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Reply Comments of  
The Center for Civic Networking, Inc.  
and  
The Graduate School of Library and Information Science, University of  
Illinois, Champagne/Urbana

Before the Federal Communications Commission  
Washington, DC 20554

In the Matter of the Federal-State Joint Board on Universal Service  
CC Docket # 96-45

Reply Comments of:

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## **Executive Summary**

As the public Internet, the precursor to the National Information Infrastructure, becomes more valuable, it creates more opportunities for those with access. It is likely that opportunities in the new economy will increasingly flow to those with access to the National Information Infrastructure—especially those who can strategically apply its resources, as in using electronic mail to enter labor markets. Access to such resources could also stimulate increased civic participation in governance.

The Federal-State Joint Board on Universal Service has been tasked with a solemn responsibility. Its recommendations will influence decisions that will affect the American economy and individual quality of life for decades to come. We strongly urge the Board to seek out and examine data that will illuminate how their recommendations may impact economic opportunity and quality of life not only on disenfranchised groups, but on emerging economic sectors.

We encourage a Universal Service policy that promotes a leveling effect between information haves and have-nots while stimulating new sectors in the economy such as microenterprises and home-based businesses. At the same time this framework is explored, we urge the Board to carefully examine results of analyses that illustrate the characteristics of affected population groups.

We suggest the Board consider a federal policy that establishes guidelines, but provides states considerable flexibility, allowing decision making to the local community level at the maximum extent feasible. It is perhaps too early to understand what Universal Service for the NII should be. A period of experimentation within the "laboratory of the states" should be considered, before establishing firm federal baselines. We believe the process of the Joint Board revisiting Universal Service provisions every several years creates a good opportunity to promote such experimentation. Therefore, any federal framework for Universal Service should provide flexibility for states to develop their own priorities and financing mechanisms, and empower local communities to establish their own criteria, programs and services. We suggest such a framework provide for:

- Market incentives and individual tax credits to increase computer ownership among low-income households and microenterprises;
- Electronic mail services for low-income children and job-seekers;
- Development of public access network services that offer useful and beneficial information products and services that address community needs and civic life;
- Mechanisms to finance network literacy programs through adult education programs, public libraries, and schools.

### ***Analyses in Support of Joint-Board Deliberations***

The Clinton Administration assigns a high priority to promoting the use of the National Information Infrastructure by all Americans. Yet there is little understanding of how and to what degree different classes of individuals are using networked information services from their homes.

The Center for Civic Networking and the Graduate School of Library and Information Science at the University of Illinois, Champaign/Urbana have undertaken a joint project to produce a set of brief white papers based upon Census Current Population Survey (CPS) data that describe emerging groups of information haves and have nots, policy implications of the data and options for decisionmakers to consider. We would be pleased to submit these white papers should the Board find such studies helpful in their future deliberations.

We will analyze Census data on demographic groups such as:

- Home-based businesses and microenterprises;
- Discouraged workers;
- Disabled individuals;
- Family farms;
- Group households; and
- Single mothers on public assistance.

These groups will be examined from national samples over a several year period, and then broken down into geographic regions, income quintiles, ethnic background and individual interests such as civic participation. We hope that in the coming months, the Board will consider the demographic characteristics described in these upcoming white papers and by similar studies we hope will be submitted by other organizations.

### ***Policy Recommendations***

We suggest the Board consider a policy framework that would combine market incentives and individual tax credits to increase computer ownership among low-income households and microenterprises, provide electronic mail services for low-income children and job-seekers, promote development of public access network services, and fund network literacy programs through adult education programs, public libraries, and schools.

#### **Improve Federal Data Collection on Individual Use of Networked Information**

- The Board should recommend the federal government upgrade its ability to conduct surveys that can lead to a better understanding of social and economic effects of the National Information Infrastructure on individuals.

A better understanding of residential use of the Internet or how individuals use networked information for job-seeking, consumer education or civic participation purposes would be invaluable.

While the government has not implemented any particular survey strategy designed to measure how Americans are affected by the NII in their daily lives, Census data has been collected concerning home computer ownership and individual use. While the Current Population Survey is a superb instrument for doing this, the present survey of home computer use every four years commissioned by the Department of Education is inadequate<sup>1</sup>. Assessing CPS data collected for school enrollment surveys in 1990 and 1993 along with one CPS set commissioned by NTIA in November 1994 is hampered not only by conflicting methodologies but its infrequency. It is essential that this Board must be adequately informed of these swiftly changing demographic conditions.

### **Offer Tax Incentives for Low Income Home Computer Ownership**

- The Board should explore combinations of Federal and State tax credits that could make it possible for low-income households and micro-enterprises to better afford personal computers and access to networked information services.

Accelerating depreciation schedules for personal computers used in business could rapidly create a secondary market of quality used equipment that could flow to low-income households and poverty-level microenterprises. In order for a business to qualify for an accelerated depreciation, it could be required that the equipment be provided to a school, charity organization, or low-income individual, with the name of the recipient to be listed on the tax form.

Existing mechanisms such as the Earned Income Tax Credit could be used to create a one-time credit for the purchase of a new computer system for household use. The EITC would be useful because it is already designed to target low and moderate income working families with children. This mechanism could also be used to provide credits for the purchase of networked information services, software, and training that could be set to various levels depending upon family size and household income.

