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Introduction

The year 2022 marks the 25th Anniversary of the May 1, 1997 publication of the print edition of *Netizens: On the History and Impact of Usenet and the Internet* by Michael Hauben and Ronda Hauben. This issue is again part of the celebration of that Anniversary. The articles here are Chapters 13, 14 and 15 by Michael Hauben in that book. In these chapters, he examines the effect the net and netizens are having on the media, politics and local questions and changes.

The first article, "The Effect of the Net on the Professional News Media: The Usenet News Collective / The Man-Computer News Symbiosis" quotes Victor Hugo about the cathedral and the book, "Alas, this will kill that." This article raises the question about the Net and the professional news media, Will this kill that? After examining criticism of the current press, the article examines the role of Usenet and the growing role of the Internet as people's sources of news. But also that the very concept of news is being reinvented as people come to realize that they can provide the news. As an example, the 1995 Pentium Chip story is told. Intel, the computer chip manufacturer, was forced to recall faulty Pentium chips because of the online pressure. The online discussion led to people becoming active and getting the manufacturers of their computers and Intel to fix the problem despite requiring a costly recall. The article concludes that Netizen reporters are challenging the premise that authoritative professional reporters are the only possible reporters of the news. Therefore, the professional

news media must evolve a new role or will be increasingly marginalized.

The second article projects that the net may lead to more democracy, *The Ascendancy of the Commons*. It does that by examining James Mill's understanding of the obstacles to direct democracy and how the net can revitalize the concept of a democratic Town Meeting via online communication and discussion. The bulk of the article is about the 1994 Virtual Conference on Universal Service and Open Access to the Telecommunications Network sponsored by the U.S. National Telecommunications Information Administration. This NTIA online conference was a prototype of an online town meeting facilitated by the net. The over 800 participants across the U.S. and abroad contributed a wide spectrum of thoughtful opinions on the importance of the internet, its benefit to society, and the need for a government role including to ensure widespread and equal access. The article serves as an archive of selected posts from the conference and an argument that it should set a precedent for future conferences which will start as the basis of a new social contract between people and their government.

The third article, "Exploring New York City's Online Community: A Snapshot of nyc.general," raises the question of what is a community and does the net broaden the answer? The article is a case study using a few threads posted on the Usenet newsgroup nyc.general during one week in 1995. Everyday problems were posted and the newsgroup community responded with a spectrum of opinions. As an example: "My boss is going to fire me" which led to a discussion of collecting unemployment compensation. Concerns posted included about life in the city and how to survive, especially finding an affordable decent place to live. The examples paint a picture of people with a common interest, and only secondarily of a common location, making themselves available to be helpful to others with that interest. The article concludes that online communications can help to enrich

[Editor's Note: A version of this article appears as Chapter 13 of *Netizens: On the History and Impact of Usenet and the Internet* by Michael Hauben and Ronda Hauben published in 1997 by the IEEE Computer Society Press, pp. 222-240. An earlier version was presented at INET '96 in Montreal, Quebec, in June 1996. It also appeared in the *Amateur Computerist* Vol. 7 No. 2 (Winter 1997).]

The Effect of the Net on the Professional News Media: The Usenet News Collective / The Man-Computer News Symbiosis

by Michael Hauben

The archdeacon contemplated the gigantic cathedral for a time in silence, then he sighed and stretched out his right hand toward the printed book lying open on his table and his left hand toward Notre-Dame, and he looked sadly from the book to the church:

'Alas,' he said, 'this will kill that' ...

This was the presentiment that as human ideas changed their form they would change their mode of expression, that the crucial idea of each generation would no longer be written in the same material or in the same way, that the book of stone, so solid and durable, would give way to the book of paper, which was more solid and durable still.

Victor Hugo, *Notre Dame de Paris*

I. Media-criticism

Will this kill that? Will the new online forms of discourse dethrone the professional news media? The French writer Victor Hugo observed that the printed book rose to replace the cathedral and the church as the conveyor of important ideas in the fifteenth century. Will Usenet and other young online discussion forums develop to replace the current news media? Various people throughout society are currently discussing this

question.

The role of modern journalism is being reconsidered in a variety of ways. There are journalists and media critics like the late Professor Christopher Lasch, who have challenged the fundamental premises of professional journalism. There are other journalists like *Wall Street Journal* reporter Jared Sandberg, who cover an online beat, and are learning quickly about the growing online public forums. These two approaches are beginning to converge to make it possible to understand the changes in the role of the media in our society brought about by the development of the Internet and Usenet.

Media critics like Christopher Lasch have established a theoretical foundation which makes it possible to critique the news media and challenge the current practice of this media. In "Journalism, Publicity, and the Lost Art of Argument," Lasch argued:

What democracy requires is public debate, and not information. Of course, it needs information, too, but the kind of information it needs can be generated only by vigorous popular debate.¹

Applying his critique to the press, Lasch wrote:

From these considerations it follows the job of the press is to encourage debate, not to supply the public with information. But as things now stand the press generates information in abundance, and nobody pays any attention.²

Lasch explained that more and more people are getting less and less interested in the press because, "Much of the press ... now delivers an abundance of useless, indigestible information that nobody wants, most of which ends up as unread waste."³

Reporters like Jared Sandberg of the *Wall Street Journal*, on the other hand, recognize that more and more of the information which the public is interested in, is starting to come from people other than professional journalists. In an article about the April 1995 Oklahoma Federal building explosion, Sandberg wrote:

In times of crisis, the Internet has become the medium of choice for users to learn more about breaking news, often faster than many news organizations can deliver it.⁴

People curious and concerned about relatives and others present on the scene turned to the Net to find out timely information about survivors and to discuss

the questions raised by the event. Soon after the explosion, it was reported and discussed live on IRC and in newsgroups on Usenet such as alt.current-events.amfb-explosion and elsewhere online. Sandberg noted that many logged onto the Internet to get news from first-hand observers rather than turning on the TV to CNN or comparable news sources.

Along with the broader strata of the population which has begun to report and discuss the news via the Internet and Usenet, a broader definition of who is a media critic is developing. Journalists and media critics like Martha Fitzsimon and Lawrence T. McGill present such a broader definition of media critics when they write, "Everyone who watches television, listens to a radio or reads ... passes judgment on what they see, hear or read."⁵ Acknowledging the public's discontent with the traditional forms of the media, they note that, "the evaluations of the media put forward by the public are grim and getting worse."⁶

Other journalists have written about public criticism of the news media. In his article, "Encounters Online," Thomas Valovic recognizes some of the advantages inherent in the new online form of criticism. Unlike old criticism, the new type "fosters dialogue between reporters and readers."⁷ He observes how this dialogue "can subject reporters to interrogations by experts that undermine journalists' claim to speak with authority."⁸

Changes are taking place in the field of journalism, and these changes are apparent to some, but not all journalists and media critics. Tom Goldstein, Dean of University of California Berkeley Journalism School observes that change is occurring, but the results are not fully understood.⁹

II. Examining the Role of Internet/Usenet and the Press

There are discussions online about the role of the press and the role of online discussion forums. The debate is active, and there are those who believe the print press is here to stay, while others contend that interactive discussion forums are likely to replace the authority of the print news media. Those who argue for the dominance of the online media present impassioned arguments. Their comments are much more persuasive than those who defend the traditional role of the print media as something that is handy to read over breakfast or on the train. In a newsgroup thread discussing the future of print journalism, Gloria Stern

stated:

My experience is that I have garnered more information from the internet than I ever could from any newspaper. Topical or not, it has given me community that I never had before. I touch base with more informed kindred souls than any tonnage of paper could ever bring me.¹⁰

Regularly, people are commenting on how they have stopped reading newspapers. Even those who continue to read printed newspapers, note that Usenet has become one of the important sources for their news. For example, a user wrote:

I_do_get the *NYT* every day, and the *Post* and the *Washington Times* and the *Wall Street Journal* (along with about 100 other hardcopy publications), and I_still_find Usenet a valuable source of in-depth news reporting.¹¹

More and more people on Usenet have announced their discontent with the traditional one-way media, often leading to their refusal to seriously read newspapers again. In a discussion about a *Time* magazine article about the Internet and Usenet, Elizabeth Fischer wrote:

The point of the whole exercise is that for us, most of us, paper media is a dead issue (so to speak).¹²

In the same thread, Jim Zoes stated the challenge posed for reporters by the online media:

This writer believes that you (the traditional press) face the same challenge that the monks in the monastery faced when Gutenberg started printing Bibles."¹³

Describing why the new media represents such a formidable foe Zoes continued:

Your top-down model of journalism allows traditional media to control the debate, and even if you provide opportunity for opposing views, the editor *always* had the last word. In the new paradigm, not only do you not necessarily have the last word, you no longer even control the flow of the debate.¹⁴

He concludes with his understanding of the value of Usenet to society:

The growth and acceptance of email, coupled with discussion groups (Usenet) and mail lists provide for a 'market place of ideas' hitherto not possible since perhaps

the days of the classic Athenians.¹⁵ Others present their views on a more personal level. One poster writes:

I will not purchase another issue of *Newsweek*. I won't even glance through their magazine if it's lying around now given what a shoddy job they did on that article.¹⁶

Another explains:

My husband brought [the article] home ... for me to read and [I] said, 'Where is that damn followup key? ARGH!' I've pretty much quit reading mainstream media except when someone puts something in front of me or I'm riding the bus to work ...¹⁷

These responses are just some of the recent examples of people voicing their discontent with the professional news media. The online forum provides a public way of sharing this discontent with others. It is in sharing ideas and understandings with others with similar views that grassroots efforts begin to attempt to change society.

While some netusers have stopped reading the professional news media, others are interested in influencing the media to more accurately portray the Net. Many are critical of the news media's reporting of the Internet, and other events. Users of the Internet are interested in protecting the Internet. They do this by watchdogging politicians and journalists. Concern with the coverage of the Internet in the press comes from first-hand experience with the Internet. One netuser expressing such dissatisfaction writes:

The net is a special problem for reporters, because bad reporting in other areas is protected by distance. If someone reports to the *Times* from Croatia, you're not going to have a better source unless you've been there (imagine how many people in that part of the world could correct the reports we read). All points of Usenet are equidistant from the user and the reporter – we can check their accuracy at every move. And what do we notice? Not the parts that the reporter gets right, just the errors. And Usenet is such a complete culture that no reporter, absent some form of formal training or total immersion in the net, is going to get it all right.¹⁸

Another online critic writes:

It's scary when you actually are familiar with what a journalist is writing about.

Kinda punches a whole bunch of holes in the 'facts'. Unfortunately it's been going on for a looooooong time ... we, the general viewing public, just aren't up to speed on the majority of issues. That whole 'faith in media' thing. Yick. I can't even trust the damn AP wire anymore after reading an enormous amount of total crap on it during the first few hours of the Oklahoma bombing.¹⁹

In Usenet's formation of a community, that community has developed the self-awareness to respond to and reject an outside description of the Net. If the Net was just the telephone line and computer infrastructure making up a machine, that very machine couldn't object and scold journalists for describing it as a pornography press or a bomb-production press. Wesley Howard believes that the critical online commentary is having a healthy effect on the press:

The coverage has become more accurate and less sloppy in its coverage of the Net because it (the Net) has become more defined itself from a cultural point of view. Partly because of growth and partly because of what the media was saying fed debates and caused a firmer definition within itself This does not mean the print media was in any way responsible for the Net's self definition, but was one influence of many.²⁰

Another person, writing from Japan, believed that journalists should be more responsible, urging that "all journalists should be forced to have an email address." He explained:

Journalists usually have a much bigger audience than their critics. I often feel a sense of helplessness in trying to counter the damage they cause when they abuse their privilege. Often it is impossible even to get the attention of the persons responsible for the lies and distortions.²¹

Usenet newsgroups and mailing lists provide a media where people are in control. People who are online understand the value of this control and are trying to articulate their understandings. Some of this discussion is being carried on Usenet. Having the ability to control a mass media, also encourages people to try and affect other media. The proposal to require print journalists to make available an email address is an example of how online users are trying to apply the

lessons learned from the online media to change the print media.

III. People as Critics: the Role the Net Is Playing and Will Play in the Future:

People online are excited, and this is not an exaggeration. The various discussion forums connected to the global computer communications network (or the Net) are the prototype for a new public form of communication. This new form of human communication will either supplement the current forms of News or replace them. One person on a newsgroup succinctly stated: "The real news is right here. And it can't get any newer because I watch it as it happens."²²

The very concept of news is being reinvented as people come to realize that they can provide the news about the environment they live in; that people can contribute their real-life conditions and this information proves worthwhile for others. The post continued:

As other segments of society come online, we will have less and less need for some commercially driven entity that gathers the news for me, filters it, and then delivers it to me, hoping fervently that I'll find enough of interest to keep paying for it.²³

Such sentiment represents a fundamental challenge to the professional creation and dissemination of news. The online discussion forums allow open and free discourse. Individuals outside of the traditional power structures are finding a forum in which to contribute, where those contributions are welcomed. Describing the importance of the open forum available on the Net, Dolores Dege wrote:

The most important and eventually most powerful aspect of the net will be the effect(s) of having access to alternative viewpoints to the published and usually (although not always either intentionally or consciously) biased local news media. This access to differing 'truths' is similar to the communication revolution which occurred when the first printing presses made knowledge available to the common populace, instead of held in the tight fists of the clergy and ruling classes.²⁴

This change in who makes the news is also apparent to Keith Cowing:

How one becomes a 'provider' and 'receiver' of information is being totally revamp-

ed. The status quo hasn't quite noticed – yet – THIS is what is so interesting.²⁵

While this openness also encourages different conspiracy theorists and crack-pots to write messages, their contributions are scrutinized as much as any other posting. This uncensored environment leads to a sorting out of mis-truths from thoughtful convictions. Many people online keep their wits about them, and seek to refute half-truths and lies. A post from Australia notes that it is common to post refutations of inaccurate posts:

One of the good things about Usenet is the propensity of people to post refutations of false information that others have posted.²⁶

Because the online media is in the control of many people, no one person can come online and drastically alter the flow or quality of discussion. The multiplicity of ideas and opinions make Usenet and mailing lists the opposite of a free-for-all.

