



Information Renaissance

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**FCC MAIL ROOM**

October 30, 1996

OCT 31 1996

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
Room 222  
1919 M Street, NW  
Washington, DC 20554

**RECEIVED**

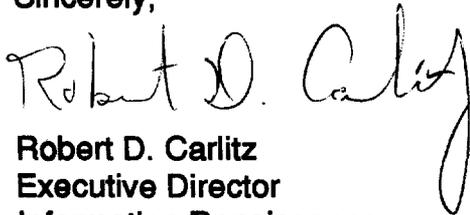
Dear Mr. Secretary:

Enclosed is the full text of discussions from the on-line seminar "Universal Service/Network Democracy," which took place from August 26 - September 27. The seminar involved teachers and librarians from all 50 states and Puerto Rico, bringing an important grass-roots perspective to the discussions of Universal Service. Please include this material in CC Docket 96-45, in the matter of the Federal-State Joint Board on Universal Service. Also, please note that this material is conveniently available on-line at the Information Renaissance Web site,

<http://info-ren.pitt.edu/universal-service>

This material is respectfully submitted on behalf of Information Renaissance, a nonprofit organization which seeks to further the development of computer networks in support of education, community development and economic revitalization. Thank you for your consideration of this material.

Sincerely,



Robert D. Carlitz  
Executive Director  
Information Renaissance

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# Welcome to the On-line Seminar: Universal Service/Network Democracy

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This site contains information and activities relating to Information Renaissance's **Universal Service/Network Democracy** on-line seminar. The seminar is an attempt to involve local teachers and librarians in the implementation process of the Telecommunications Act of 1996 and, specifically, in the development of rules regarding the Act's new Universal Service provisions for schools and libraries.

The present page contains pointers to project information. If you consult this page on a regular basis, it should be easy for you to keep up with what is happening in the seminar, which will run from August 26 through September 27, 1996. After the conclusion of the seminar, this material will be kept on-line for ready reference, with updates to the on-line repository as new information becomes available.

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## **Sponsorship**

Primary funding for the on-line seminar has been provided by:

- BellSouth Foundation
- The Heinz Endowments

with additional support from:

- American Micrographics Company
- NYNEX
- Pacific Bell

Information Renaissance is grateful to these supporters for helping to make this unique activity available on the short timescale required by the FCC's implementation schedule.

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# Universal Service/Network Democracy Preliminaries

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### How the Seminar Functions

There are two primary ingredients in the Universal Service/Network Democracy on-line seminar. The first is the Web site, which you are presently visiting. The second is a set of electronic mailing lists, which are described below.

If you want to participate in the seminar, you must register by completing the [on-line registration form](#). If you don't have access to a Web browser which can handle on-line forms, you can send e-mail to [register@info-ren.pitt.edu](mailto:register@info-ren.pitt.edu) to request a registration form via electronic mail.

### What is Authoritative

The activity with which this seminar is concerned is a complex legal proceeding. Seminar participants are at the periphery of this proceeding in the sense that we can make contributions based upon the personal experience that each of us brings to the discussion.

It is unlikely that anyone in the country can claim complete expertise in all of the disciplines – law, economics, technology and education – that are required in these proceedings. But by combining the skills of the various participants in this seminar, we should be able to master enough of these topics to be able to make significant contributions to the debate.

In the seminar there will be a moderator who presents a weekly agenda on the Web site and who facilitates the on-line discussion. The moderator's role is to provide a framework for discussion and to maintain some degree of order in the participants' contributions.

Given the remarks above, the moderator won't claim any over-arching expertise,

and will welcome contributions from people who correct errors or offer additions to the on-line material. There exists space on the Web for contributions from all of the seminar's participants.

### **Registration**

In order to participate in the Universal Service/Network Democracy on-line seminar, you must be registered. Information on registration options, instructions on how to register and a registration form are available on-line. Registration will remain open at least through September 1.

### **What's Required**

Once you have registered for the seminar you will be subscribed to one of several possible mailing lists. These subscriptions enable you to post material to the seminar's on-line discussion. As a participant you will be expected to make regular contributions to the discussion. Specific expectations for each seminar participant are as follows:

- Read the Web pages for each week's set of activities.
- Make at least one weekly contribution to the on-line discussion through a posting to the Universal Service/Network Democracy electronic mailing list.
- Complete other assignments, such as the writing of summaries for some of the material in the Information Renaissance on-line library.
- Conscientious students can expect to spend about ten hours a week on the seminar. Zealous students are welcome to spend more time and to help Information Renaissance in the conduct of the seminar. Please write to info@info-ren.pitt.edu if you would like to help.