### **Provide Email To Low-income Children And The Unemployed**

- The Board should consider the principle that free, public access to Internet mail can create new opportunities for displaced workers and low-income children to broaden their networks of personal acquaintances for employment and education prospects far outside their schools and neighborhoods.

Internet-based electronic mail may well be a public good, with implications concerning the types of basic services that should be bundled into any new consideration of Universal Service policies.

By encouraging broad access to Internet electronic mail, Universal Service policy can effectively reduce costs associated with meeting new people and maintaining relationships that can lead over time to new employment and education opportunities. Internet-based electronic mail introduces a new process efficiency in creating and maintaining novel relationships. For job-seekers, weak ties facilitated over electronic mail can increase the potential for strong ties that can result in new working relationships. Internet-based mailing lists have significant potential for transforming weak ties of acquaintance into strong ties that can result in instrumental actions and productive gains. As Pickering and King note, "The maintenance of weak ties can play a crucial role for an individual when he or she is forced to change jobs. Such a situation is a classic case when current job ties are likely to be useless, but ties to individuals in other employment settings might be very valuable indeed."<sup>2</sup> For disadvantaged groups, an increase in weak tie interactions "reduces inequality, thereby creating a more equitable distribution of employment across groups."<sup>3</sup>

### **Expand the Concept of Universal Service From POTS to PANS**

- The Board should consider and recommend financing mechanisms to increase the number of community-based public access network services and connected libraries.

Universal Service policy can level the playing field in some respects by supporting community-based PANS – public access network services (community networks, community computer centers, public access cable centers, library media centers, etc). The driving characteristic of Universal Service over the past sixty years has been access to plain old telephone service (POTS). In the information age, access is a more complex proposition that requires support for users as well as information content. As Moltz notes, “Civic network programming can provide access to Internet, job rosters, community listings, educational resources, health information and governmental databases.”<sup>4</sup>

Public libraries are especially well positioned to leverage Universal Service priorities for local communities. Currently, 20.9 percent of public libraries have some type of Internet connection. Library connections to the Internet are most prevalent in the west, at 28.2 percent, and the northeast, at 25.9 percent, following trends of both home ownership of computers and individual use of networked information services. Only 5.7% of public libraries have network connections provided through local public access network services, although 12.8% of all public libraries are providing content information to such services in some form.<sup>5</sup>

### **Network Literacy and Acquiring High-Performance Work Skills**

- The Board should consider how Universal Service policy could promote innovative community-based job training programs for displaced workers and disadvantaged youth that focus on high-performance workplace competencies and network literacy.

Unless a certain level of literacy skills in the use of networked information have been attained by the general population, Universal Service policies will have limited impact. Network literacy has been described as a critical skill for citizens in the future, who must be able “to identify, access, and use electronic information from the network if they wish to be productive and effective in both their personal and professional lives.”<sup>6</sup> The necessary knowledge includes awareness of the range and use of globally networked information resources and how to apply such resources in everyday problem solving and improving individual quality of life.

However, the former Congressional Office of Technology Assessment (OTA), in a report on adult literacy, pointed out that no more than 15 percent of literacy providers use computers regularly, and adult literacy applications are not high priorities for most vendors and developers in the technology industry<sup>7</sup>. Yet without the necessary skills to use the National Information Infrastructure, access is meaningless and competition for jobs will leave the unskilled far behind.

The National Education Goals state that “by the year 2000, every adult will have the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.” The Economic Policy Institute has found that attainment of computer skills “tends to widen pay differences between educational groups more so than in the past.”<sup>8</sup> Yet simply acquiring computer skills has become insufficient in the age of the Internet. It has become important to be literate in the use of networked information, and any Universal Service policy must address this. This is necessary to close income gaps as well as to promote civic participation.

Particular skills would include an understanding of how to search for, browse, and retrieve desired materials and how to manipulate networked information with other resources to add value. These are general adult literacy skills needed to survive in an information economy<sup>9</sup>.

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<sup>1</sup> see Civile, Richard “*The Internet and the Poor*”, in Public Access to the Internet, Kahin, Brian & James Keller, ed. MIT Press. 1995; and Anderson, Robert, Tora K. Bikson et al Universal Access to E-Mail: Feasibility and Societal Implications. Rand Corporation. 1995.

<sup>2</sup> Ibid.

<sup>3</sup> Montgomery, James D. “Weak Ties, Employment, and Inequality: An Equilibrium Analysis,” in *American Journal of Sociology*, vol. 99, No. 5, pp. 1212-36. University of Chicago, March, 1994.

<sup>4</sup> Moltz, K. “Civic Networks in the United States.” Mimeograph. New York: Columbia University, Graduate Program in Public Policy and Administration. 1994.

<sup>5</sup> McClure, Charles, John Carlo Bertot and Douglas L. Zweizig. “Public Libraries and the Internet: Study Results, Policy Issues and Recommendations.” National Commission on Libraries and Information Science: Washington, DC, June 1994.

<sup>6</sup> McClure, Charles. “Network Literacy in an Electronic Society: An Educational Disconnect?” in, *Annual Review of Institute for Information Studies, 1993-1994*. Aspen Institute.

<sup>7</sup> U. S. Congress. Office of Technology Assessment. *Adult Literacy and New Technologies: Tools for a Lifetime*. Washington, D.C.: 1993.

<sup>8</sup> Mishel, Lawrence, and Jared Bernstein. *The State of Working America 1992-93*, pp. 91-96. Washington, DC: Economic Policy Institute, 1993.

<sup>9</sup> Ibid.