IV. Qualities of this New Medium

A common assumption of the ethic of individualism is that the individual is in control and is the prime mover of society. Others believe that it's not the individual who is in control, but that society is being controlled by people organized around the various large corporations that own so much of our society – whether those corporations are the media, manufacturers, etc. The global computer communications networks currently allow uncensored expression from the individual at a bottom rung of society. The grass-roots connection of people around the world and in local communities based on common interests is an important step in bringing people more control over their lives. Lisa Pease wrote in *alt.journalism*:

There is nothing like finding a group of people who share your same interests and background knowledge. Some of my interests I didn't know one person in a hundred that shared – and now I've met many. What makes it a community is ultimately in-person meetings.²⁷

She continued on in her message to state why such connections and discussions are important:

The net ... requires no permissions, no groveling to authority, no editors to deal with – no one basically to say 'no don't say that.' As a result – far more has been said here publicly than has probably been said in a hundred years about issues that really

matter – political prisoners, democratic uprisings, exposure of disinformation – THIS is what makes the net more valuable than any other news source.²⁸

Similar views are expressed by others about the power of the Internet to work in favor of people rather than commercial conglomerates:

The internet is our last hope for a medium that will enable individuals to combat the overpowering influence of the commercial media to shape public opinion, voter attitudes, select candidates, influence legislation, etc. . . .²⁹

People are beginning to be empowered by the open communications the online media provides. This empowerment is beginning to lead toward more active involvement by people in the societal issues they care about.

V. The Pentium Story

In discussions about the future of the online media, people have observed how Usenet makes it possible to challenge the privileges inherent in the traditional news media. John Pike started a thread describing the challenge the Net presents to the former content providers:

To me this is the really exciting opportunity for Usenet, namely that the professional content providers will be directly confronted with and by their audience. The prevailing infostructure privileges certain individuals by virtue of institutional affiliation. But cyberspace is a far more meritocratic environment – the free exchange of ideas can take place regardless of institutional affiliation.³⁰

Pike continues by arguing that online forums are becoming a place where “news” is both made and reported, and thus traditional sources are often scooped. He writes:

This has tremendously exciting possibilities for democratizing the infostructure, as the ‘official’ hardcopy implementations are increasingly lagging cyberspace in breaking news.³¹

An example of news being made online occurred when Intel, the computer chip manufacturer, was forced to recall faulty Pentium chips because of the online pressure and the effect of that pressure on computer manufacturers such as IBM and Gateway. These com-

panies put pressure on Intel because people using Usenet discovered problems with the Pentium. The online discussion led to people becoming active and getting the manufacturers of their computers, and Intel to fix the problems.

In the article “Online Snits Fomenting Public Storms,” *Wall Street Journal* reporters Bart Ziegler and Jared Sandberg, commented:

Some industry insiders say that had the Pentium flub occurred five years ago, before the Internet got hot and the media caught on, Intel might have escaped a public flogging and avoided a costly recall.³²

Buried in the report is the acknowledgment that the traditional press would not have caught the defect in the pentium chip, but that the online media forced the traditional media to respond. The original reporting about the problem was done in the Usenet newsgroup comp.sys.intel and further online discussion took place in that newsgroup and other newsgroups and on Internet mailing-lists. The *Wall Street Journal* reporters recognized their debt to news that people were posting online to come up with a story which dealt with a major computer company and with the real world role that Usenet played.

In another article in the *Wall Street Journal*, reporter Fara Warner focused on the impact of the online news on Intel. “[Intel] offered consumers a promise of reliability and quality, and now that promise has been called into question,” she writes quoting the CEO of a consulting firm.³³ The people who did this questioning were the users of the computers with the faulty chips. Communicating about the problem online, these users were able to have an impact not otherwise possible. Ziegler and Sandberg noted that the discussions were online rather than in “traditional public forums like trade journals, newspapers or the electronic media.”³⁴ Online users were able to work together to deal with a problem, instead of depending on other forums traditionally associated with reporting dissatisfaction with consumer goods. After all of the criticisms, Intel had to replace faulty chips in order to keep their reputation viable. The *Wall Street Journal*, *New York Times* and other newspapers and magazines played second fiddle to what was happening online. In their article, Ziegler and Sandberg quote Dean Tom Goldstein: “It’s absolutely changing how journalism is practiced in ways that aren’t fully developed.”³⁵ These journalists acknowledge that the field of journalism is changing as a result of the existence of the online complaints. The

online connection of people is forming a large and important social force.

As a community where news is made, reported and discussed, Usenet has been a hotbed of more than just technical developments. Other late breaking stories have included the Church of Scientology and the suppression of speech. An Australian reporter, John Hilvert, commented on the value of being online:

It [Usenet] can be a great source of leads about the mood of the Net. The recent GIF-Unisys-Compuserve row and the Intel Pentium bug are examples of USENET taking an activist and educative role.³⁶

Nevertheless, Hilvert, warned about the authenticity of information available online:

However the risk is you can easily be spooked by stuff on the Net. Things have to be shaped, confirmed and tested off-line as well. One of the interesting side-effects of Usenet is that we have to work even harder to get a good story because, there is not much value-added in just summarizing a Usenet discussion.³⁷

With Usenet it is not necessary to rely on any single piece of information. Usenet is not about ideas in a vacuum. Usenet is about discussion and discourse. Tom Kimball, in a Usenet post, writes about the value of a public Usenet discussion:

I have great respect for the usenet ideal of everyone having the chance to respond to the ideas of others and the resulting exchanges of information and clashes of ideas I think is of some value (despite the flame-war garbage that gets in the way).³⁸

The great number and range of the unedited posts on Usenet brings up the question of whether editors are needed to deal with the amount of information. Discussing the need to take time to deal with the growing amount of information, a post on alt.internet.media-coverage explained:

The difference being that for the first time in human history, the general populace has the ability to determine what it finds important, rather than relying on the whims of those who knew how to write, or controlled the printing presses. It means that we as individuals are going to have to deal with sifting through a lot of information on our own, but in the end I believe that we will all benefit from it.³⁹

Such posts lead to the question of what is meant by the notion of the general populace and a popular press. The point is important as those who are on the Net make up but a small percentage of the total population of either the USA or the world. However, that online population of an estimated 27.5 million people⁴⁰ make up a significant body of people connecting to each other online. The fast rate of growth also makes one take note of the trends and developments. Defining what is meant by 'general populace and a popular press' the post continues:

By general populace, I mean those who can actually afford a computer, and a connection to the net, or have access to a public terminal. As computer prices go down, the amount of people who fit this description will increase. At any rate, comparing the 5-10 million people with Usenet access, to the handful who control the mass media shows that even in a nascent stage, Usenet is far more the 'people's voice' than any media conglomerate could ever be.⁴¹

The comments from the last two people lead to asking whether or not the new technologies are helping the human species to evolve or to deal with the ever increasing amount of information. Computer pioneers like Norbert Wiener, J.C.R. Licklider and John Kemeny discussed the need for man-computer symbiosis to help humans deal with the growing problems of our times.⁴² The online discussion forums provide a new form of man-computer symbiosis. They are helpful intellectual exercises. It is healthy for society if all members think and make active use of their brains – and Usenet is conducive to thinking. It is not the role of journalists to provide us with the answers, the objective truth of life. Even if someone's life is busy, what happens when they come to depend on the opinions and summaries of others as their own? Usenet is helping to create a mass community which works communally to aid the individual. Usenet works via the active involvement and thoughtful contributions of each user. The Usenet software facilitates the creation of a community whose thought processes can accumulate and benefit the entire community. The creation of the book, and the printed book helped to increase the speed of the accumulation of ideas. Usenet now speeds up that process to help accumulate the thoughts of the moment. The resulting discussion seen on Usenet could not have been produced beforehand as the work of one individual. The bias or point of the view of any

one individual is no longer presented as the whole truth.

Karl Krueger describes some of the value of Usenet in a posting to Usenet:

Over time, Usenetters get better at being parts of the Usenet matrix – because their *own* condensations support Usenet's, and this helps other users. In a way, Usenet is a 'meta-symbiont' with each user – the user is a part of Usenet and benefits Usenet (with a few exceptions ...), and Usenet includes the user and benefits him/her.⁴³

Krueger points out how experienced Usenet users contribute to the Usenet community. He writes:

As time increases normally, the experienced Usenet user uses Usenet to make himself more knowledgeable and successful. Experienced users also contribute back to Usenet, primarily in the forms of conveying knowledge (answering questions, compiling FAQs), conveying experience (being part of the environment a newbie interacts with), and protecting Usenet (upholding responsible and non-destructive use, canceling potentially damaging spam, fighting 'newsgroup invasions', etc.).⁴⁴

As new users connect to Usenet, and learn from others, the Usenet Collective grows and becomes one person richer. Krueger continues:

Provided that all users are willing to spend the minimal amount of effort to gain some basic Usenet experience then they can be added to this loop. In Usenet, old users gain their benefits from other old users, while simultaneously bringing new users into the old-users group to gain benefits.⁴⁵

The collective body of people, assisted by the Usenet software, has grown larger than any individual newspaper. As people continue to connect to Usenet and other discussion forums, the collective global population will contribute back to the human community in this new form of news.

VI. Journalists and the Internet

Professional journalists are beginning to understand that the online discussion forums will change their field, though they may not fully understand what the changes will be. In posing the question: "What, if any, effect do Usenet News and mailing lists have on reporters and editors you are in contact with?" several

journalists responded. Some stated that Usenet and mailing lists are valuable information and opinion gathering tools which also help them to get in touch with experts, while others are either timid about the new technology or did not want to bother with yet another reporting tool. Several of the reporters stated that they do not participate in any discussion forums per se, but rather lurk in these areas and contact posters by email who they feel will have valuable information for a story. Their main concern was that they might waste time online trying to get information when there would only be a small amount of worthwhile material in a lot of waste. Lastly, one or two did not see any value in online discussion forums, and have stayed away from them after initial negative impressions.

These reporters were asked if they sensed any pressure to get Internet accounts or to connect to Usenet and mailing lists. Josh Quittner of *Time Magazine* said the pressure came from the publishing side, where publishers are looking for the development of new markets. John Verity of *Business Week* and Lorraine Goods of *Time Interactive* said editors are responding to interest about the Internet and want stories about it. Brock Meeks, an independent journalist, stated that the pressure comes from reporters such as himself who have been online for some time and have beaten other reporters to stories because of the power of online communications. Some reported that they understood that it was important to get online without knowing why. A few said there is no push to go online.

Asked whether it is important to be online, some did not see it as necessary, given that they are already connected to those they consider to be experts in their respective field without being online. Others felt the speed of email helped to gather timely information for the stories they were working on. Farhon Memon of the *New York Post* compared today's online forums to conferences because they make contacting experts much easier both in terms of time and place.

When asked about the best forms of reader feedback, a number of the journalists stated that letters to the editor and op-ed pages were helpful. One reporter noted that letters to the editor were not particularly heeded. Email was named as the next most important means for readers to send in commentary. Whether this commentary is listened to or not is another story. One reporter did suggest that the online criticism, correct or not, encourages journalists to do the best possible job.

When it came to the question of whether online

discussion forums would ever replace newspapers, the journalists almost universally stated that each form has its own role to play. Quittner didn't think traditional journalists would evolve into online discussion leaders. Such a job might emerge, but not as an additional responsibility of the regular journalist. Maia Szalavitz responded:

The print media can't beat online stuff for interactivity; online stuff can't beat print journalism for organization, ease of portability and use at this point.⁴⁶

Goods offered a similar analysis:

An online news outfit can obviously do things that print cannot. However, there are certain things you can do with a newspaper that you can't do on a computer (like read it on the subway on the way to work, or in the bathroom). Just as TV did not replace radio, computers will not replace newspapers. I do think, however, that the introduction of new media will have an effect on traditional media. What those effects will be, however, I don't know.⁴⁷

There is a growing trend of journalists coming online for various reasons. Coming online could mean one of several things. Some use the Net as a new information source, and some look for people to interview. Lastly, there are those who are actually joining the community or responding to their reading audience. A growing number of journalists are participating in such newsgroups as alt.internet.media-coverage, alt.journalism.criticism, alt.news-media, also in forums on some of the commercial online services and in online communities such as the Well, among other places.⁴⁸ Reporters are entering the discussion and both asking for people's suggestions on how to improve their coverage of the Internet and for remarks on their stories.