### **How to Post**

The primary mechanism for distributing materials relating to the seminar is a set of electronic mailing lists. These mailing lists will be archived on a weekly basis and made available through this Web site. To make a submission to the seminar, simply send a message to us-nd@info-ren.pitt.edu. You must be registered in order to participate. If you have not already registered for the seminar, please do so by filling out the on-line registration form.

### **Etiquette**

Participants in the on-line seminar include people working for a variety of organizations in the fields of education, libraries, law, government and business. Each participant has joined the seminar as an *individual*, and seminar participants should interact with each other as individuals, not as representatives of the organizations with whom they may be affiliated. The FCC Docket includes hundreds of examples of official filings from organizations interested in the Universal Service provisions of the Telecommunications Act, and we will refer to this material often throughout the seminar. Individuals enrolled in the seminar may be able to help interpret some of these official filings, but they have not joined the seminar simply to explain their organization's views.

## Library Resources

A major component of the **Universal Service/Network Democracy** project is an **on-line repository** of filings with the Federal Communications Commission on CC Docket 96-45, which deals with the Universal Service provisions of the Telecommunications Act.

The FCC makes available through their Web site a variety of public notices and documents dealing with issues currently before them. We will maintain pointers to these and other **documents relevant to the seminar**, along with hypertext versions of the most important of these resources where they are not otherwise available.

**Information produced during the seminar** will also be placed on-line. This includes white papers and summaries of comments before the FCC which have been drafted by seminar participants.

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# Universal Service/Network Democracy Week One (August 26 – September 1)

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Discussions in the first week of the Universal Service/Network Democracy on-line seminar will deal with the following topics:

- The Telecommunications Act of 1996
  - Major Features of the Telecom Act
  - Implementation Schedule
  - Universal Service Provisions for Schools and Libraries
- Participants' Summaries (Assignment #1)
- Topics for Following Weeks (Assignment #2)

The sections which follow contain information on these subjects and suggestions on how seminar participants can work together to develop these topics and help provide useful input to the Federal Communications Commission as it works to implement the Telecommunications Act.

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## **Preliminaries**

If you have not yet read the page on Preliminaries to the Universal Service/Network Democracy on-line seminar, please read it now. The Preliminaries page contains information on the following items:

- How the Seminar Functions
  - What is Authoritative
  - Registration
  - What's Required
  - How to Post
  - Etiquette
  - Library Resources
  - How This All Works (coming soon)
- 

## **The Telecommunications Act of 1996**

The Universal Service/Network Democracy on-line seminar deals with the provisions of the Telecommunications Act of 1996 which provide possible support for the telecommunications needs of schools and libraries. The seminar brings together teachers

and librarians with direct experience in the educational applications of telecommunications, people associated with the businesses who provide telecommunications services and government staff working in the areas of education and telecommunications. Through the seminar it may be possible to shape the implementation of those provisions of the Act which affect schools and libraries in such a way as to maximize the educational benefits of the new law.

There are three broad areas that will be covered in the seminar:

- Content of the Telecommunications Act
- Procedures for implementing the Act
- Telecommunications needs of schools and libraries

Seminar participants bring expertise relevant to all these areas, and the goal of our on-line discussions will be to share this expertise.

The information given on this Web page is meant to provide a framework for further discussion on-line. Through the on-line discussion we will be able to sharpen our focus and cover in a adequate manner the broad set of issues which underly this debate.

## **Major Features of the Act**

If we attempt to reduce a very complex topic to a few sentences, we could describe the Telecommunications Act of 1996 as having the following two major features:

- **Competition.** The Act attempts to establish an environment in which competition among various telecommunications providers is maximized.
- **Universal Service.** Previous telecommunications legislation (dating back to 1934) defined a concept of Universal Service, which provided subsidies to enable rural telephone customers to be supplied with basic telephone service. The new Act extends this concept to include the following areas:
  - Basic telephone service. This is a continuation of prior coverage, although the possibility exists to extend this coverage to include more features than were previously regarded as "basic".
  - Schools, libraries and rural health care providers. There is a stipulation that these groups should receive subsidized access to telecommunications services, with specific mention of access from every school classroom.

In essence, the competitive and Universal Service aspects of the law attempt to strike a balance between the desire to provide a free market economy for telecommunications services while preserving some notion of equity or universal access to these services.

