Social Responsibility and Equity in the Age of Technology

Paper presented at the LAMA/LITA Conference in Pittsburgh PA, Fall, 1996.

The purpose this paper is to discuss the impact of technology on American society and more specifically its effects on those segments of our society outside the middle and upper middle class mainstream, including people of color and the poor. It will include an overview of the issues as well as some background information.

There has already been quite a bit of discussion in the press and in the professional literature of the issues covered in this paper. In a review of what has been written on the Information Superhighway for example, I found some very exciting information, and some very thoughtful, well articulated work on the potential negative impact of technology on our society. The work of Karen Coyle and Ronald Doctor, in particular, touches on many of the points made in this paper.

First, however, an overview of some major topics, themes and issues is in order. These include: a brief overview of the information industry today, the Information Superhighway or the National Information Infrastructure and related topics such as privatization and the role of the federal government, the notions of universal service and universal access and the impact on communities of color

TOPICS/ISSUES/CONCERNS:

The Internet and the World Wide Web

I'm going to start off with a brief overview of some of the more popular technology, the internet and the World Wide Web.

One definition of the internet is that it is a ubiquitous, multi protocol, cheap, non-proprietary tool that offers a gateway to unlimited information and communications services, that it can accomplish much at a fraction of the cost of other technologies and that its user friendly, cost effective, and convenient. It is used for e-mail, news groups, and on-line chat groups. A person can log on to computer systems around the world using the telnet function, download files using the file transfer protocol function, read hypertext documents, or read multi-media documents on the world wide web. There are also

usenet groups, freenets and bulletin board systems in place that provide people with similar interests an opportunity to converse and that provide free information at the local level. In essence then, its a fast growing, huge and rapidly evolving industry.

With the development of the world wide web, the Internet is as popular as ever, both with private users and business. In fact, in 1995, the Internet business was valued at 771 million dollars. A huge growth in the number and variety of products and services occurred last year alone. This year, the trend is continuing at an even more rapid rate.

The internet population is doubling every seven months. Estimates about the number of users vary from 20 million to 50 million.

While all this seems well and good for society, some critics think that the Internet is full of hype and even on the decline. The following concerns come to mind: 1) the Internet is expensive for those institutions that are subsidizing access to it and 2) there is potential danger of violation of some of our fundamental rights, including the right to privacy and free speech. For example, there are indications that the National Security Agency, the FBI and the CIA are already at work monitoring the traffic and eavesdropping on on-line forums, particularly those left of center and forums for people of color.

Those unhappy with the internet also argue that it is slow (graphics take forever to download unless you have the latest equipment), and that the information is difficult to manage. There is a lack of consistency in page design; the connections are unreliable due to ever changing url addresses that don't get updated regularly, and it is difficult to filter the vast amounts of information on the Internet.

Some of the issues that have yet to be resolved relative to the Internet include intellectual property and ownership issues, archiving of information, and of course privacy issues. We also especially need to watch out for and fight the development of intellectual property cartels. If not kept in check, they will most likely charge lots of money for access information and they have the potential to make the future public library a thing of the past.

When all is said and done,, there is still a large sector of the American population that does not even know what the word

Internet means, and there is evidence that it may be a passing fad. For example, in a Fall 1995 survey, 1/3 of those who have internet access say that they haven't logged on at all in the past three months.

Related to this, a 1994 survey found that most Americans do not know what the Information Superhighway is. Only 34% knew what it meant. Only 11% of those surveyed thought they understood it very well. Most people do not see a direct connection of the Internet to their lives.

The World Wide Web

The World Wide Web has boomed in the past two years. However, this very popular technology is not free. It's increasingly evident that to have easy access to the information on the World Wide Web with all its graphic, sound and other capabilities, one needs to have the latest hardware to run it. Today that means having at least a 486 pentium processor and 8mb of RAM.

While SLIP accounts provide full internet access and allow for running multiple sessions at the same time through multi-tracking capability, these are expensive for the average user. Many universities are finding that they need to subsidize these accounts or offer them at discounted rates.

A new package called JAVA allows WWW sites to have multi media capability. JAVA is a programming language. It allows you to see, hear, and interact on the Internet in a completely new way. It allows for animation, pop up windows, and a high degree of interactivity. But you need a high end pentium using windows nt. What does this mean? It means that the latest technology, because of the hardware and software requirements and expensive costs associated with acquiring such equipment, is and will continue to be accessible only to those of can afford it.