Newspapers and magazines are developing online counterparts of their print editions (e.g., *San Jose Mercury News*, and *Business Week*) on commercial online services such as Prodigy and America Online, and are experimenting with new content differing from their print editions on the World Wide Web (WWW) (e.g., HotWired, Time Online, NandoNet). These online offerings sometimes provide another interface between journalists and readers. Message areas or public discussion boards are offered along with publicized e-mail addresses for emailing letters to the editor or particular journalists.⁴⁹

VII. Conclusion

Newspapers and magazines are a convenient form for dealing with information transfer. People have grown accustomed to reading newspapers and magazines wherever and whenever they please. The growing dissatisfaction with the print media is more with the content than with the form. There is a significant criticism that the current print media does not allow for a dynamic response or follow-up to the articles in hand. One possible direction would be toward online distribution and home or on-site printing. This would allow for the convenience of the traditional newspaper and magazine form to be connected to the dynamic conversation that online Netnews allows. The reader could choose at what point in the conversation or how much of the discussion to make a part of the printed form. But this leaves out the element of interactivity. Still, it could be a temporary solution until the time when ubiquitous slate computers with mobile networks would allow the combination of a light, easy to handle screen, with a continuous connection into the Internet from anyplace.

Newspapers could continue to provide entertainment in the form of cross-word puzzles, comics, classified ads, and entertainment sections (e.g., entertainment, lifestyles, sports, fashion, gossip, reviews, coupons, and so on). However, the real challenge comes in what is traditionally known as news, or information and newly breaking events from around the world. Citizen, or now Netizen reporters are challenging the premise that authoritative professional reporters are the only possible reporters of the news. The news of the day is biased and opinionated no matter how many claims for objectivity exist in the world of the reporter. In addition, the choice of what becomes news is clearly subjective. Now that more people are gaining a voice on the open public electronic discussion forums, previously unheard "news" is being made available. The current professional news reporting is not really reporting the news, rather it is reporting the news as decided by a certain set of economic or political interests. Todd Masco contrasts the two contending forms of the news media:

Free communication is essential to the proper functioning of an open, free society such as ours. In recent years, the functioning of this society has been impaired by the monolithic control of our means of communication and news gathering (through television and conglomerate-owned news-

papers). This monolithic control allows issues to be talked about only really in terms that only the people who control the media and access to same can frame . . . Usenet, and News in general, changes this: it allows real debate on issues, allowing perspectives from all sides to be seen.⁵⁰

Journalists may survive, but they will be secondary to the symbiosis that the combination of the Usenet software and computers with the Usenet community produces. Karl Krueger observes how the Usenet Collective is evolving to join man and machine into a news gathering, sorting and disseminating body. He writes:

There is no need for Official Summarizers (a.k.a. journalists) on Usenet, because everyone does it – by cross-posting, following-up, forwarding relevant articles to other places, maintaining FTP archives and WWW indexes of Usenet articles (yes, FTP and WWW are Internet things, not Usenet things – but if Usenet articles are stored in them, the metaphor extends).⁵¹

He continues:

Journalists will never replace software. The purpose of journalists is similar to scribes in medieval times: to provide an information service when there is insufficient technology or insufficient general skill at using it. I'm not insulting journalism; it is a respectable profession and useful. But you won't *need* a journalist when you have a good enough news-reader/browser and know how to use it.⁵²

These online commentators echo Victor Hugo's description of how the printed book grew up to replace the authority that architecture had held in earlier times. Hugo wrote:

This was the presentiment that as human ideas changed their form they would change their mode of expression, that the crucial idea of each generation would no longer be written in the same material or in the same way, that the book of stone, so solid and durable, would give way to the book of paper, which was more solid and durable still.⁵³

Today, similarly, the need for a broader, and more cooperative gathering and reporting of the news has helped to create the new online media that is

gradually supplanting the traditional forms of journalism. Professional media critics writing in the Freedom Forum's *Media Studies Journal* acknowledge that online critics and news gatherers are presenting a challenge to the professional news media that can lead to their overthrow. They write:

News organizations can weather the blasts of professional media critics, but their credibility cannot survive if they lose the trust of the multitude of citizens critics throughout the United States.⁵⁴

As more and more people come online, and realize the grassroots power of becoming a Netizen reporter, the professional news media must evolve a new role or will be increasingly marginalized.

Notes

1. Christopher Lasch, "Journalism, Publicity, and the Lost Art of Argument," *Media Studies Journal*, Vol. 9 no. 1, Winter 1995, p. 81.
2. *Ibid.*
3. *Ibid.*, p. 91.
4. Jared Sandberg, "Oklahoma City Blast Turns Users Onto Internet for Facts, Some Fiction," *Wall Street Journal*, April 20, 1995, p. A6.
5. Martha Fitzsimon and Lawrence T. McGill, "The Citizen as Media Critic," *Media Studies Journal*, Vol. 9 no. 2, Spring 1995, p. 91.
6. *Ibid.*
7. Thomas S. Volovic, "Encounters Online," *Media Studies Journal*, Vol. 9 no. 2, Spring 1995, p. 115.
8. *Ibid.*
9. Bart Ziegler and Jared Sandberg, "Online Snits Fomenting Public Storms," *Wall Street Journal*, December 23, 1994.
10. From: Gloria Stern <af385@lafn.org>
Date: 7 April, 1995
Subject: Re: Future of print journalism
Newsgroups: alt.journalism
Message-ID: <1995Apr7.214157.11293@lafn.org>
11. From: John Pike <johnpike@clark.net>
Date: 24 April, 1995
Subject: Re: Usenet's political power (was Re: Content Providers – Professionals versus Amateurs on Usenet)
Newsgroups: alt.culture.usenet
Message-ID: <3ngntr\$giu@clarknet.clark.net>
12. From: Elizabeth Fischer <efischer@wimsey.com>
Date: 20 July, 1994
Subject: Re: TIME Cover Story: pipeline to editors
Newsgroups: Alt.internet.media-coverage
Message-ID: <efischer-200794133211@pme16.pomo.wis.net>
13. From: Jim Zoes <mustang@mcs.com>
Date: 22 July, 1994
Subject: Re: TIME Cover Story: pipeline to editors
Newsgroups: alt.internet.media-coverage
Message-ID: <30nmf4\$bgg@News1.mcs.com>

14. *Ibid.*
15. *Ibid.*
16. From: Catherine Stanton <cat@uunet.uu.net>
Date: 21 July, 1994
Subject: Re: TIME Cover Story: pipeline to editors
Newsgroups: alt.internet.media-coverage
Message-ID: <30ltmc\$huu@rodan.UU.NET>
17. From: Abby Franquemont-Guillory <abbyfg@tezcat.com>
Date: 22 Jul 1994 13:45:19-0500
Subject: Re: TIME Cover Story: pipeline to editors
Newsgroups: alt.internet.media-coverage
Message-ID: <30p43v\$5o6@xochi.tezcat.com>
18. From: The Nutty Professor <flixman@news.dorsai.org>
Date: Mon, 16 Jan 1995 13:35:34 GMT
Subject: Re: Reporter Seeking Net-Abuse Comments
Newsgroups: alt.internet.media-coverage
Message-ID: <D2I33A.MtC@dorsai.org>
19. From: Mikez <mikez@cris.com> .
Date: Tue, 25 Apr 95 03:58:55 GMT
Subject: Re: Mass media exploiting 'cyberspace' for ratings ...
Newsgroups: alt.journalism.criticism
Message-ID: <3nhs1v\$cds_002@news.cris.com>
20. From: Wesley Howard <caspian@digital.net>
Date: 8 Apr 1995 05:39:43 GMT
Subject: Re: Does Usenet have an effect on the print news media?
Newsgroups: alt.internet.media-coverage
Message-ID: <3m57iv\$m90@ddi2.digital.net>
21. From: John DeHoog <dehoog@st.rim.or.jp>
Date: Fri, 21 Apr 1995 20:01:24 +0900
Subject: Make journalists get an email address!
Newsgroups: alt.journalism
Message-ID: <ABBDBF94966820B78D@ppp017.st.rim.or.jp>
22. Message-Id: <elknox.35.00091823@bsu.idbsu.edu>
23. *Ibid.*
24. Delores Dege, "Re: Impact of the Net on Society," email message, February 21, 1995.
25. From: Keith L. Cowing <kcowing@aibs.org>
Date: Mon, 17 Apr 1995 12:33:23-0500
Subject: Re: Content Providers – Professionals versus Amateurs on Usenet
Newsgroups: alt.culture.internet
Message-ID: <kcowing-1704951233230001@168.143.0.239>
26. From: William Logan Lee <bill@extro.ucc.su.OZ.AU>
Subject: Re: Is hobby computing dead?
Newsgroups: alt.folklore.computers
Message-ID: <1993Apr6.121613.16236@ucc.su.OZ.AU>
27. From: Lisa Pease <lpease@netcom.com>
Date: Wed, 5 Apr 1995 23:17:24 GMT
Subject: Re: Future of print journalism
Newsgroups: alt.journalism
Message-ID: <lpeaseD6L4p0.2K0@netcom.com>
28. *Ibid.*
29. From: Norman <normane814@aol.com>
Date: 20 Mar 1995 21:05:54-0500
Subject: Re: Impact of the Net on Society
Newsgroups: alt.culture.internet
Message-ID: <3klca2\$ma1@newsbf02.news.aol.com>
30. From: John Pike <johnpike@clark.net>
Date: 17 Apr 1995 12:21:49 GMT
Subject: Content Providers – Professionals versus Amateurs on

Usenet
Message-ID: <3mtmgt\$56a@clarknet.clark.net>
31. *Ibid.*
32. Bart Ziegler and Jared Sandberg.
33. Fara Warner, "Experts Surprised Intel Isn't Reaching Out To Consumers More," *Wall Street Journal*, December 14, 1994.
34. Bart Ziegler and Jared Sandberg.
35. *Ibid.*
36. From: John Hilvert <hilvertj@ozemail.com.au>
Date: Wed, 5 Apr 1995 03:40:57 GMT
Subject: Re: Does Usenet have an effect on the print news media?
Newsgroups: alt.culture.usenet
Message-ID: <hilvertj.107.2F821149@ozemail.com.au>
37. *Ibid.*
38. From: Tom Kimball <tom@europa.lonestar.org>
Date: Thu, 26 Aug 1993 02:25:28 GMT
Subject: Usenet impact upon reading habits and skills
Message-ID: <1993Aug26.022528.6376@europa.lonestar.org>
39. From: Miskatonic Gryn <miskat@iii1.iii.net>
Date: 17 Apr 1995 15:31:22-0400
Subject: Re: Cliff Stoll
Newsgroups: alt.internet.media-coverage
Message-ID: <3mufmt\$47n@iii1.iii.net>
40. The number of people accessible via email was placed at 27.5 million as of October 1994 according to John Quarterman and MIDS at <http://www.tic.com/mids/howbig.html>
41. Miskatonic Gryn
42. See John Kemeny, *Man and the Computer*, J. C. R. Licklider, "Man Computer Symbiosis," Norbert Wiener, *God & Golem, Inc.*
43. From: Karl A. Krueger <karl@plato.simons-rock.edu>
Date: Mon, 27 Mar 1995 08:58:33 GMT
Subject: Re: Special Issue of TIME: Welcome to Cyberspace
Newsgroups: alt.internet.media-coverage
Message-ID: <D63CxL.DJv@plato.simons-rock.edu>
44. *Ibid.*
45. *Ibid.*
46. Maia Szalavitz, "Re: Questions about the effect of Usenet on journalism," email message, April 18, 1995.
47. Goods, Lorraine. (1995, April 23) "Questions about the effect of Usenet on journalism" [email to M. Hauben], [Online]. Available email: lg105@columbia.edu
48. While I was writing this paper, there was a debate online over moving discussion from alt.internet.media-coverage into a new newsgroup tentatively called talk.media.net-coverage.
49. Jennifer Wolff wrote an interesting article entitled "Opening Up, OnLine: What Happens When the Public Comes At You From Cyberspace" in the *Columbia Journalism Review*, Nov/Dec 1994, pp. 62-65.
50. From: L. Todd Masco <cactus@clinton.com>
(No Subject Line)
Newsgroups: news.future, comp.society.futures, ny.general
51. Karl A. Krueger.
52. *Ibid.*
53. Victor Hugo, *Notre Dame de Paris*, translated by John Sturrock, Penguin Books, London, 1978, p. 189.
54. Fitzsimon and McGill, p. 201.

[Editor's Note: A version of this article appears as Chapter 14 of *Netizens: On the History and Impact of Usenet and the Internet* by Michael Hauben and Ronda Hauben published in 1997 by the IEEE Computer Society Press, pp. 241-279. An early version appeared in *Proceedings of Telecommunities '95: Equity on the Internet*, August 19-23, 1995]

The Net and the Future of Politics: The Ascendancy of the Commons

by Michael Hauben

What democracy requires is public debate, and not information. Of course, it needs information, too, but the kind of information it needs can be generated only by vigorous popular debate. We do not know what we need to know until we ask the right questions, and we can identify the right questions only by subjecting our own ideas about the world to the test of public controversy ...

Christopher Lasch,
"Journalism, Publicity,
and the Lost Art of Argument"

Throughout American history, the town meeting has been the premier, and often the only, example of 'direct democracy' ... The issue of whether the town meeting can be redesigned to empower ordinary citizens, as it was intended to do, is of vital concern for the future.

Jeffrey B. Abramson,
"Electronic Town Meetings:
Proposals for Democracy's Future"

I. Introduction

Democracy, or rule by the people, is by definition a popular form of government. Writers throughout the ages have thought about democracy, and understood the limitations imposed by various factors. Today, computer communications networks, such as the Internet, are technical innovations which make moving toward a true participatory democracy more feasible.