## Implementation Schedule

When the Telecommunications Act was signed into law earlier this year, it set in motion a series of activities to implement the Act through the development of a set of rules. The official calendar for these activities is maintained at the Federal Communication Commission's Web site. A summary of the dates relevant for the present discussion is as follows:

*February 8, 1996: Enactment of the Telecommunications Act*

The Act involves many more issues than Universal Service. We will touch on some of them in the seminar, but in the timetable which follows we list only those dates which relate directly to Universal Service provisions for schools and libraries.

*March, 1996: Appointment of the Federal/State Joint Board.*

This Board is charged with making recommendations to the FCC on the content of its rule for Universal Service.

*March 8, 1996: Notice of Proposed Rule Making (NPRM).*

This notice provided a running commentary on the Telecommunications Act with specific questions on items that require clarification for the FCC to develop its rules on Universal Service.

*April 12, 1996: Public Comments to NPRM are due.*

Public Comments, limited to 25 pages in length, could be submitted by any parties interested in participating in the rule making process. Traditionally such Comments have been available at the FCC's reference room in Washington. Through the efforts of Information Renaissance, this material is now available on-line.

*May 8, 1996: Reply Comments to NPRM are due.*

Public Reply Comments, issued in response to the original Comments received by the FCC, were to be filed by this date. This material is also available on-line.

*July 3, 1996: Request for Further Comments.*

The FCC published a list of 72 specific questions relating to areas of the Universal Service discussion which had not been adequately addressed by previous respondents.

*August 2, 1996: Further Comments are due.*

This material is currently being processed by Information Renaissance and will be made available on-line during the next week.

*November 8, 1996: Report of the Joint Board to the FCC is due.*

At this point the FCC will be able to begin drafting of its rules to implement the Universal Service provisions of the Telecommunications Act. There will follow another round of Comments and Reply Comments, which will be of crucial importance in shaping the final rules.

May 8, 1997: FCC shall implement recommendations of the Joint Board.

As you can see, the present seminar is placed at a critical time relative to the activities of the Joint Board. Although the seminar is taking place too late for participants who have not already done so to be able to file formal Comments, Reply Comments or Further Comments. There remain, however, many avenues through which the public can communicate with FCC staff. These include:

**Informal Comments.**

These can be sent to the FCC by e-mail or post.

**Ex Parte Presentations.**

You can request an appointment with FCC staff to present your views in person, or you can submit material for inclusion in the Universal Service docket.

**Participation in this seminar.**

The entire proceedings on this on-line seminar will be filed by Information Renaissance as an *ex parte* presentation to the FCC. Hence all of your remarks in this seminar will find their way into the official record. Equally importantly, both FCC staff and representatives of organizations which have been participating in the rule making process will be participating in this seminar. This makes the seminar an easy entree into the process.

## **Universal Service Provisions for Schools and Libraries**

Traditionally, the Universal Service Fund has existed to help equalize the charges for telecommunications services experienced by customers in different regions of the country. Through this fund, customers in regions with intrinsically high costs, such as rural areas, have their telecommunications services subsidized by the Fund. The Fund is circular in nature, in that the same telecommunications providers will typically contribute to the fund and draw from the fund.

The Telecommunications Act of 1996 mandates that the concept of Universal Service should be extended to provide support for the telecommunications needs of schools and libraries. A brief summary of the provisions of Section 254 of the Telecom Act has been provided by one of our seminar participants. This summary encapsulates some of the language of the Act and some of the procedures by which these provisions of the Act are to be implemented.

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## **Participants' Summaries**

There has been an enormous amount of material submitted to the FCC as part of the Universal Service discussion. While it is almost impossible for any single person to read through all 15,000 pages of these submissions, the Universal Service/Network Democracy has hundreds of participants who can divide this task, making it a practical effort for us

to approach.

Although the total volume of submissions on this topic has been very large, it's important to note that the provisions for schools and libraries represent only a small fraction of the topics under discussion. Hence there is a need to dig out those portions of the material submitted to the FCC which are actually relevant to the needs of schools and libraries. Here, too, it's useful to have many people available to share the task. If we can distill the information submitted to the FCC into more manageable chunks, we will be able to share the results and use this information more effectively.