The National Information Infrastructure or The Information Superhighway

The National Information Infrastructure, or what is more commonly referred to as the Information Superhighway is a vast array of fiber optics, computers, telephone and cable TV networks that will connect public and private institutions and individuals into a vast web so that each can communicate with all. Communication will be in the forms of voice, video, graphics, and data transmission.

The National Information Infrastructure concept grew out of the national research network, which later evolved into   the National Research and education network or NREN (bill passed in 1991.

Then in 1993 Senator Markley introduced the National Communication Competition and Information Act which built a much broader framework for access. The bill passed in 1994 and contained strong provisions for equal access and used the term common carrier to describe the social role expected of the new telecommunications technology.

The National Information Infrastructure was introduced by President Clinton in 1994 as a major project. Clinton appointed a number of task forces to study the issues around telecommunications policy.

Elements of the information infrastructure include: networks, clients, servers, intellectual property, industry, government, public institutions, knowledge guilds, ivory towers, entertainment enterprises, and unaffiliated individuals.

Some say the Information Superhighway has the potential to provide a vast array of services for the home that would include such things as movies on demand, interactive newspapers, video phones, 500 channels (with nothing on), home schooling and university level education through interactive television and video and other services that would benefit the average American household.

Fiber optics (multiple access points over broad bands)   and the development of broad band networks is needed to accomplish this and is in fact already available in some communities, but for most its coming in the next 10 to 20 years. The costs will be between $200 and $400 billion dollars. Some states are moving toward fiber optic networks already and are bypassing the other types of hardware that are less expensive and more widely available.

Privatization of the National Information Infrastructure and Universal Service

In 1996, the Telecommunications Act was passed followed by proceedings for Universal service. The act mandates that libraries and schools be considered universal service providers.

In fact all recommendations were due to the Federal
Communications Commission in November, 1996, with a final
ruling due in May, 1997.

Universal service would provide discounts for schools and
libraries. Any telecommunication services available commercially
by tariff or through contract should be made available to
libraries and schools at a discount. Those in greatest need of
high bandwidth telecommunications facilities including people
living in rural regions and the urban poor, should receive
additional support. Core universal service should support at a
minimum, entry level access to the Internet.

But, according to Karen Coyle of the organization Computer
Professionals for Social Responsibility,

"The verbal commitment to universal access and the actual goals
of the Clinton Administration are not the same. The Clinton
administration has clearly stated that the National Information
Infrastructure will be built by the commercial sector, and that
the role of government is to eliminate regulatory barriers that
would hinder such development. Can the commercial sector develop
a system based on market concepts that provide universal access?
It's in answering this question that the Clinton administration
and telephone and cable companies differ from public interest
groups, and this is where it becomes obvious that our
definitions of universal access are not all the same".

The commercial marketplace has primary interests other than
those of free speech and democracy, and it would be unnatural
for us to expect them to put these before profit.

Access to what:

The National Information Infrastructure should really be called,
according to Ms. Coyle, *the National Communication
Infrastructure*, because we ought to be emphasizing
communication between people over exchange of data and
information. Expanding this definition would be more inclusive
of the arts and information pertinent to the person on the
street.

Who will provide the content?

Most information we need and use is fairly social and mundane.
It's useful but not commercial. Bus schedules, school

information, health services information are all important,
particularly to the poor. Still it will cost, because this kind
of information is not commercial. Left to market economies,
necessary vital information like information on sexually
transmitted diseases, immunizations, how to apply for social
services, etc. will not be available because it won't make a
profit.

It isn't universal access if the information superhighway
provides for the information needed by big business and well to
do individuals, but not that needed by our communities, minority
groups, or less wealthy individuals.

Communities must provide their own information--information that
is important to the common person. We cannot count on the
commercial sector to do this for us. Universal access is not
defined as putting everyone in a position to receive
information. It is defined as putting everyone in a position to
provide as well as to receive information. Our success at
achieving universal access will be measured by the extent to
which the information needs of all of our communities are met:
rural, urban, ethnic and linguistic groups as well as interest
groups.

De-regulation of the telecommunications industry will leave
responsibility to the private sector and to the states for
building the information infrastructure. Currently, some States
are much further ahead of others in developing networks than
others. Arizona, for example, until recently lacked a strategic
plan, but it's still behind its neighboring States in building
fiber optic networks due in part to a lack of funding and also
in part to the fact that the telephone and cable TV companies
are battling for turf and profit. The Arizona Corporation
Commission has stalled work toward building the fiber optic
infrastructure because the companies building it want to pass
the costs on to the consumer. This has driven away US West for
example. It has decided not to invest in Arizona.