James Mill, a political theorist from the early nineteenth century and the father of philosopher John Stuart Mill, wrote about democracy in his 1825 essay

on "Government" for that year's Supplement for the *Encyclopedia Britannica*. Mill argues that democracy is the only governmental form that is fair to the society as a whole. Although he does not trust representative government, he ends up advocating it. But he warns of its dangers:

Whenever the powers of Government are placed in any hands other than those of the community, whether those of one man, of a few, or of several, those principles of human nature which imply that Government is at all necessary, imply that those persons will make use of them to defeat the very end for which Government exists.¹

Democracy is a desirable form of government, but Mill found it to be impossible to maintain. Mill lists two practical obstacles in his essay. First, he finds it impossible for the whole people to assemble to perform the duties of government. Citizens would have to leave their normal jobs on a regular basis to help govern the community. Second, Mill argues that an assembled body of differing interests would find it impossible to come to any agreements. Mill speaks to this point in his essay:

In an assembly, every thing must be done by speaking and assenting. But where the assembly is numerous, so many persons desire to speak, and feelings, by mutual inflammation, become so violent, that calm and effectual deliberation is impossible.²

In lieu of participatory democracies, republics have arisen as the actual form of government. Mill recognizes that an elected body of representatives serves to facilitate the role of governing society in the interests of the body politic. However, that representative body needs to be overseen so as to not abuse its powers. Mill writes:

That whether Government is entrusted to one or a few, they have not only motives opposite to those ends, but motives which will carry them, if unchecked, to inflict the greatest evils ...³

A more recent scholar, the late Professor Christopher Lasch of the University of Rochester, also had qualms about representative government. In his essay, "Journalism, Publicity, and the Lost Art of Argument,"⁴ Lasch argued that any form of democracy requires discourse and debate to function properly. His article is critical of modern journalism failing in its role as a public forum to help raise the needed ques-

tions of our society. Lasch recommended the re-creation of direct democracy when he wrote:

Instead of dismissing direct democracy as irrelevant to modern conditions, we need to recreate it on a large scale. And from this point of view, the press serves as the equivalent of the town meeting.⁵

But even the traditional town meeting had its limitations. For example, everyone should be allowed to speak, as long as they share a common interest in the well-being of the whole community, rather than in any particular part. One scholar wrote that a:

well-known study of a surviving small Vermont town meeting traces the breaking apart of the deliberative ideal once developers catering to tourism bought property in a farming community; the farmers and developers had such opposed interests about zoning ordinances that debate collapsed into angry shouting matches.⁶

The development of the Internet and of Usenet is an investment in a strong force toward making direct democracy a reality. These new technologies present the chance to overcome the obstacles preventing the implementation of direct democracy. Online communication forums also make possible Lasch's desire to see the discussion necessary to identify today's fundamental questions. Mill could not foresee the successful assembly of the body politic in person at one time. The Net allows for a meeting which takes place on each person's own time, rather than all at one time.⁷ Usenet newsgroups are discussion forums where questions are raised, and people can leave comments when convenient, rather than at a particular time and at a particular place. As a computer discussion forum, individuals can connect from their own computers, or from publicly accessible computers across the nation to participate in a particular debate. The discussion takes place in one concrete time and place, while the discussants can be dispersed. Current Usenet newsgroups and mailing lists prove that citizens can both do their daily jobs and participate in discussions that interest them within their daily schedules.

Mill's second observation was that people would not be able to communicate peacefully after assembling. Online discussions do not have the same characteristics as in-person meetings. As people connect to the discussion forum when they wish, and when they have time, they can be thoughtful in their responses to the discussion. Whereas in a traditional meeting, par-

ticipants have to think quickly to respond. In addition, online discussions allow everyone to have a say, whereas finite length meetings only allow a certain number of people to have their say. Online meetings allow everyone to contribute their thoughts in a message, which is then accessible to whomever else is reading and participating in the discussion.

These new communication technologies hold the potential for the implementation of direct democracy in a country as long as the necessary computer and communications infrastructure are installed. Future advancement toward a more responsible government is possible with these new technologies. While the future is discussed and planned for, it will also be possible to use these technologies to assist in the citizen participation in government. Netizens are watching various government institutions on various newsgroups and mailing lists throughout the global computer communications network. People's thoughts about and criticisms of their respective governments are being aired on the currently uncensored networks.

These networks can revitalize the concept of a democratic "Town Meeting" via online communication and discussion. Discussions involve people interacting with others. Voting involves the isolated thoughts of an individual on an issue, and then his or her acting on those thoughts in a private vote. In society where people live together, it is important for people to communicate with each other about their situations to best understand the world from the broadest possible viewpoint.

Public and open discussions and debates are grass-roots, bottom-up development which enable people to participate in democracy with enthusiasm and interest more so than the current system of secret ballots allows. Of course, at some point or other, votes might be taken, but only after time has been given to air an issue in the commons.

II. The NTIA Virtual Conference

A recent example and prototype of this public and open discussion was the Virtual Conference on Universal Service and Open Access to the Telecommunications Network in late November 1994. The National Telecommunications and Information Administration (NTIA), a branch of the U.S. Department of Commerce sponsored this email and newsgroup conference and encouraged public access sites to allow broad-based discussion. Several public libraries across the nation provided the most visible public sites in the

archives of the conference. This NTIA online conference is an example of an online “town meeting.” This prototype of what the technology facilitates also demonstrated some of the problems inherent in non-moderated computer communication. The NTIA conference was a new social form made possible by the Net and actually occurred as a prototype of one form of citizen online discussion. It demonstrated an example of citizen-government interaction through citizen debate over important public questions held in a public forum with the support of public institutions. This is a viable attempt to revitalize the democratic definition of government of and by the people. This particular two-week forum displayed the following points:

1. Public debate making it possible for previously unheard voices to be part of the discussion
2. A new form of politics involving the people in the real questions of society
3. The clarification of a public question
4. The testing of new technological means to make more democracy possible.

Following is a case study of the archives of this prototype conference, including some analysis for the future.⁸

David J. Barram, the Deputy Secretary of the U.S. Department of Commerce, closed the National Telecommunications and Information Administration’s (NTIA) Virtual Conference on Universal and Service and Open Access by stating the conference was: “... a tremendous example of how our information infrastructure can allow greater citizen participation in the development of government policies.” To hear such a comment from a government representative is important. Such a statement indicates that many users of the Net have demonstrated to the U.S. government that they oppose the recent conversion of the communications-based Internet into the commerce-based National Information Infrastructure.

The goals of the two-week conference, were stated in the Welcoming Statement.⁹ The Welcoming Statement promised to replace the one-way top down approach with a new form of dialogue among citizens and with their government.

Open discussion is powerful. Such exchange is more convincing than any propaganda. The forums on “Availability and Affordability” and “Redefining Universal Service and Open Access” demonstrated that the solution of the so-called “free market” is not a correct solution for the problem of spreading network access to all. Usually unheard voices spoke out loud and clear

there is a strong need for government to assure that online access is equally available to urban, rural, disabled or poor citizens and to everyone else. The government must step in to provide Net access in non-profitable situations that the so-called “free market” would not touch. Non-governmental and non-profit organizations along with community representatives, college students, normal everyday people and others, made this clear in their contributions to the discussion. Though the NTIA Virtual Conference was not advertised broadly enough, the organizers did establish 80 public access points across the U.S. in places like public libraries and community centers. This helped to include the opinions of people in the discussion who might not have been heard otherwise.

A. The Importance of the Internet to Our Society

The Internet and Usenet represent important developments in technology which will have a profound effect on human society and intellectual development. We are in an early stage of the development and distribution of these technologies, and it is important to look toward the future. Some areas of human society which these new communications technologies are likely to affect include government, human communication and community formation. Democracy is government by the people, and both Usenet and mailing lists allow everyone to speak out without the fear that their voices would not be heard. Individuals can still be uncooperative, but these new communications technologies make it possible to have one’s voice presented equally. These technologies could be integrated with other online information and communication technologies to make possible a true participatory democracy. This potential excited several of the participants.

Many participants in the NTIA virtual conference recognized the value inherent in these new communication technologies and discussed the need for universal access to the technology. The Internet was identified to be a “public good,” worthy and necessary to be accessible to all of the population and throughout the land. This led to the understanding that it was important to make access equal across all stations of society. Citizens living in rural areas, people with various handicaps, or of low-income should have equal opportunity with everyone else to access and utilize the Internet. These particular cases were described and explored as being unprofitable for businesses to provide equal access for equal payment. Businesses make profits off of the mass production of like goods or

services. Parts of society which cannot use the common product wind up paying extra. This was seen as discriminatory by various participants. The problems described included the high prices involved with long distance phone rates which most rural inhabitants need to pay to communicate with most other people. These rates would have to be paid to connect to the closest Internet access phone number. Rural access would be costly, as would access from territories such as the Virgin Islands. Another concern was the extra cost to those with hardships to gain access. People with handicaps would need to purchase expensive input/output devices in order to compensate for their individual disadvantage. Access is expensive, but so are computers and training. Participants felt it important to make access to Internet accounts and computers easily available.

The number of subscribers averaged about 400 people per conference. The conferences sponsored a debate on the issues, and people with different ideas contributed. However, there was a clear cry by many participants that the U.S. government should stay involved with the U.S. backbone of the Internet to best provide equal access and service to individuals throughout U.S. society. One of the arguments in favor of this understanding was that it was vital for people from all walks of life and all possible backgrounds to be using the Internet. Only if there is access for all can the Internet work as a medium of communication and discussion, including all the differences, and diversity of the population. A network only connecting a few types of individuals together would not benefit society. The question was raised by one participant whether we as a society could afford being split into two distinct societies – those online and those not.

Following are general comments taken from the archives of the NTIA Virtual Conference about the importance of the Internet to our society. Subsequent sections will focus on particular topics discussed during the conference.

1. The Benefits of the Net

From: Randolph Langley

I agree wholeheartedly – the Internet costs so little, and benefits so many. As with the interstate highway system, it is a proper and effective activity for the federal government. I believe most of the citizenry would not care to see the interstate system given over to a few large toll companies,

and I believe the Internet will be on the scale of economic and cultural benefit as the interstate system.¹⁰

From: Bob Summers

In order for the nation to access a common pool of information, such as the library of congress, an efficient system must be in place to handle the load of thousands of library's and other users to access the information. Yes, I believe that there will have to be an outlay of funds to provide such a system, not to mention the cost of putting the information online. These funds must come from the Federal government, since it is for the public.¹¹

From: W. Curtiss Priest

Government should supply/support activities where there are public goods (public information) and when the benefits of this support exceeds the cost to we taxpayers.¹²

From: Wayne County RESA

The Net is certainly not free, I agree. We all pay to a certain degree for it. I am a little concerned about the commercialism aspect of it, though. I think if it is privatized we will see more ads. Seems logical. Why would someone pay good money to be on the Net and not advertise their wares. I imagine it is inevitable but I would like the inevitable forestalled or better yet somehow modified so that information and the kinds of information is not compromised.¹³

From: BNN Television

Public access is a 'public good', not only because it allows people from disadvantaged backgrounds the opportunity to use new technology, but also because it increases the collective pool of information from which even newer technology is born. Analyze this increase from a business perspective if you must – I'll keep on rooting for the future of my species.¹⁴

From: Brent Wall

The draft financial plan for the Leon Coun-

ty Free-Net project, while proposing a number of different financial opportunities to make universal service a reality to the community, will emphasize an old notion practiced for years in this and other countries: cross-subsidies. Based on the view that citizen communication and education are public goods and should not be constrained by cost of service pricing mechanisms, the financial plan proposes that business uses and enhanced services shall be charged a fee that underwrites the first Amendment communication functions of the Net as well as its educational employment.

This entire argument hinges on defining communication and education (and I recognize that there are grey areas that would need to be ironed out) as PUBLIC GOODS. This is not, in my judgement simply a matter of determining whether Net communication is "divisible" etc. as the economic profession would tend to analyze the problem. It deals with fundamental philosophies of the social value of education and communication in a democracy. If, to email my County Commissioners on a topic that affects me, I have to pay a charge that I really can't afford, while Mr. Thickwallet has no such impediment, then this means something to democratic participation in an electronic world.

