanding of “caching” in providing Internet access and the benefits of using such capabilities. For example, in its *Universal Service Report to Congress*, the Commission described how subscribers interact with an Internet service provider’s web page “cache” in order to effectively retrieve and browse files from the World Wide Web.⁵⁹

Moreover, the caching servers provide substantial benefits to Tennessee’s students and teachers and are critical to maximizing the utility and responsiveness of ENA’s Internet access service. Without these servers, the utility of ENA’s service would decrease substantially because end-users would be faced with much slower response times, which would substantially limit their ability to make efficient and effective use of valuable computer time. “Caching therefore advances core Internet values: the cheap

⁵⁸ 47 C.F.R. § 54.5.

⁵⁹ Universal Service Report to Congress at ¶ 76 (noting that “[w]hen subscribers utilize their Internet service provider’s facilities to retrieve files from the World Wide Web, they are similarly interacting with stored data, typically maintained on the facilities of either their own Internet service provider (*via a Web page “cache”*) or on those of another.”) (emphasis added).

and speedy retrieval of information.”⁶⁰ Because these caching servers are part of ENA’s Internet access service, the Commission should reverse the Administrator’s findings as to this issue.

3. ConnectEN Routers

For similar reasons, the Administrator erred in focusing on the ConnectEN routers as discrete pieces of equipment rather than integral parts of ENA’s Internet access service.⁶¹ These routers are vitally necessary for the efficient transmission of information to students and teachers. Generally, routers provide an ISP with a demarcation point between the customer’s local area network and the ISP’s network that provides access to the Internet.⁶² Through a router, an ISP can provide the customer with specific Internet addressing and also monitor the telecommunications connection quality and traffic service levels.

The fact that the routers are located on the schools’ premises in no way alters the fact that they are used in providing eligible Internet access service. If the State were seeking reimbursement for internal connections, the location would be important. The State is not seeking such funding, however: once again, ENA must emphasize that the State applied for service discounts. Moreover, ENA is not charging the State in any way for the use of the routers, as is made clear by examining the State’s Form 471.

⁶⁰ *ACLU v. Reno*, 929 F. Supp. 824, 848 (E.D. Pa. 1996).

⁶¹ See Administrator’s Decision at 3.

⁶² In dedicated Internet Access scenario, a router at the customer’s premises is necessary to provide a standardized interface to the ISP’s network.

To the contrary, ENA's service charges are much lower than they would have been if the in-place routers were not available for use and ENA had been compelled to procure new equipment.

IV. THE ADMINISTRATOR ERRED IN CHARACTERIZING THE USE OF THE ConnecTEN ROUTERS AS AN INELIGIBLE PRE-1998 SERVICE.

In addition to characterizing the ConnecTEN routers as non-Internet access components, the Administrator denied the State's discount request for Internet access service on the basis that "the purchase and installation of the facilities were made prior to January 1, 1998."⁶³ The Administrator's decision also improperly suggests that the State of Tennessee is seeking to avoid the rules restricting discounts for pre-1998 service "by virtue of transferring ownership of the facilities in question to ENA and providing for ENA's charging these costs back" to the State.⁶⁴ These aspects of the decision evidence a fundamental misunderstanding of the State's application to receive discounts for service.

First, contrary to the Administrator's statements, the State did not sell routers to ENA. It only transferred software, along with the right to use the routers in order to continue providing Internet access in the most efficient manner possible.⁶⁵ This

⁶³ Administrator's Decision at 2-3.

⁶⁴ *See id.* at 4.

⁶⁵ Notably, ENA is not charging the State for its costs of acquiring the software. ENA's recovery of these costs will come, if at all, at the end of the contract, through the residual value of its network.

approach not only saves money for the State and the fund, but also ensures that access to Internet access services is not disrupted as services are upgraded.