With this in mind, I would like to propose the following *assignment* to all seminar participants:

1. Pick Comments, Reply Comments or Further Comments that have been submitted by groups which relate most directly to your concerns. You can make your choice based upon geography (by picking a service provider in your region), association (by picking an organization of which you are a member) and randomly. An index of available material is accessible at this site.
2. Read the items you have chosen with an eye toward their applicability to the needs of schools and libraries.
3. Prepare a brief summary of what you have read and send it to library@info-ren.pitt.edu for inclusion in the Universal Service/Network Democracy Web site.

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## Topics for the Following Weeks

There is a broad range of topics which we can choose to explore in the upcoming five weeks. Given the interactive nature of the medium in which we are working, I prefer not to fix a rigid syllabus for the seminar in advance. Rather, I would like to let the participants help select which topics we will cover in the next few weeks. Hence I am making the following *assignment*:

- Send a message to the seminar, us-nd@info-ren.pitt.edu, with your suggestions of which topics to cover.

As an example of possible topics, I have put together the following list. This reflects my own interests, and topics which others have pointed out as ones that are important to consider. If your suggestion simply endorses some of these points, that's fine, but feel free to add whatever topics you feel are most important for us to take up.

Scope of Universal Service subsidies for schools and libraries

Should they simply cover connectivity to the buildings, or should they include other aspects of telecommunications services? Specifically, should they cover such items as in-house Local Area Networks, user devices or training?

### What already exists?

Are there already special arrangements that schools and libraries have made with telecommunications providers in their areas which make it easier for schools and libraries to acquire needed telecommunications services? These could be discounts, bulk purchases, give-aways or other subsidies. It's important that new subsidies not be set up in such a way as accidentally to eliminate existing mechanisms that might serve schools and libraries better than the new subsidies. Alternatively, one might look to existing mechanisms which work well and should be included in the new FCC rules.

### Present approaches to low-cost connectivity

Independent of any special discounts, subsidies or gifts, many school districts and library systems have found clever ways to gain access to advanced telecommunications services at low cost. By sharing this information, we will enable others to make use of it, and we will ensure that the underlying mechanisms will be included in new FCC rules. Otherwise there is a danger that new rules might undermine some of the mechanisms that have been used effectively in the past.

### Flat rate versus metered pricing

It is my impression that Internet connectivity depends upon flat rate (untimed) pricing of the network connection. Is this true? To what extent is flat rate pricing currently available?

### Unbundling

One facet of the sort of competition that the Telecommunications Act of 1996 seeks to promote is the unbundling of various telecommunications services. This allows purchasers of these services to look for the best provider in each category of service. To what extent is unbundling essential for schools and libraries? To what extent is it currently being used?

### How should the subsidies be allocated?

Commenters on the NPRM have suggested a number of alternatives for dispensing funds from the Universal Service Fund for schools and libraries. These include discounts administered by the telecommunications carriers, cash grants or vouchers to individual schools or school districts, and block grants to states. Which of these mechanisms is likely to be the most efficient and the most effective?

### What constitutes a *bona fide* request?

The NPRM and the Request for Further Comments raise the issue of what should constitute a *bona fide* request for telecommunications services that should be eligible for a Universal Service subsidy. There exist a wide range of recommendations on this point - from requiring school districts to receive state approval for a technology plan which incorporates the requested services to simply having the request submitted by the school district's technology manager. This will be an important issue in the practical implementation of a Universal Service subsidy.

### Advanced services for schools and libraries

An important part of the Telecommunications is contained in Section 706, which deals with the provision of "advanced services." This is a plausible mechanism for ensuring that schools and libraries will continue to be provided with telecommunications services comparable with those available to the business community and other institutional users.

If you are still looking for ideas, another good place to look is the FCC's Request for Further Comments, which contains 21 questions directly related to schools, libraries and health care providers.

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# Universal Service/Network Democracy Week Two (September 2 – September 8)

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In the second week of the Universal Service/Network Democracy on-line seminar, we will go over the following topics:

- Summary of the First Week of the Seminar
  - New Material on the US/ND Web Site
  - Topics to Discuss in Upcoming Weeks
  - Scope of Universal Service Subsidies
  - Assignments
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## Preliminaries

If you have not yet read the page on Preliminaries to the Universal Service/Network Democracy on-line seminar, please read it now. The Preliminaries page contains information on the following items:

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  - Etiquette
  - Library Resources
  - How This All Works (coming soon)
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## Summary of the First Week of the Seminar

The seminar got off to a rapid start in its first week. There were nearly 100 postings to the seminar's mailing list from over 50 of the seminar's participants. The people who posted the first 92 messages came from a broad range of participant groups:

- Schools and Libraries: 19 people, 25 messages
- Non-profit Organizations: 9 people, 17 messages

- Universities: 10 people, 19 messages
- State and federal government: 7 people, 7 messages
- Business: 6 people, 24 messages

Thanks to Laurie Maak for providing these statistics. I also want to thank everyone who has contributed to the discussion so far and to encourage those who have just been listening to speak up regularly in the upcoming weeks.