This is nothing new: witness C-Span, local access channels, and the like. If we adopt a concept and policy like the above, more and more citizens, over time, would be able to join the virtual community as a full member. To have this membership driven by one's personal income will surely result in two societies that are separate and unequal. Can we afford this future?¹⁵

From: Stephen Brenner

We are dealing with a major paradigm shift when it comes to this lateral flow of communication and the kinds of community building processes and empowerment that this can catalyze. We need to put some thought into how a real democracy could function, given these new communication

tools.¹⁶

From: Lew McDaniel

In my opinion, information access is sufficiently important to be a guaranteed right. By guaranteed information access, I mean for K-12, adult education, health services, and government access. Movies on demand, games, and electronic shopping (ala the shopping channels) should be charged at an additional rate.¹⁷

From: Dave W. Mitchell

I agree that the knowledge base of a society and the ability of its citizens to use it will determine the ultimate survival of free peoples.¹⁸

From: Daniel Lieberman

We are looking toward the future. Anyone who hopes to participate in the society will need to have access. Banking, schooling, books, its all coming very fast. Just think of the rate of change in the last five years or the last six months on the WWW. Voters handbooks, policy papers, etc. How can one hope to be a knowledgeable citizen without access. The hardware will trickle down like automobiles. But the communication links must be available.¹⁹

From: Sean Connell

The Internet offers a chance for us to follow through on a promise of democracy that was betrayed over two hundred years ago. Our Constitution, clever as it may be, was written to *prevent* civic action. [Jefferson] was the first to recommend public education, because he knew that it was vital to a healthy democracy. We must all be informed and capable of contributing to the governing of our country. The public does not have the means to act in concert and it is not the interest of the current power players to afford us those means. The Internet ... is a means to create vocal, active, communities that transcend race, geography, and wealth. It is entirely necessary that we recognize this fact and make a stand now to maintain this highway to real

Democracy.²⁰

From: Colette Brooks

And many of us feel that the Infobahn is not primarily a private preserve but a national/world resource which should be extended to all, for reasons already explored in other posts this week.²¹

From: Bill Russell

What SERVICES should be guaranteed to every citizen. The old definition of universal service has been called POTS: Plain Old Telephone Service. As I understand it, the NEED for this service was so great that it is public policy that every one (hence universal) should have it. It has been also called "life line service." ... IMHO universal service needs to be defined as a set of SERVICES that are so important to our civilization that they should be made universally available. Foremost among them is POTS. Next is access to a network that provides at least an email bridge to the worldwide Internet at an equitable price. It is just plain not fair for urban cybernauts to pay zero while rural cybernauts pay ten cents per minute for telephone connection to the net.²²

2. The Cry for Equal Access and Universal Access

Following are some messages from the conference demonstrating concern that access to the Internet be available universally, with respect both to access and to price.

From: Brent Wall

An early post to this group from an individual from the Anneberg NPR group suggested that, as a beginning, universal access, as defined from the consumer's and not the supplier's viewpoint, merely entails, at present, a phone line to every home. The implicit definition of availability in the Leon County library Tallahassee Free-Net adds one important dimension on top of the phone line notion. It is the expansion to as many homes as possible of the communication and educational bene-

fits of a community Net over the phone lines.²³

From: Harvey Goodstein

... [T]aking into consideration the needs and rights of deaf and hard of hearing individuals in particular (and individuals with disabilities in general). ... federal regulations on minimum standards are necessary to enhance equal access for all Thus, universal service provisions should not discriminate against individuals with disabilities (irrespective of their financial status) who invariably would have to pay abnormally high costs for technical connectivity.²⁴

From: Ellen Davis Burnham

This whole segment of the conference is about "Availability and Affordability" to all NOT just some that live in a largely populated area. People in Mississippi need the Internet just like everyone, probably more so than people who live in large areas with ready access to libraries or any form of research. Should we teach just *SOME* of our children to read, maybe just a few should learn Algebra, and heaven knows no one needs to know grammar rules. We can't pick and choose who is allowed access we live in a democratic society that says everyone is equal and should receive equal access to schooling among other inalienable rights.

The rural area should be addressed first because we have such a hard time to find access (affordable access). If you could just go into a school one day and help students who are struggling to find the needed 12 sources for a research paper, students who know what they need is out there SOMEWHERE if only they had access to it.

YES, WE MUST PROVIDE INTERNET ACCESS TO **EVERYONE**, not just to those who are easy to put online

The competition may be greater in larger cities BUT the need is not. I don't mean to berate anyone but if you could only see first-hand the great need in our schools you would understand. I teach in a school that

has only 3700 books total in the library. Our situation is extreme because the school burned a couple of years ago. I try to help the students by hunting for needed items on the Internet. Until I began teaching there this year *ONLY* one student knew about the Superhighway. What about ... the children who have parents that have never heard of the Internet either. We have to start somewhere and I believe the population of America as a whole is as good a place to begin as any.²⁵

From: Lucy Co

Hearing the real-life experiences of people like Ellen Davis Burnham, who wrote of introducing school children in rural Mississippi to the Internet – is one of the best aspects of this conference. Helps ward off the tendency to discuss concepts such as “availability” as though they were theoretical only. Keep up the good work, Ellen – and don’t apologize for your “preaching.”²⁶

B. Government as Producer and Disseminator of Information

The U.S. government is a major producer of information in American society, most of which is public and printed on paper. As a distributor of that information, the government would save money if it distributed it electronically and let the user decide whether or not to print that information. Having handed over the Internet backbone to commercial entities, the U.S. government no longer has the capability of distributing that information without the increased cost of contributing to some companies’ profit margins. A U.S. government-run backbone would have allowed the efficient distribution of governmental information without the increased cost profits requires. U.S. citizens will now have to pay a profit-making company overhead to access the very information we pay for with our taxes. In any case, if the U.S. government works toward providing governmental information and services online, more incentive will exist for more of the U.S. population to get connected to the Internet.

From: Carl Hage

... [T]he government would be the main beneficiaries of an *information* infrastructure. The government is a major pro-

ducer and consumer of information, most of which is inaccessible to the public in practice We need a new kind of information, a glasnost for the information age, in which the public at large can access any public information without charge (other than low network charges). That means every public library, school, government office, business or home could have access to everything.²⁷

From: Chloe Lewis

We might legislate that all public gov’t information – stuff that The Public has already paid for and usually has a right to, if near enough a G-Doc depository – be made available to anyone with email. This will, if done with common sense, reduce the expenses of both the government agencies involved and of anyone who needs frequent access to government publications. This is an obvious reason for schools and libraries to have Internet access, and a reason for citizens and businesses to acquire it.

The U.S. has been subsidizing access to paper information, for the sake of knowledge and self-government; we have found a more efficient way to provide this information; where possible, we should subsidize this more efficient way instead. It isn’t as whizbang attractive as giving everyone realtime video, but it would be useful immediately.²⁸

From: Carl Hage

The largest single producer of information is the federal government, most of which is public. Although these days virtually all documents are produced in electronic form on a word processor, etc., very little of the information is available in electronic form. Nearly all information is distributed in paper form, typically obtained by calling over a telephone. A similar case can be made for state and local governments.²⁹

From: Susan Hadden

If the federal and state government would announce a policy of making their services

available in electronic form there would be a package of stuff ... that should make the net worthwhile to most people. (Examples: Renewing drivers' license, hunting licenses, finding the right official for your problem the first time, getting online help on your income tax where you didn't just talk to someone but showed them the calculations in real time, etc.)³⁰

C. Why it Is Important for All to Have Access

Early in the "redefining universal service" segment of the virtual conference, people started discussing how to determine access rates. One participant, Bob Johnson, proposed the starting point is to figure out first why it was important for people to have Internet access. His point is important, and others echoed it throughout the conference. It is necessary to understand why it is important for both individuals and organizations in our society to have access to the Internet for both its information and communication benefits. Another participant, Carly Henderson, raised a parallel question asking why access to public libraries is important. Part of the debate taking place publicly was over a difference in views. One view was that the USA is a democracy where everyone is equal and should receive equal opportunities versus the understanding that the USA is a nation of individuals and access should only be for those who strive for it.

From: Bob Jacobson

An appropriate question is not how much a particular individual or organization should pay for access to the Internet or its successors, but why they should have access, individually and collectively? Once you figure this out, and define access to suit, you can figure on pricing. Everything else is premature, unless people get out their basic premises on which they are operating.³¹

From: Carly Henderson

I agree with Bob; this is a very important question that deserves a well thought out answer. Why should people have access to the Internet? In response, I pose the question, why should every community have a library and allow its citizens access to all that it contains?³²

From: Robert J. Berrington III

But what I'm willing to bet is that most of the people that we're talking about providing a service to haven't the slightest clue as to what the Internet is.³³

From: Martin Kessel

A final requirement for universal access is that people need to understand what the Information Highway can do for them – how it can benefit their lives.³⁴

D. What the Internet Can Do for People

The significance of Internet access for all in society is not obvious because it is a new way to think about communication between people. Before the Internet and Usenet, most broadcast forms of communication were owned and operated by large companies. Other more democratic forms of broadcast which provide one-to-many communication exist for small segments of the population in particular regions: public access cable, various self-produced newsletters or zines, "pirate" radio and so on. The Internet makes available an alternative to the corporate owned mass media and allows a grass-roots communication from the many to the many. As it has taken a struggle for an individual to be seen as an information provider, it is not immediately obvious to all that it is possible to speak out and have your voice heard by many people. It is also important that people could express their views and be in contact with others around the world who are expressing their views. Participants in the virtual conference were active in defining their interest in keeping the Internet protected from dominance by commercial interests. Commercial information and communication is vastly different from personal information and communication. Participants recognized this difference, and voiced their opinion on how it is important to keep the Net as an open channel for non-commercial voices.

The picture of the Internet painted by the U.S. government has been one of an "information superhighway" or "information infrastructure" where people could connect, download some data or purchase some goods and then disconnect. This image is one that is very different from the current cooperative communications forums on Usenet where everyone can contribute. The transfer of information is secondary. The descriptions by much of the news media pop, portraying people's contributions as being pornographic or other-

wise illegal are in contrast to the reality that the Internet and Usenet provide a place where people can share ideas, observations, and questions. Those participating in the virtual conference debated whether and why people would want access to the Net.

From: R. M.

Overlooked in the current free market vs. regulated access debate is any argument convincing me why the average American will want access to the net. Apart from the "information elite" (most already on the net), I don't know too many people interested in communications capability not already available using existing infrastructures. How many people do you know, not associated with research or education, who care about access to government information repositories? Or virtual conferences?³⁵

From: Dr. Robert LaRose

In response to Woody Dowling's comment that the average American is not interested in advanced communications infrastructure, at least not those who don't already have it.

Not so. We did a national survey a couple of years ago and asked about interest in videotex, ISDN, etc., found interest levels far beyond those of then-current penetration levels. Found the most intense interest among low income homes, in fact, suggesting that it is cost and not interest that holds them back. Want a killer application for low income households? Email. Many can't afford long distance rates, some move too often or have no home, can't keep a phone line The applications already exist, but the people who need them most can't afford them – or don't constitute an attractive enough market.³⁶

From: Curt Howland

While the inverse relation between cost and pervasiveness is certainly true, I must take issue with comparing the Net to TV. Such comparisons allow for the taking of information, but not for the tremendous possibilities involved with ease of *providing* info. There is no reason to think that a

future Stephen Hawkins isn't sitting right now in front of a boob-tube sucking down Mighty Morphin Power Rangers because there is no way for his ideas to be expressed. Without the facility to put ideas out, with each person acting as an information provider assumed from the outset, we are doing ourselves a great disservice.³⁷

From: Don Evans

A two way street for all Americans. Not only should they be able to receive from the net, but they also must be able to provide their unique information.³⁸

From: Michael Hauben

I. Universal Access Basic Principles

In order for communications networks to be as useful as possible, it is necessary for [them] both to:

- A) Connect every possible resource and opinion,
- B) Make this connection available to all who desire it.

A and B call for Universal Interconnection, rather than Universal Access. The usage of "interconnection" highlights the importance and role of every user also being an information provider. The term "access" stresses the status-quo understanding of one-way communication, the user accesses information that other "authorized" information providers make available. This is the old model. The new model is of interconnection of many different types of people, information, and ideas. The new model stresses the breakdown of old definitions of communication and information. Diversity allows for both the increasing speed in the formation of new ideas, and the ability for previously unauthorized ideas to have the airing and consideration they rightfully deserve.

II. Definition of "Services" to Be Available on this Universal Interconnection

The new era of interconnection and many-

to-many communication afforded by Net-news and Mailing lists (among other technologies) brings to the forefront a model of bottom-up rather than top-down communication and information. It is time to reexamine society and welcome the democratizing trends of many-to-many communication over the one-to-many models as represented by broadcast television, radio, newspapers and other media.

As such, I would say it would be important to highlight, discuss and make available interactive modes of communication instead of the passive transfer of information. Thus I am suggesting emphasizing of forms of multiple way of communication and broadcasting. Forms currently defined by newsgroups, mailing lists, talk sessions, IRC sessions, MOO experiences, and other forms of sharing and collaboration. These type of forums are where this new technology excels. Plenty of media exist which facilitates the passive transfer of information and goods. (Such as mail-order, stores, telephone orders, etc.) It would be best to explore and develop the new forms of communication which this new media facilitates, and which was less possible and present in the past.³⁹

From: B. Harris

Summary of the Affordability and Availability Conference

The Internet and the Global Computer Network are providing a very important means for the people of our society to have an ability to speak for themselves and to fight their own battles to better the society.⁴⁰

From: Eric Rehm

... [C]onception of access, I would posit, demands a much more interactive use of the medium and perhaps the bandwidth needs are more balanced: This example can then be extended to any number of community organizations with members as avid information producers.

In other words, basic service based on

enabling "many producers" might actually prompt a larger share to be allocated to bandwidth OUT of the home than that envisaged by the Baby Bells and cable companies.

It seems to me, in rural America, there would be even more fear of not having ample "basic" bandwidth to be a producer because the distance to such an "access point" might be enough to effectively deny community production.⁴¹

E. Efficiency of Email vs Video, Etc.

In the discussion about universal and equal access to the Internet, access to live video and the problems it creates was introduced. Some participants argued that "video on demand" would be a resource hog, and again introduce inequality into the online world based on who could pay, and also creating a different priority in use of network bandwidth. One participant contributed a message titled "Net Economics 101" which gave tables showing the relative sizes of different forms of data. Carl Hage made his comparisons clear by writing, "A single video movie is equivalent to 6 million people sending a one page e-mail message." He concluded his message by writing, "Why should we provide subsidized video access to a few when we could use those resources to provide textual information to millions?"