Second, the Administrator misconstrued the scope of the Commission's eligibility rules with regard to pre-1998 services. That rule provides that the "Administrator shall not approve funding for *services received* by a School or Library before January 1, 1998."⁶⁶ It cannot plausibly be interpreted to mean that ISPs must use equipment in their networks that was manufactured and purchased after January 1, 1998. Yet, that is the result of the Administrator's decision to deny ENA's request on the basis that such equipment was provided prior to January 1, 1998.⁶⁷ The fact that *equipment* was used, as opposed to new, has no bearing on the eligibility of *services* made possible by that equipment.⁶⁸

Moreover, consistent with the plain language of the Commission's rules, the State did not seek reimbursement for any service provided prior to January 1, 1998. As is clear from the Form 471 application, the State sought reimbursement for Internet access service after July 1, 1998, which is consistent with the Commission's rules.

⁶⁶ 47 C.F.R. § 54.507(f) (emphasis added).

⁶⁷ Nor has the Administrator shown that it is at all relevant that ENA obtained the software from the State instead of some other source.

⁶⁸ Indeed, the Administrator's reasoning creates the absurd result that AOL or any other Internet service provider would have to put in place all new equipment, and could not purchase used equipment, in order to obtain reimbursement for Internet access and internal connections. However, such a requirement would obviously raise the costs of providing Internet access and would unreasonably inflate demands on the fund.

V. CONCLUSION

The Administrator's denial of funding for ENA's Internet access service rests on a profound misunderstanding of the State's Form 471, no doubt a result of the baseless challenges filed against that form by the disgruntled losing bidder in the State's procurement. Contrary to the Administrator's decision, the State seeks funding for eligible Internet access service, not the individual network components used to provide that service. The Administrator's failure to appreciate this fundamental fact and its decision instead to pass upon specific network elements, is at odds with the Commission's definition of Internet access, ignores the way ISPs typically provide service, and most importantly, substantially and directly harms school children in Tennessee.

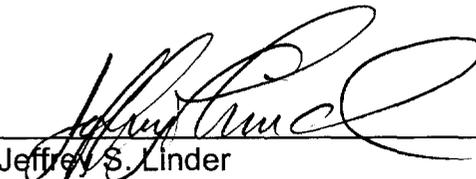
Reversal of the Administrator's denial of funding is therefore plainly warranted as a matter of law and sound policy. Simply put, granting this Request for Review is necessary to ensure that the Schools and Libraries fund is administered in a manner

that fully upholds the agency's obligation to deliver the benefits of the Internet to schools and libraries consistent with the intent of Congress.

Respectfully submitted,

EDUCATION NETWORKS OF AMERICA

By:



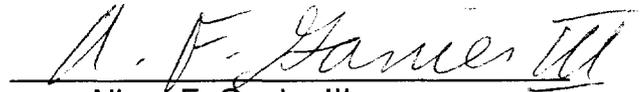
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Its Attorneys

March 29, 1999

**DECLARATION OF
ALBERT F. GANIER III**

I declare under penalty of perjury that the foregoing "Request For Review" is true and correct. Executed on this 29th day of March 1999.


Albert F. Ganier III

CERTIFICATE OF SERVICE

I hereby certify that the foregoing Request For Review of Education Networks of America was served today, the 29th day of March, 1999, by hand delivery (except as noted below), on the following parties:

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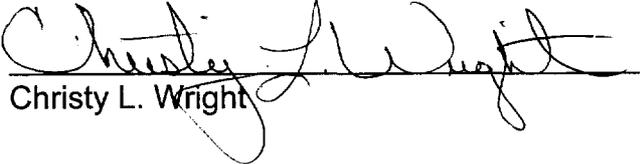
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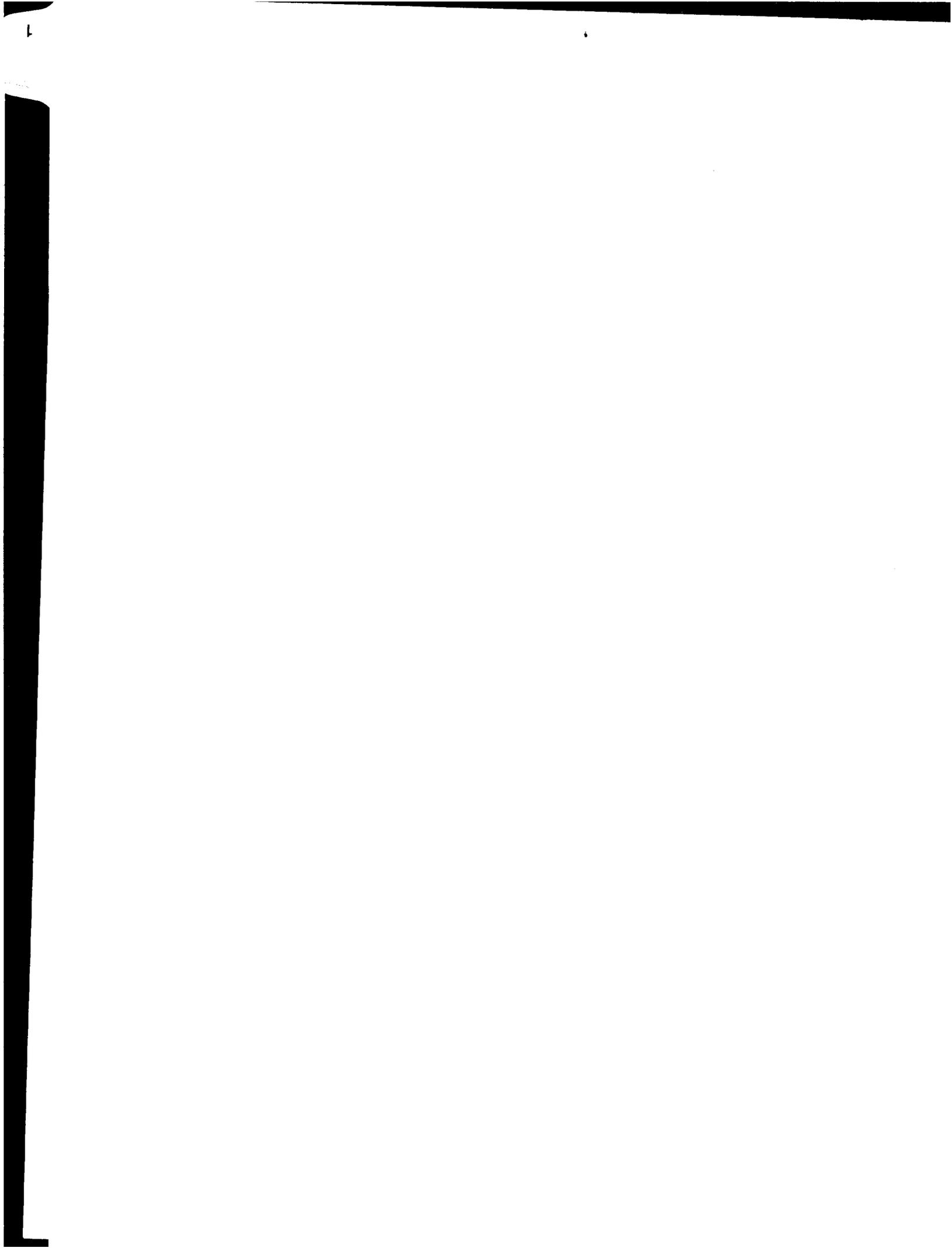
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* By first class mail, postage pre-paid



ATTACHMENT 1

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February 26, 1999

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Re: Application of the State of Tennessee, FCC Form 471, Application No. 18132

Gentlemen:

Enclosed are the following documents:

Form 471 **Funding Commitment Decisions** Letter for Application No. 18132

Administrator's Explanation of Funding Commitment Decisions for Application No. 18132.

These two documents collectively form the Administrator's Decision regarding FCC Form 471, Application of the State of Tennessee for discounts on the contract between the State and Education Networks of America, Application No. 18132.

The Administrator processed this application in accordance with its responsibilities prescribed in 47 C.F.R. Section 54.705. The Administrator is transmitting these documents in response to the documents that have been filed concerning this application, and in accordance with the procedural guidance offered by the Federal Communications Commission Common Carrier Bureau to the Administrator.

Sincerely,

Debra M. Kriete

**Debra M. Kriete
General Counsel to Schools and Libraries Division
Universal Service Administrative Company**

**cc: Lisa Zaina, Acting Deputy Bureau Chief
FCC Common Carrier Bureau**

**Irene Flannery, Acting Chief
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