There will be an effort to focus the discussion on specific issues relating to the FCC's implementation of Universal Service provisions of the Telecommunications Act, and I will try to keep the discussion on-track in this direction. If I send you a note asking that you send a particular message as a private communication to the person to whose message you are responding, please understand that I'm not trying to keep anyone from contributing to the broader discussion but simply trying to keep that discussion focused, even though we are a very large and very diverse group of people.

The 100 messages posted in the seminar's first week are too broad to summarize very briefly, but a few threads stood out (at least in my mind):

- **Resale.** Although the Telecommunications Act contains explicit language discouraging the resale of subsidized telecommunications services, this topic generated a number of comments. We'll pick this topic up again later in the seminar, when we delve into issues of aggregating traffic and linking school and library networks into broader community networks.
- **Training.** Many people pointed out the need for adequate measures to familiarize new users with the technology and to provide ongoing user support. Since the Act refers to "telecommunications services", it may be problematic to apply any Universal Service support to this activity. We will explore this topic in more detail this week, since we'll be talking about the allowed and desired scope of the subsidies provided by the Universal Service Fund for schools and libraries.
- **Technical Support.** This is an issue similar to that of user support. Here, at least, there may be precedents for Universal Support for the maintenance of an installed facility. How far this could and should go is something we should try to resolve in this week's discussion.
- **Equity.** Several postings raised questions of whether Universal Service subsidies might exacerbate discrepancies between rich and poor school districts, on the one hand, or penalize those districts which have shown initiative in the application of technology, on the other hand. These are good questions to keep in mind as we proceed.
- **Educational Basis.** Several of the teachers in the seminar reminded us to focus upon the educational goals of telecommunications technology and to work to structure the Universal Service subsidies so as to best meet these goals. This is certainly a concern that we don't want to lose sight of as we dig deeper into the legal and technical issues that sometimes cloud this discussion.

There were two assignments given in the first week. One dealt with suggestions for topics to discuss in the upcoming weeks. Some of these topics are covered in the list just given; others will be summarized below.

The second assignment called for contributions to the seminar's on-line library of participants' contributions. These could be summaries of Comments, Reply Comments or Further Comments filed with the FCC, or brief position papers relevant to topics being covered in the seminar. These submissions are being processed now and will be placed on-line in the next few days.

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## **New Material on the US/ND Web Site**

The On-line Repository of Comments, Reply Comments, Further Comments and Ex Parte submissions continues to grow. During the past week the Reply Comments that had to be scanned from paper were added to the Repository. Last Friday the FCC posted copies of electronically-submitted Further Comments. These Further Comments constitute about 2/3 of the material submitted to the FCC on this subject. They have been converted to hypertext and placed in the Repository. The remaining set of Further Comments will be scanned during the upcoming week and placed on-line as soon as they are ready.

To facilitate reading of the original FCC material referenced during the seminar, we have placed excerpts of that material relevant to schools and libraries in the "Useful Documents" section of the Universal Service/Network Democracy Web site. These excerpts can be downloaded much more rapidly than the full text of the corresponding documented. Our goal is to boil things down to the point where everyone in the seminar can comfortably absorb the major issues at hand. Although the full proceedings contains a lot of paper, much of what appears on this paper is outside the scope of Universal Service for schools and libraries, and an enormous amount of the available material is very repetitious.

In order to make it easier to find things on the Web site and inside the On-line Repository or the Archive of On-line Discussions, we have added a simple search engine to the Universal Service/Network Democracy Web site. You can access the search engine from the site's home page,

<http://info-ren.pitt.edu/universal-service>

It supports Boolean searches (using AND, NOT or OR) but not fielded searches (such as looking for items FROM a particular person) or phrases (such as "Universal Service"). A drawback to this search engine is that most of the Comments filed with the FCC talk about the same issues, so a search on something like the Telecommunications Act won't distinguish any of the filings. On the other hand, you can look up something like "New York" to find companies and organizations with a focus on that state. And you can do a search on "jazz" to find Ferdi Serim's initial posting. (Ferdie requested the search engine, and fortunately it was ready to go just about the time he requested it.)