Another participant differed and stated that providing video is important so that access can be offered to the percentage of the U.S. population which is illiterate. A couple of other participants stated that video has enormous educational expressive potential. It was important that the virtual conference allowed for the presentation of different points of views, as that assists in figuring out the best way forward.

From: Debbie Sinmao

On Tue, 15 Nov 1994, Richard Civile wrote:

>> At 2:26 PM 11/14/94 -0800, Michael Strait wrote:

>> I think the simple answer to that is: single-line telephone

>> service capable of supporting touch tone and computer modem exchange.

>> Tomorrow is something else, but that should be the minimum today.

> What would a basic basket of services be

in five years? In ten? And, by
> what process do we change our minds
and expand our definition?
Whatever the basket will be in 5, 10, etc.
years, it should not include Al Gore's idea
of video on demand ... unless it is for
educational uses – if you want to see a
movie, go to your nearest movie theater or
rent a video from Blockbuster.⁴²

From: Robert J. Berrington III
I agree with Debbie. At the current date,
we don't have the technology to support
such things. It may be 50 years down the
road before that technology is available.
Why clutter up a system that can't handle
such a load.⁴³

From: Rey Barry
> Date: Thu, 17 Nov 1994 14:56:57 CDT
> From: gunzerat@vaxa.weeg.uiowa.edu
> To: redefus@virtconf.ntia.docgov
> 2) To debbie: I think it's shortsighted to
equate "video on demand," or
> video in any form in the new age with
what we can presently pick up at
> Blockbuster. For that matter, to think in
terms of video as a passive,
> "something to watch" form seems to me
to ignore its potential.
>> That's why I don't think it's right at
this point to dismiss Al Gore; video
> has the potential to allow for perhaps
even greater educational and
> expressive possibilities than text. To
limit ourselves at the outset could
> mean missing out on the greatest possi-
bilities.

Creative video is a neat concept. Thanks
for bringing that up. The fear that Gore is
bursting with desire to sell out to commer-
cial interests is the opposite of what comes
through when you talk to him or look at the
work he focused his life on.⁴⁴

From: Ron Choura
Advanced telecommunications services
should not be legislatively mandated for
inclusion in the definition of universal

service. Universal service funding of such
services is not appropriate unless and until
a critical mass of demand develops. Inclu-
sion of such services in the definition
would yield anti-competitive results, since
services typically included in universal
service do not have all relevant costs allo-
cated to them.⁴⁵

From: Carl Hage
One thing to keep in mind is that digital
transmission of text, e.g. email is very
efficient. For each user who sends email
instead of fax or telephone call, hundreds
of additional users can send email in the
transmission resource saved.
Access of gopher or www text is similar to
email in efficiency. Pictures, voice/audio
and video are, of course, much more ex-
pensive.⁴⁶

From: Carl Hage
But according to the polls, the public is
skeptical about the ways in which the
industry is touting the NII and they see
other more important uses. With the focus
on video entertainment, my fear is that the
less glitzy uses will be delayed and left out.
Also, the focus toward high-end technol-
ogy is a diversion of resources which could
be used to provide low end data communi-
cations to all instead of video for a few.⁴⁷

From: Carl Hage
Here are some tables showing the relative
sizes of data in different forms:
The following table gives a comparison of
a page of text (obtained from an OTA
report on the NII) in various forms, either
in compressed or uncompressed ASCII text
(averaged), as a page of fax, voice where
the text was read aloud, or in video form
where the speaker read the information
aloud.

Relative Sizes for Multi-Media Information Text

Type	Pages	MB
Compressed	1	0.0011
Uncompressed Text	3	0.003
Fax Image	40	0.04
Fax Modem Transmission	270	0.27
Compressed Voice (8:1)	200	0.2
Compressed Voice (2:1)	800	0.8
Voice Telephone (64Kb)	1600	1.6
Low Quality VideoPhone (H.320)	3200	3.2
Commercial VideoConf	6400	6.4
High Q VideoConf (H.120 1.5Mb/s)	37000	37.5
Compressed Broadcast Video	167000	167
Uncompressed Video	1100000	1100

The last entry of about one million to one is the size as used in an actual NII sponsored video classroom, <<http://www.ncih.net/>>. Access for schools costs \$4000/mo for 1 video link or \$8000/mo for 2, paid for by state grants.

An ordinary voice telephone call consumes more than 3000 times the data inside an email message (calls use 64Kb in two directions). Fax images are about 50 times more than the equivalent compressed text in disk storage space, but consume about 300 times the telecommunications resources when transmitted via modem, or 100 times if the text is not compressed.

Comparisons of 1GB of Digital Information	Number/GB
1 page documents	1000000
100 page documents	10000
Kodak Photo-CD pictures	1000
JPEG Images (640x480 @ 10:1)	10000
Minutes of Voice Telephone	400
1.44MB Diskette	700
JPEG Images (640x480 @ 10:1)	1.5
Minutes of Voice Telephone	0.2
Purchase cost of hard disk	\$500
Purchase cost of floppy disks	\$250

Equivalent of a 2 Hour Digital Video Movie

1 page documents	6000000
100 page documents	60000
Kodak Photo-CD pictures	6000
JPEG Images (640x480 @ 10:1)	60000
Minutes of Voice Telephone	2600
Hours of Voice Telephone	43
44MB Diskettes	4200
CD-ROMs	10
Gigabytes	6

A single video movie is equivalent to 6 million people sending a one page email message.

Why should we provide subsidized video access to a few when we could use those resources to provide textual information to millions? For example, we could make the federal register and congressional record available to everyone for free rather than have to pay \$375 per person/year to access any part.⁴⁸

F. Libraries as Points of Public Access

Libraries were proposed as a central public location where people could gain access to the Internet. This would be especially helpful to those who cannot currently afford to buy a computer. There was discussion about how the role of libraries might change from a location where information is stored, to one where information access is facilitated through training and individual help from librarians.

There were problems inherent in suggesting libraries be the public access point. First, library hours would limit when access would be available for those without computers and Internet accounts, and libraries might only be able to provide limited access to the Internet – if, for example, they could only afford the cheapest modems. One participant mentioned that his local library did not receive its latest funding, because the bond was voted down. This raises the issue of funding if libraries are to take on the role of Internet access provider. Another participant brought up the fact that since many communities do not have a local library, those communities would also not have any public access site if libraries were to be the only public sites for access to the Net.

FOR: Libraries as Universal Points of Access

From: Kathleen L. Bloomberg

Libraries are universal access points to information for school students, faculty at higher education institutions, and the general public. Not everyone will have a microcomputer and modem at home in the future just like everyone doesn't have plain old telephone service now. Librarians are trained in facilitating access to information and are an integral part of the emerging information superhighway.

According to a recent survey by the National Commission on Libraries and Information Science, 21% of the public libraries in the United States are accessing the Internet now. That number is growing monthly. Most academic libraries and many school and special libraries also are using the Internet regularly to meet their patrons' needs.⁴⁹

From: Solomon Philip Hill

Until the time comes when everyone can afford a personal terminal of some sort, I think that the community center or library model of access works pretty well. This leaves open the question of training which seems to be the least talked about, but possibly most important aspect here.⁵⁰

From: Dave W Mitchell

It is indeed true that the public library model provides a philosophical and structural underpinning, yet the immense popularity of talk radio (for example) shows a strong underlying hunger for communication of individual reactivity and creativity. In its satisfaction may lie the tool wherein we redefine the compact with one another on which this society was founded.⁵¹

From: Susan G.

I agree – the public library is definitely a good place to start for public access. It isn't the only solution, but there is rarely just one good answer to a complex problem. Rather multiple good answers.⁵²

From: Carl Hage

Currently libraries pay substantial fees to obtain reference material in print or microfilm form. Actually, due to budget problems, many libraries, including my own, are cutting back on this material. If this material were available electronically, then purchases of microfilm, etc. could be discontinued and the money saved could be used for hardware and network access fees. I believe that better dissemination of information could be used to provide more cost effective access for libraries, where the equipment, software, and methods of access can be tailored to the needs for libraries.⁵³

From: Lew McDaniel

I believe that better dissemination of information could be used to provide more cost effective access for libraries

The ideas which follow the above are good ones. To me, they show the concept of "library" evolving from common source of information and repository to "facilitator of access" in addition to today's functions. Particularly if all the have-nots are going to head for the library I-way access point.

I see libraries, K-12, and higher education all becoming significantly more competitive, more virtual, and less corporeal if the I-way reaches fruition. Even though each provides a great deal of value inappropriate to a telecommunications line – social interaction, community cohesiveness, etc.⁵⁴

AGAINST: Libraries Are Not the Solution of the Access Question

Others disagreed that libraries could solve the problem of universal access. They presented some of the problems libraries are having even surviving and noted that there are many locations that do not have libraries.

From: MTN

Much as I'd like to believe it, I do not feel that libraries solve the access problem. First, access is already limited by the hours

of the library. In a world where success and (em)power(ment) may hinge upon immediate access to information, it's tough to assume that people who must schlep over to the library and wait in line for a 1200 baud (when I last checked) modem and terminal are on an equal footing.⁵⁵

From: Stephen Brenner

I like the library model as well. Unfortunately, our library bond went down to defeat in the last election and they aren't likely to take on this role without funding. In the meantime, providing free access to the Internet, including public access terminals, is part of Oregon Public Network's charter.⁵⁶

From: Carol Deering

I just wanted to mention the large Indian reservation which surrounds our town. A great many people who live there have no telephones and some even no TV. I have seen mention in this conference of other rural situations, but I wanted to be sure to include this type of rural instance. There is no library service to this area, either.⁵⁷

From: Marilyn Letitia Korhonen

I agree to the extent that schools and libraries will allow this. We do not have a library in my local phone exchange, so that wouldn't serve my area and many others. The schools would be an answer for some, but the school in my district is not interested, even if I'll write grants for them. They do not trust it, they can not see the usefulness in their day-to-day lives, and they are simply not interested.⁵⁸

G. Debate Over the "Free Market"

A strong debate took place on both conferences over how Internet access could be best deployed throughout society. Some people argued the "market" would provide the best quality service to most people, while others challenged the notion that "the market" could provide such access. Therefore many said that it was important for government to play a strong role in making access available universally. Those encouraging a governmental role understood that the "market"

would not work toward providing access to those living in areas where access would be harder to provide, or for those with special needs.

1. On the Need for a Government Role

From: Ron Choura

Now, however, there is near universal consensus that opening up these markets to competition will lead to enhanced benefit for most consumers. But, can we be sure that market forces alone will achieve the goal of widely available, affordable services for all Americans? Is action by state and federal governments needed? What should be done? States must have the ability to ensure that high quality service is provided in markets that are less competitive or attractive for investment.⁵⁹

From: Frank Whittle

The term "economic development" has become prominent in state telecommunication policy during the last ten years as the states battle to retain and attract industry. It appears from the preliminary research that the issue of providing universal access (services) has become less prominent in policy documents.⁶⁰

From: Brent Wall

If one reads the testimony given at the hearings conducted on the NII and the global infrastructure by the Dept. of Commerce, one can detect two sense[s] of the terms "universal access" at work. The Motorolas, with their pleas for a wireless world, and cable companies with their arguments for phone service, and phone companies with their exhortations for delivering cable service, one comes away with a sense that universal access means: supply access – or the ability of service providers to access the NII (whatever infrastructure this may turn out to be) and sell their wares.

Yet, there is a second sense ascribed to these terms, one often advocated by community-based advocates, almost invisible in the national dialogues of service purveyors. And this is that universal access refers

to access to the net by all, rich and poor. Given the tenor of the NII discussions I have monitored, there is a threat that the latter meaning is being absorbed by the former.⁶¹

From: Henry Huang

The idea that the “free market” is going to solve all our problems is a MYTH. Go back and look over the history of most of the major online providers PRIOR to the recent big Internet expansion, and consider their current policies regarding Net access. No one who values their time, money, or access would seriously consider getting on the Internet through ANY of the major services, be it Compu\$erve, Delphi, Prodigy (HA!), or America Online.

The reason for this is simple: each one of these services has either restricted the Net services available (hence restricting your access), and/or charges you way too much for it compared to some of the other access providers currently around.⁶²

From: Rey Barry

Provide any sort of data highway with near-universal access and people will spend money developing ways to make a living from it. The glory of the system. Tailor the highway to commercial interests from the start and you surely build in road-blocks to pro bono services, the danger of the system.⁶³

From: Paul Weismantel

Dr. Priest’s observation regarding the Advisory Council is clear Business in general is frightened by the very underpinnings of Universal Access, because it amounts to a mandate, which is usually a drain on profits.

Unless we can approach the discussion so as to fit into the business scheme (and that does not necessarily mean full recovery of investment in all cases), some members of the council will prevail in pushing off this issue by a lowest common denominator solution.⁶⁴

From: Martin Kessel

There was strong sentiment that the competitive market alone will not serve the nation’s needs. As Steve Miller said, “The free market is like a ship with 100 sails blowing full blast and no rudder. Public policy provides the rudder.”⁶⁵

From: Richard M. Kenshalo

We can’t be led to believe that market forces will eventually provide for the investments necessary for rural America, where loop costs remain extremely high. Without existing (and probably re-defined) price support structures, and an expanded definition of Universal Service to include guaranteed information access, we will truly develop a society of information “haves” and “have-nots.”⁶⁶

From: Jeanne Gallo

We would like to urge the administration and congress to pass legislation which mandates the setting up of community sites where citizens of all ages, etc. can have access provided. This will mean that funding will need to be available for setting up such centers with the technology that is needed to be online and that universal access will need to be built into any proposals, such as was done for universal access to the telephone. Subsidies may be a “dirty” word in D.C. at this moment, but they will be necessary if we are to include all of our citizens in the technology of the future.⁶⁷

From: B. Harris

Summary of the Affordability and Availability Conference

The territories are not naive in insisting that the information infrastructure must accommodate both access and low rates. Without both, the territories will receive no benefit and will in fact find their needs increasingly marginalized.