While the opinions about the role of government in the
information infrastructure vary, most of the authors seem to
agree that the federal government does need to intervene and
ensure that there is equitable, universal access. How to do this
also varies, but regulation of the telecommunications industry,
anti-trust action, and the provisions of corrective subsidies
are some of the ways its been suggested that government can
intervene.

However detractors from the above think that the role of regulators is to protect consumers where the market power remains, to promote non-market social objectives and promote competition by opening markets. One author warns that government intervention does not always result in the most efficient or desired outcome as evidenced in the Cable Television Act of 1992, which had the opposite effect of its intent. Instead of lowering the price of cable television for the middle and lower income consumer, it raised the costs for this segment of the population. Those who benefited were the folks that could afford premium channels. The costs of access to these actually decreased. How did this happen? The cable companies found loophole after loophole in the legislation and took advantage of them.

In reality, it can be said that the government is controlled to a great degree by the telecommunications industry. Between 1984 and 1993, for example, telecommunications political action committees gave Congress $50 million. On Capitol Hill, the Baby Bells are known as Kings of the Hill and practically every congressman has a so called best friend in the industry. In 1994 the Baby Bells were able to kill a bill that would provide for common carriage and open architecture. Common Carriage would require the Baby Bells to serve everyone for the same price, preventing them from forcing folks they don't like off the road by spiking prices. Open architecture on the other hand refers to the concept that any point on a communication system can contact another without having to go through a central communications hub. The internet is such a network, although as was noted earlier, it has its share of problems and detractors.

One author notes that companies have their own visions for the information superhighway--to increase profits through the creation of a stratified cyberworld--a series of tollbooths that head straight to the electronic shopping mall and racetrack.

We are now seeing a dangerous trend of conglomerate mergers. Cable companies and telephone companies are joining forces and killing any chances of there being fair competition. These companies do not care about free speech and equal access. For them the bottom line is the almighty dollar.

I tend to agree with Karen Coyle's assessment of what the NII ought to be: Here are some more of her ideas:

The NII should be equally available to all. It should foster diversity of information and communication equal to the diversity in our society.

Communication over this technology should be protected under the first amendment. It should be public space.

Users must be providers of information as well as recipients of information. The NII must be truly interactive enough so that one can alter content and provide new content.

The open access model is a must.

 Finally, Coyle believes that if we lost freedoms because we haven't created a communications system that supports them, it will be extremely hard to recover these freedoms in the future, especially since any negotiation would have to go over the very telecommunications systems that may be denying free speech. We need a bill of rights for the cyberfuture. Rather than letting the technology determine what culture we can have, we need to decide what culture we want the technology to support. Universal access is not about the technology--its about preserving our rights as a free citizenry. This includes free speech.

We are in real danger of having a handful of giant global communications and entertainment corporations controlling the public mind.

Already, commercial providers such as America On-line and CompuServe are censoring what they deem harmful. In one case a feminist discussion group was shut down. This and other newsgroups have been barred from participation on these services.

Unequal access and the impact on communities of color and other diverse groups

A serious question remains regarding how to be more inclusive of the homeless and poor, and others outside of the mainstream in discussions and provisions of universal service and access. We're not just talking about connecting data points, but connecting people to people and meeting vital needs.

Here is some data I have gathered on access to technology by people of color and the poor.

While 94% of all households have telephones 4.4 million households (some say its as high as 20% of the population) do not have a telephone. Among Latinos, 13.3% of all households function without immediate access to a telephone. (FCC 1993)

Only a fraction of those that do have access will be able to afford computers and related equipment that currently make access possible.

Two thirds of all computers sold reach families with incomes of $40,000 or more. which means that fewer than one in three (33%) households owns a computer. Only 11% of families that earn under $20,000 currently own a computer. It gets worse the lower the level of income.

Latino and African American children are less likely to have access to computers both at home and at school than other children. 6% of Black children and 5% of Latino children use a computer at home, whereas 17% of white children use one at home.

Latinos with a median family income of slightly less than $24,000 a year will probably not be able to access a network that relies on an expensive delivery system and a computer interface.

Electronic redlining has already occurred in places like New York state. This phenomenon refers to the delivery of fiber optic networks to only affluent communities--those with $50-$60,000 incomes, twice that of the average income of Latino families.

In sum,

There is differential access to computers and fiber optics based on race, ethnicity and income, which means that obstacles--economic, social and regulatory-- remain to be hurdled before universal access can be achieved via these cutting edge technologies.