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# Topics to Discuss in Upcoming Weeks

We have several places to look for topics to cover in the course. These include:

- Topics covered in our on-line discussions
- Topics indicated by the Telecommunications Act itself
- Topics mentioned in the Notice of Proposed Rule Making
- Topics underscored in the FCC's Request for Further Comments

I have gone through all of these sources in an effort to come up with a list that is short enough for us to go through it in the remaining four weeks of the seminar. Fortunately, there is a lot of overlap in the various lists cited above, so it should be possible for us to cover all the necessary material. What I hope to do is to focus each week's discussion of one or more issues which will be broad enough to encompass the various narrower topics that have come up either in our discussions or those of the FCC. Here's my current list:

- **Scope.** What services should be covered by the Universal Service subsidies?
- **Aggregation.** How can schools and libraries share services with each other and with other community groups to maximize efficiency and effectiveness?
- **Allocation.** Who gets the subsidies and under what conditions?
- **Integration.** How will new discounts fit in with existing programs?

Although this list is shorter than the one I gave last week, I think it covers the same range of topics, and I hope it encompassed the topics that have come up in the sources listed above. Please feel free to suggest additions or modifications. This week we'll concentrate on the first item, as described in more detail below.

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## Scope of Universal Service Subsidies

This week's major topic will be the question of the scope of Universal Service subsidies under the Telecommunications Act of 1996. The FCC's Request for Further Comments refers to this topic in their questions 6 and 7:

6. Should the services or functionalities eligible for discounts be specifically limited and identified, or should the discount apply to all available services?

7. Does Section 254(h) contemplate that inside wiring or other internal connections to classrooms may be eligible for universal service support of telecommunications services provided to schools and libraries? If so, what is the estimated cost of the inside wiring and other internal connections?

In our on-line discussions we have taken this question much further:

- Should Universal Service subsidies provide for professional development and user support?

- Should the subsidies provide for technical support?
- Should the subsidies provide not just for initial capital investment and monthly usage charges but for ongoing upgrades of a school's or library's telecommunications capacities?

It is very clear that the successful application of telecommunications service in a school or library setting depends upon a number of components:

- Connectivity to the site
- Internal wiring at the site
- On-site network hardware (routers and servers)
- Users' access devices
- User training
- Technical support

While all of these components are necessary, it is not at all clear that the funding for all of these components should come from the same source. With the Telecommunications Act of 1996 the opportunity exists for schools and libraries to receive subsidies which pay for the bulk of their external connectivity. Estimates of the value of this subsidy are in the billion dollar a year range and translate into a relatively small tax on residential and business telephone service or other telecommunications services that have a broad enough subscribership to be able to raise significant funds for this need.

The issue of how broad to make the applicability of Universal Service subsidies is, in part, a question of how large a percentage of any service these subsidies will cover. If the range of applicability is narrow, then the magnitude of the discount can be large. Conversely, if the range of applicability is very broad, then either the available discounts will be small or the size of the Universal Service Fund will necessarily be much larger.

One can ask how large a fund would be tolerated by the customers of other telecommunications services who will ultimately bear the cost of this fund. One indication is the size of the current Universal Service, which is on the order of \$700 million a year. It is this figure which emboldens one to propose a billion dollar a year subsidy for schools and libraries, but the same figure might caution us not to go much, much higher in our requests.

There is a second issue which might make one want to narrow the scope of Universal Service subsidies. This is the question of who puts into the Universal Service Fund, and who takes out of it. Traditionally, the Universal Service Fund has been circular, with the same companies putting into the fund, typically in proportion to the number of urban customers they serve, and taking out of the fund, typically in proportion to the number of rural customers they serve.

If one were to extend coverage of the Universal Service subsidies for schools and libraries to areas beyond the typical reach of traditional telecommunications suppliers, it opens up a whole new set of concerns about fairness. If, for example, the fund were to cover the purchase of computers, should computer vendors be required to make payments into the fund? You will find much discussion of this issue in the Comments

presented to the FCC. Typically, those businesses which have not previously had to pay into the fund are arguing against having new regulatory requirements imposed upon them through this sort of arrangement.