General Summary

Several people expressed concern that the development of the NII has focused on

business interests and economic development rather than on ensuring access for all Americans. The theme the economic development will not by itself bring universal service to reality surfaced repeatedly.⁶⁸

From: Carl Hage

I certainly agree with your point, and I would use these examples as proof that a free market does not exist. I don't think most people fail to value their money, just that the big advertizing machines, and the PC magazine-industrial complex have duped an uneducated public, and an uneducated government.

Yes, the free market will *not* provide equal access to rural areas, etc. However, the solutions for rural areas might be radically different. It is least likely that there will be much of any competitive market in rural areas, so co-ops, monopolies, etc. might be required.⁶⁹

2. Opposition to Government Regulation

From: Viraj Jha

>>While 'public access' is sometimes considered either a necessity or

>>a public good, what effects will the above choices make on a market

>>that is still in the early stages of development? Specifically, will

>>public access stunt market and technological development in the long term? >What does "stunt" mean in this case?

By 'stunt' I probably more accurately meant 'distort' – in other words, would the rate of technological development be slowed by such a policy? Certainly industry leaders fear that strict regulation would hinder their profit-maximizing activities; in high competition technology markets these profits are often linked to innovation. Congressman Boucher in '92 agreed with Bell Atlantic that its deployment time for fiber optic lines could be halved absent stringent line of business regulation. Might similar regulations/subsidies for universal access not cause technological stagnation?⁷⁰

From: Christine Weiss

Another viewpoint to add to the discussion comes from John Browning in an article from the Sept. '94 issue of WIRED: "... universal service is a 1930's solution to a 21 century problem. ... the solution is Open Access." In a nutshell, it seems that Open Access would ensure a competitive marketplace, that would in turn keep costs low. Another option, for what its worth⁷¹

From: Carl Hage

I believe we can use the free market and competition to significantly lower the cost to access the net and provide a wide variety of options. There are a number of things that the government could do to enhance the competition and available services which would cost very little.⁷²

From: Stan Witnov

Dear Conferees,

Why are so many participants against unleashing American business (AND it's stereotypical greed) in order to let the invisible hand lead us to the most efficient use of resources. I certainly trust that our government regulators and court system will move in at the appropriate time and correct some of the "wrongs" which are inevitable (whether we're under a government OR private enterprise umbrella).

I believe our great advantage here is to let venture capital risk itself for a profit but in so doing create and market services which increase user knowledge, accessibility, and the population of users.⁷³

From: Jawaid Bazyar

In response to ab368@virgin.uvi.edu (Bruce Potter):

>To the NTIA, we ask careful attention to the equity issues of access, and

>a federal guarantee of access and availability.

Oh my, it looks like the Socialists have grabbed onto the Internet as their next great crusade

If you choose to live on an island in the

middle of the ocean with a small population, you can expect to pay a lot for high-tech services.⁷⁴

From: Curt Howland

There are left only the people making Universal Access in one form or another happen, and those that just talk, begging the Big Friendly Government to wait on them hand and foot.⁷⁵

H. NTIA Conference as Prototype for Future Democracy

Some participants understood that the conference they were participating in could be seen as a model of citizen participation in government. They were thus thoughtful in considering the future and how these technologies could be used. A participant from Boston suggested it was important that permanent public access sites be established in order for any policy decisions to happen.

From: Martin Kessel

Some participants questioned whether it will be truly feasible to put a computer terminal in every home. However, there was strong agreement that access should be available at public sites, such as libraries, schools, and other community places. This would be an extension of the model used by the NTIA in holding this Virtual Conference, noted Michelle Johnson, a reporter for the *Boston Globe*. Federal help is needed to provide libraries with resources and technical expertise.⁷⁶

From: Carl Hage

Thank you for the opportunity to participate in this discussion, and provide my input into the shaping of the future information age in America. I believe that using the Internet offers the potential to obtain high quality information needed for proper decision making, as well as improving the access of the government to the public.⁷⁷

From: Hubert Jessup

Reading the discussion of the past two days about redefining universal access has confirmed our conviction that public access

sites are not just important for this virtual conference but are needed as a permanent aspect of the development of the NII. Typically, only universities and certain businesses have Internet access. For the average American, these forms of access are far too limited. Consequently, citizens have little experience with the net and understanding of what is at stake in its development. Also, basic computer skills – even as simple as logging on and typing a message – are lacking for most Americans.

What is needed in our opinion is on-going, institutionalized public access sites. We think these should be based in a variety of community based institutions, including the public libraries, public schools, and public access cable centers. These sites need equipment, Internet connection, staffing, and basic operating support. And, of course, these sites need funding

If we as a country do not develop a permanent, institutionalized and consistently supported system of public access sites, the NII will develop quickly among the current information “haves” but will totally leave behind the vast majority of Americans who are information “have-nots.” Facing this same situation concerning literacy in the early part of the 19th century, the response by public spirited Bostonians was the development of funding for the first public schools and public library in America. Soon, these institutions were quickly adopted by every city and town in America. Now, with a new technology and a new type of literacy, we as Americans should strive to expand our democracy by developing public access sites on the NII.⁷⁸

I. Importance of Need for Time to Learn at Own Pace

Paying for access limits what someone will do online. First it limits how much an individual can care to learn, as the time spent will be costly; people will be selective in what they attempt to learn. Second, it is hard for people to take the time to be helpful to others when they are paying by the hour. The Internet and Usenet have grown to be such a cooperative community because there was no price tag on the cooperation.

It will be a step backward to have to pay to access these communities. Individuals should be honored for their contributions to the Net and not expected to pay in proportion to their contribution.

From: A public access site in Seattle
Obviously, SCN (Seattle Community Network) has been wonderful, since it has allowed me to learn at my own (slow!) pace, without worrying about “wasting money.” I am presently on NW Nexus, since I purchased the Internet Starter Kit which came with a coupon for two free weeks. I am continuing to pay for it, for a while, because it allows so much more opportunity to learn all the pluses of the Internet I am willing to pay the monthly fee for a short time, but unfortunately, I am not in a financial position to be able to continue at this rate for very long. It seems a shame that those of us who are not “well off” cannot reap the benefit of the whole Internet. I am grateful that SCN is there for us.⁷⁹

From: Henry Huang
Hence, in limiting my time, you limit the quality of my posts, and hence the general quality of the discussion.
Many of the people who would want or NEED such free/cheap access are newbies – and hence EXACTLY the sort of people who WOULDN’T have the experience, knowledge, or time necessary to overcome the limits on their access. The less access you provide a person with, the more trouble that person has to go through JUST to get UP to a sufficiently useful level.⁸⁰

From: Sean Connell
An open communication infrastructure will allow children ample opportunity to explore and increase their knowledge at a pace with which they are comfortable.⁸¹

J. Need for Openness Because of Development via Open and Free Standards

The Internet has developed out of connecting networks together based on open and available standards. These protocols were developed by many

people over the ARPANET and Internet. Commercial development is usually proprietary and closed. The Internet will develop much slower if the pressure toward commercialism is allowed to overwhelm the open and cooperative culture of the Net.

From: Henry Huang
The NII is NOT a harbinger of change . . . the Internet WAS – hence this conference (run using list server software on a UNIX box, and sent mostly over Internet links).⁸²

From: Henry Huang
Now look at the development of the Internet. Even with the astonishing growth of the World Wide Web and Mosaic (and perhaps soon Netscape), much of the Net is STILL ruled by text-based standards first set down perhaps a decade or more ago. The vast majority of Email is STILL text. In fact, Email and News are often cited as two of the most useful services offered by the Net, despite their chunkiness. As quirky and outdated as they are, they still WORK – more to the point, everyone HAS them. If everyone had a different format for Email messages, no one could communicate with anyone else – thus defeating the very purpose of Email!
Even more important, many of the standards adopted by the Internet are OPEN standards, freely available to anyone who’s interested in modifying or improving them. Compare this to companies which charge you an arm and a leg for their proprietary code. Now, which one do YOU think people will be more willing to work with, and improve?

What no one seems to realize is that the Net is anything BUT a commodity – it’s a means to an end. And that end is not profit, but *GLOBAL COMMUNITY*.
If we treat the Net as a commodity, then inevitably that’s what it’s bound to become – a balkanized, divided, proprietary collection of private networks which neither know nor care about the existence of the others. It would be like a giant version of CompuServe, only many times worse. And in the end, by putting walls and barriers

between the very users who need to communicate with each other, they will have eliminated the sole reason for their own existence – as a means to COMMUNICATE, quickly and efficiently. And when that happens, either they will die, or the future which they (and all of U.S.) sought to promote will be relegated to obscurity. And that would be an absolute shame.⁸³

From: Carl Hage

How can we devise incentives for investment in technologies for the “last mile” to the home?

The key to an investment in products needed and availability at a mass produced low price, is the establishment of standards and a detailed goal.

If there is an agreed upon standard and a large market, then a number of companies will build very low cost products designed for high volume sales. If the standard is not agreed upon, and/or deployment is uncertain, then there may not be cost effective products available.

The best way to establish standards and then insure there is a rich market of supporting products is to have open, public domain standards, with public domain reference implementations and test software. The Internet standards established by the IETF are a good example. All the specifications are available electronically and free to the public. In order to be adopted, there must be a working implementation, and typically there was a public domain version available as a starting point and as a comparison.

Part of the research money for the NII could go toward producing some competing designs for these technologies, which could result in a public version of the specifications, and a sample reference design. Also, research money could go to produce testing software and an interoperability laboratory. Vendors who produce chipsets and boards can take the standards and reference implementation and use that as a basis for a specific product, and could then make use of the test suites and inter-

operability laboratory.

Public funding for the establishment of the standards, reference implementation, and test suite would eliminate many interoperability problems, and would yield low cost products very quickly, as each vendor would not need to duplicate this basic research. The money saved in lower cost product availability for the government’s internal use would more than pay for the investment in a publicly available technology.⁸⁴

III. Conclusion

Because the NTIA conference was held online, many more points of view were heard than is normal. Prominent debates included that of encouraging “economic development” versus mandating “universal service” and depending on the “free market” versus recognizing the need for government regulation to make access available to all. Another issue raised was that the NII will be an extension of the Internet and not something completely new. As such, it is important to acknowledge the origin and significance of the Internet, and to properly study and understand the contribution the current global computer communications network represents for society. Many who participated in the online conference expressed the hope that the government would be helpful to society at large in providing access to these networks to all who would desire this access.

Despite the many objections to privatization of the NSFNET expressed during the NTIA conference in November, 1994, the public NSFNET (National Science Foundation Network) was put to death quietly on May 1, 1995. Users heard about the shut down indirectly. Universities and other providers who depended on the NSFNET might have reported service disruptions the week or two before while they re-established their network providers and routing tables. No announcements were made about the transfer from a publicly subsidized U.S. Internet backbone to a commercial backbone. The switch signaled a change in priorities of what the Internet will be used for. May 1, 1995 was also the opening date of a national electronic open meeting sponsored by the U.S. government on “People and their Governments in the Information Age.” Apparently the U.S. government was sponsoring this online meeting from various public access sites, and paying commercial providers in the process.

Something is deeply ironic in this government-mandated change to increase government expenses.

But also, on May 1, 1995, there was a presentation at a branch of the New York Public Library which focused on the value of the Internet and Usenet as a cooperative network where people could air their individual views and connect up with people around the world. The Internet and Usenet have provided the means for new voices to be heard without being overwhelmed by the more established voices of society. This May Day, traditionally a people's holiday around the world, the domain of the commons was opened up to the commercial world. But the commercial world already has a strong hold on all other broadcast media, and these media have become of little or no value. The Internet has been a social treasure for people in the U.S. and around the world. It is important to value this treasure and protect it from commercial interests. As such, this move by the U.S. government is disappointing, especially considering the testimony presented by many Internet and Usenet users who participated in the November 1994 NTIA Virtual Conference on Universal Service and Open Access to the Telecommunications Network.

In order to make any socially useful policy concerning the National Information Infrastructure (NII), it is necessary to bring the greatest possible number of people into the process of discussion and debate.⁸⁵ The NTIA online conference is a prototype of possible future online meetings leading to direct democracy. There are several steps that need to be taken for the online media to function for direct democracy. First, of all, it would be necessary to make access easily available, including establishing permanent public Internet access computer locations throughout the country along with local phone numbers to allow citizens to connect their personal computers to the Net. Secondly, it is wrong to encourage people to participate in online discussions about government policy and then ask them to pay for that participation. Rather, it would be important to be able to figure out some system of paying people who participate in their government. Payment for participation is not an easy issue to decide, but it is a necessary step forward in order to facilitate more participation by more people.

The online archives of the avail forum and the redefus forum provide very important reading.⁸⁶ It would be valuable if they were available in print form and available to those involved with policy decisions on the NII and for people around the U.S. and the

world who are interested in the future of the Net. This online conference was an important landmark in the study toward the development of the NII. However, it should not only stand as a landmark, rather it should set a precedent for future conferences which will hopefully start as the basis of a new social contract between people and their government.