One way of looking at this issue – and many related issues in the Telecommunications Act – is in terms of *competition*. There are portions of the telecommunications infrastructure which have traditionally been monopolistic and regulated. Local telephone service, up until this year, has been a good example of this phenomenon. Other portions of the infrastructure, if we can call it that, are very competitive and unregulated. The computers which schools and libraries purchase as user access devices are an example of this phenomenon.

Many commenters have urged the FCC to maintain this distinction. Ideally, a truly competitive marketplace for telecommunications would result in lower prices for all consumers, with schools and libraries benefiting in the bargain.

Unfortunately, the reality of today's marketplace is one in which true competition is rare, except when one looks to the most lucrative sectors of the commercial market. Hence some of the arguments which sound good in principle may not work so well in practice, particularly when one applies them to sectors of the market with very low margins, which is precisely where schools, libraries and other public sector entities reside.

I don't want to bias the discussion too much in one direction or the other. Our task for this week will be to explore the range of options which seem plausible for the scope of the Universal Service subsidies. We should keep in mind our primary educational goals, which you will find reinforced in the FCC's Notice of Proposed Rule Making, paragraphs 71–74. Please read this material and the other excerpts of FCC documents supplied through the Universal Service/Network Democracy Web site. And please make regular contributions to the on-line discussion.

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## Assignments

This week's assignments are a logical continuation of last week's activities:

- Continue to develop summaries of the Comments, Reply Comments and Further Comments in the On-line Repository. Send your summaries to [library@info-ren.pitt.edu](mailto:library@info-ren.pitt.edu) so they can be linked into the Web site as part of the Participants' Contributions.
- Post to the on-line discussion group on this week's topic – the scope of Universal Service subsidies.

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# Universal Service/Network Democracy Week Three (September 9 – September 15)

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In the third week of the Universal Service/Network Democracy on-line seminar, we will go over the following topics:

- Summary of the Second Week of the Seminar
  - New Developments in the Seminar
  - Topics to Discuss in Upcoming Weeks
  - Allocation: Who Gets the Subsidies and Under What Conditions?
  - Assignments
- 

## Preliminaries

If you have not yet read the page on Preliminaries to the Universal Service/Network Democracy on-line seminar, please read it now. The Preliminaries page contains information on the following items:

- How the Seminar Functions
  - What is Authoritative
  - Registration
  - What's Required
  - How to Post
  - Etiquette
  - Library Resources
  - How This All Works (coming soon)
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## Summary of the Second Week of the Seminar

The seminar continued in the rapid pace set in its first week. There were 62 postings from 37 different people, half of whom had not posted in the previous week. These people were divided among the various participant groups as follows:

- Schools and Libraries: 13 people, 26 messages
- Non-profit Organizations: 8 people, 12 messages

- Universities: 7 people, 11 messages
- State and federal government: 3 people, 3 messages
- Business: 6 people, 10 messages

Thanks to Laurie Maak for continuing to develop these statistics. I want to repeat my thanks to everyone who has helped to keep the discussion going on the complex issues with which we have been dealing. In the upcoming weeks I hope that an increasing percentage of the registered audience will add their voices to the discussion.

The principal topic for the second week's discussion had to do with the *scope* of Universal Service subsidies for schools and libraries. Several major points emerged. I'll list them in the same framework that I employed last week, adding new topics as appropriate:

- **Resale.** While there exist interesting examples in which school districts have developed self-sufficient networking operations financed by the resale of services, this is probably not a viable option for the majority of school districts.
- **Training.** Training or professional development are major concerns for the successful implementation of new telecommunications services for schools and libraries. Since these activities are typically carried out within a school district or library and are not services traditionally supplied by providers of telecommunications services, these are not plausible candidates for Universal Service support. Nonetheless it is clearly important that Universal Service subsidies for schools and libraries should be structured so as to encourage and facilitate the necessary component of training and professional development.
- **Technical Support.** This issue is similar to professional development in that it is not on the traditional menu of services offered by telecommunications providers. Unfortunately, it is also not an area that the majority of school districts and libraries are well-equipped to handle on their own. We probably need further discussion within the seminar on how best to approach this question.
- **Equity.** This remains a major concern of seminar participants, having been cited in about 20% of the recent messages on-line. Approaches to consider include subsidies targeted for rural areas and subsidies targeted for low-income areas.
- **Educational Basis.** Many of the participating teachers and librarians continued to emphasize the educational goals of a widespread deployment of telecommunications technology. Several suggested that Universal Service subsidies should cover the evaluation of programs which employ this technology. This is another topic which deserves further discussion, even though it would appear at first glance to be far-removed from traditional telecommunications services.
- **Scalability.** Several participants emphasized the importance of building a basic infrastructure which can easily expand to serve the needs of all students, teachers and library patrons. The Internet provides a good example of how effective a scalable architecture can be.
- **Community Networks.** There is a strong sense in the group that Universal Service should mean access to network services from wherever people may be at whatever time they might be interested in accessing these services. For students and teachers, this means access from sites outside the schools, whether they be community centers, homes or other locations. For library patrons it means having multiple access points and facilities available around the clock.

The assignments for the second week were a continuation of those in the first week, namely to participate in the on-line discussion and to provide materials for the library of on-line resources. Many seminar participants have been working on these assignments, and you can see their results in the on-line discussions and the on-line library.

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## New Developments in the Seminar

Several developments have taken place in the last few days which will serve to enhance the content of the seminar and its significance.

On Friday we were able to announce that the University of Pittsburgh will be able to offer college credit for seminar participants who carry out all weekly assignments and apply for credit to the University. Please send a message to [info@info-ren.pitt.edu](mailto:info@info-ren.pitt.edu) if you are interested in this option. The University has agreed to waive student fees and to provide course credit at their in-state tuition rate. This credit is of course nationally recognized and should satisfy any local requirements for incremental or recertification credit.

A second development which will be available starting this week is the facility to conduct on-line surveys as part of the seminar. We have been trying to think of ways to expand the base of active participation. While I have been encouraging everyone who has registered to post messages at least once a week, we might all have trouble with the resulting message volume if everyone took this to heart.

What we'll do with the on-line surveys is to take an issue which has been discussed in the seminar and open it up to general evaluation through a form which all seminar participants can access through their Web browsers. The format will be similar to that of the registration form which you used to join the seminar, so it's safe to assume that everyone will be able to use it. Through this mechanism we hope to bring participation in some of the discussion topics up to the point where everyone will be taking part, if not at level of weekly postings, at least at the level of weekly expressions of opinion. The first on-line survey will deal with issues relating to the scope of Universal Service subsidies and will be announced on Monday, September 9.

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## Topics to Discuss in Upcoming Weeks

Last week's list had four major topics:

- **Scope.** What services should be covered by the Universal Service subsidies?
- **Aggregation.** How can schools and libraries share services with each other and with other community groups to maximize efficiency and effectiveness?
- **Allocation.** Who gets the subsidies and under what conditions?
- **Integration.** How will new discounts fit in with existing programs?

I would like to mention two other issues, which we can either weave into discussions of the topics listed above or break out as separate issues:

- **Other Proceedings.** The present seminar is focussed upon Section 254 of the Telecommunications Act. Other sections of the Act are also of importance for schools and libraries, and in some cases there are separate proceedings under way for these other topics. Some mention has already been made of the proceeding which deals with wireless technologies. I would like to summarize these other proceedings and try to indicate their relevance for schools and libraries.
- **Competition.** An important principle underlying the Telecommunications Act of 1996 is the idea of enhanced competition. We need to consider how Universal Service subsidies can be structured so as to enhance the competitive environment. Many examples exist which show how such an environment can benefit schools and libraries, but it is not a given that true competition will arise without planning and forethought.

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## **Allocation: Who Gets the Subsidies and Under What Conditions?**

This week's major topic will be the question of how the Universal Service subsidies for schools and libraries should be distributed. Here are a few of the issues which commenters in the current FCC proceedings have raised on this subject:

- Should there be cash grants or vouchers available directly to schools or school districts?
- Should there be an "E-rate" (educational rate) defining special discounts for schools and libraries?
- Should school districts have to complete state-approved technology plans in order to qualify for Universal Service subsidies?
- How should one define a *bona fide* request for telecommunications services? What minimal justifications should a school, library or school district have to offer in support of such a request?
- Should Universal Service subsidies extend to groups which provide educational materials or support for educational organizations, such as universities and colleges or community centers?

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## **Assignments**

This week's assignments are a logical continuation of last week's activities:

- Continue to develop summaries of the Comments, Reply Comments and Further Comments in the On-line Repository. Send your summaries to

library@info-ren.pitt.edu so they can be linked into the Web site as part of the Participants' Contributions.

- Post to the on-line discussion group on this week's topic – the allocation of Universal Service subsidies.
- Complete the on-line survey on the scope of Universal Service subsidies.

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*Return to Universal Service / Network Democracy or  
Return to Information Renaissance home page.*