Notes

1. James Mill, *Essays on Government, Jurisprudence, Liberty of the Press and Law of Nations*, reprint, Augustus Kelley Publishers, New York, 1986, p. 8.
2. *Ibid.*, p. 6.
3. *Ibid.*, p. 13.
4. Christopher Lasch, "Journalism, Publicity, and the Lost Art of Argument," *Media Studies Journal*, Vol 9 no 1, Winter 1995, pp. 81-91.
5. *Ibid.*, p. 89.
6. Jeffrey B. Abramson's "Electronic Town Meetings: Proposals for Democracy's Future," prepared for the Aspen Institute Communications and Society Program.
7. The Net is the Internet, Usenet, Mailing Lists, etc.
8. The NTIA virtual conference was sponsored by the National Telecommunications Information Administration (NTIA) and the Information Infrastructure Task Force (IITF), as part of the Administration's National Information Infrastructure initiative. This study draws on excerpts from the archives. See announcement at: <https://seclists.org/interesting-people/1994/Nov/17>
9. The NTIA listed several purposes for the conference. Among those purposes were:
 - 1) Garner opinions and views on universal telecommunications service that may shape the legislative and regulatory debate.
 - 2) Demonstrate how networking technology can broaden participation in the development of government policies, specifically, universal service telecommunications policy.
 - 3) Illustrate the potential for using the NII to create an electronic commons.
 - 4) Create a network of individuals and institutions that will continue the dialog started by the conference, once the formal sponsorship is over.
10. From: Randolph Langley <langley@dirac.scri.fsu.edu>
Date: Thu, 17 Nov 1994 09:27:51 -0500
Subject: [AVAIL:57] Re: my question
Message-ID: <199411171427.AA91585@dirac.scri.fsu.edu>
11. From: Bob Summers <bsummers@vt.edu>
Date: Thu, 17 Nov 1994 17:27:09 -0500
Subject: Re: [AVAIL:96] Re: my question
Message-ID: <199411180135.RAA07684@virtconf.digex.net>
12. From: W. Curtiss Priest <BMSLIB@MITVMA.MIT.EDU>
Date: Mon, 21 Nov 94 09:10:21 EST
Subject: Re: [REDEFUS:189] REDEFUS digest 29
Message-ID: <199411211811.KAA17129@virtconf.digex.net>
13. From: wc_resa@server.greatlakes.k12.mi.us (Wayne County RESA)
Date: Mon, 14 Nov 1994 14:17:11 -0500
Subject: Re: [REDEFUS:17] Re: Public Access
Message-ID: <9411141918.AA07357@server.great-

lakes.k12.mi.us>

14. From: BNN Television <bnn@world.std.com>
Date: Thu, 17 Nov 1994 18:20:01 +0001 (EST)
Subject: Re: [REDEFUS:37] Re: Public Access
Message-ID: <Pine.3.89.9411171753.A23713-0100000@world.std.com>
15. From: Brent Wall <brentw@freenet.scri.fsu.edu>
Date: Sat, 19 Nov 1994 11:22:46 -0500 (EST)
Message-ID: <Pine.3.89.9411191130.C17368-0100000@freenet3.scri.fsu.edu>
16. From: Stephen Brenner <sbrenner@efn.org>
Date: Wed, 16 Nov 1994 05:07:24 -0800
Subject: Re: [REDEFUS:31] Re: Public Access
Message-ID: <9411161210.AA17284@efn.efn.org>
17. From: Lew McDaniel <MCDANIEL@wvuadmin3.csc.wvu.edu>
Organization: WVU Computing Services
Date: Mon, 14 Nov 1994 14:55:34 EST
Subject: Re: [REDEFUS:15] Pilot Projects
Message-ID: <3A45E1049AE@wvuadmin3.csc.wvu.edu>
18. From: Dave W Mitchell <dmitchel@ednet1.osl.or.gov>
Date: Mon, 14 Nov 1994 14:12:54 -0800
Subject: Re: [REDEFUS:22] Re: Pilot Projects
Message-ID: <199411142212.AA12401@ednet1.osl.or.gov>
19. From: Daniel Lieberman <danlie@ix.netcom.com>
Date: Thu, 17 Nov 1994 14:11:03 -0800
Subject: Competency and access
Message-ID: <199411172211.OAA24888@ix.ix.netcom.com>
20. From: Sean <sconnell@silver.ucs.indiana.edu>
Date: Thu, 17 Nov 1994 23:00:28 -0500 (EST)
Subject: A Plea
Message-ID: <199411180708.XAA21950@virtconf.digex.net>
21. From: Colette Brooks <crb@well.sf.ca.us>
Date: Sat, 19 Nov 1994 09:30:16 -0800
Subject: my 2\$
Message-ID: <199411191730.JAA19829@well.sf.ca.us>
22. From: Bill Russell <RUSSELLB@ext23.oes.orst.edu>
Date: 23 Nov 94 12:45:00
Subject: Re[2]: [REDEFUS:68] Re: NTIA Virtual Conference universal access.
Message-ID: <2ed3a9cf.ext23@ext23.OES.ORST.EDU>
23. From: Brent Wall <brentw@freenet.scri.fsu.edu>
To: avail@virtconf.ntia.doc.gov
Date: Sat, 19 Nov 1994 11:00:24 -0500 (EST)
Message-ID: <Pine.3.89.9411191018.A17368-0100000@freenet3.scri.fsu.edu>
24. From: HARVEY GOODSTEIN <HGOODSTEIN@gallua.gallaudet.edu>
Date: Thu, 17 Nov 1994 14:18:52 -0500 (EST)
Subject: Universal Service definition
Message-ID: <01HJL7LBBLQQ01ERLS@GALLUA.BITNET>
25. From: Ellen Davis Burnham <edb1@Ra.MsState.Edu>
Date: Sat, 19 Nov 1994 22:09:22 -0600 (CST)
Subject: Re: [AVAIL:124] AVAIL digest 29
Message-ID: <Pine.SUN.3.91.941119212024.9892B-100000@Isis.MsState.Edu>
26. From: LucyCo@aol.com
Date: Sun, 20 Nov 1994 15:09:31 -0500
Subject: Re: [AVAIL:137] AVAIL digest 37
Message-ID: <941120150557_3543309@aol.com>

27. From: Carl Hage <chage@rahul.net>
Date: Sun, 20 Nov 94 18:52:16 PST
Subject: Glasnost for the Information Age
Message-ID: <9411210252.AA20328@slick.chage.com>
28. From: Chloe Lewis <chloel@microsoft.com>
Date: Tue, 22 Nov 94 14:00:29 TZ
Subject: the Internet's other ancestor
Message-ID: <9411222159.AA07745@netmail2.microsoft.com>
29. From: Carl Hage <chage@rahul.net>
Date: Tue, 15 Nov 94 05:21:42 PST
Subject: Redefining Universal Service and Open Access
Message-ID: <9411151321.AA18686@slick.chage.com>
30. From: Susan Hadden <shadden@mail.utexas.edu>
Date: Thu, 17 Nov 1994 14:52:01 -0600
Subject: Re: [REDEFUS:128] REDEFUS digest 14
Message-ID: <199411172052.OAA23573@mail.utexas.edu>
31. From: Bob Jacobson <cyberoid@u.washington.edu>
Date: Mon, 14 Nov 94 22:04:12 -0800
Subject: Re: [REDEFUS:19] Re: Public Access
Message-ID: <9411150604.AA25921@stein1.u.washington.edu>
32. From: Carly Henderson <cmh@lclark.edu>
Date: Thu, 17 Nov 1994 13:36:33 -0800 (PST)
Message-ID: <Pine.OSF.3.91.941117131202.5097A-100000@sun>
33. From: Robert J. Berrington III <berrin@river.it.gvsu.edu>
Date: Fri, 18 Nov 1994 11:11:42 -0500 (EST)
Subject: Public awareness
Message-ID: <Pine.HPP.3.90.941118104318.23355A-100000@river.it.gvsu.edu>
34. From: Martin Kessel <mkessel@world.std.com>
Date: Wed, 23 Nov 1994 15:29:57 -0500
Subject: BNN Cablecast on Universal Access
Message-ID: <199411232029.AA16911@world.std.com>
35. From: <MAADR007@SIVM.SI.EDU>
Date: Thu, 17 Nov 94 14:00:16 EST
Subject: universal access but not ubiquitous use
Message-ID: <199411172209.OAA20275@virtconf.digex.net>
36. From: Dr. Robert LaRose <LAROSE@tc.msu.edu>
Date: Thu, 17 Nov 1994 15:03:37 EST
Subject: Re: [REDEFUS:123] universal access but not ubiquitous use
Message-ID: <224FE632CC5@tc.msu.edu>
37. From: howland@nsipo.nasa.gov
Date: Wed, 16 Nov 1994 19:19:23 -0800
Subject: Re: [REDEFUS:67] Re: Public Access
Message-ID: <199411170319.TAA11501@noc2.arc.nasa.gov>
38. From: Don Evans <don@dcez.com>
Date: Mon, 14 Nov 1994 13:25:42 -500 (EST)
Subject: Universal Access ...
Message-ID: <Pine.3.89.9411141352.G26106-0100000@dcez.dcez.com>
39. From: Michael Hauben <hauben@columbia.edu>
Date: Tue, 22 Nov 1994 01:54:36 -0500
Subject: Need to stress concept of active communication and interconnection
Message-ID: <199411220654.AA28036@merhaba.cc.columbia.edu>
40. From: BHARRIS@ntia.doc.gov
Date: Mon, 21 Nov 1994 16:04:59 -0500
Subject: Interim Summary for Availability List

41. From: rehm@zso.dec.com
Date: Mon, 14 Nov 94 13:50:03 -0800
Subject: Re: [REDEFUS:22] Re: Pilot Projects
Message- ID: <9411142150.AA09999@slugbt.zso.dec.com>

42. From: Debbie Sinmao <debbie@harmony.cdinet.com>
Date: Thu, 17 Nov 1994 13:17:18 -0500 (EST)
Subject: Re: [REDEFUS:40] Re: NTIA Virtual Conference
KeyNote Address
Message- ID: <Pine.3.89.9411171341.A27812-0100000@harmony.cdinet.com>

43. From: Robert J. Berrington III <berrinr@river.it.gvsu.edu>
Date: Thu, 17 Nov 1994 13:30:11 -0500 (EST)
Subject: Re: [REDEFUS:115] Re: NTIA Virtual Conference
KeyNote Address
Message- ID: <Pine.HPP.3.90.941117132629.13213C-100000@river.it.gvsu.edu>

44. From: Rey Barry <rbarry@hopper.itc.virginia.edu>
Date: Thu, 17 Nov 1994 17:19:34 -0500 (EST)
Subject: Re: [REDEFUS:133] REDEFUS digest 15
Message- ID: <199411172219.RAA15419@Hopper.itc.Virginia.EDU>

45. From: Ron Choura 517-334-6240
<CHOURA%A1@COMMERCE.STATE.MI.US>
Posting-date: Mon, 14 Nov 1994 15:37:00 -0400 (EDT)
Subject: NARUC Comments D.J Miller

46. From: Carl Hage <hage@netcom.com>
Date: Wed, 23 Nov 1994 14:41:39 -0800 (PST)
Subject: What happens when usage expands?
Message- ID: <Pine.3.89.9411231431.A11463-0100000@netcom13>

47. From: Carl Hage <hage@netcom.com>
Date: Wed, 23 Nov 1994 16:33:17 -0800
Subject: Re: Comments to C. Hage concerns
Message- ID: <199411240033.QAA24975@netcom13.netcom.com>

48. From: Carl Hage <chage@rahul.net>
Date: Thu, 17 Nov 94 19:31:52 PST
Subject: Net Economics 101
Message- ID: <9411180331.AA19584@slick.chage.com>

49. From: Kathleen L. Bloomberg <bloomberg@eagle.sangamon.edu>
Date: Tue, 15 Nov 1994 13:03:22 -0600
Subject: Universal access & libraries

50. From: Solomon Philip Hill <blast@leland.Stanford.EDU>
Date: Mon, 14 Nov 1994 13:51:04 -0800 (PST)
Subject: Re: [REDEFUS:17] Re: Public Access
Message- ID: <Pine.3.89.9411141310.A6158-0100000@elaine30.Stanford.EDU>

51. From: Dave W Mitchell <dmitchel@ednet1.osl.or.gov>
Date: Mon, 14 Nov 1994 08:17:20 -0800
Subject: Statement
Message- ID: <199411141617.AA25971@ednet1.osl.or.gov>

52. From: msyssft!microsys!susang@uu6.psi.com
Date: 16-Nov-94 11:35
Message- ID: E0E6C92E01B361E1

53. From: Carl Hage <chage@rahul.net>
Date: Thu, 17 Nov 94 14:14:54 PST
Subject: Re: [REDEFUS:19] Re: Public Access
Message- ID: <9411172214.AA19457@slick.chage.com>

54. From: Lew McDaniel <MCDANIEL@wvudadmin3.csc.wvu.edu>
Date: Fri, 18 Nov 1994 08:40:12 EST
Subject: Re: [REDEFUS:139] REDEFUS digest 16
Message- ID: <3FE206E223A@wvudadmin3.csc.wvu.edu>

55. From: mtn@mtn.org (MTN)
Date: Tue, 15 Nov 1994 12:39:33 -0600
Subject: Re: [REDEFUS:19] Re: Public Access
Message- ID: <aace6246010210049a8a@[198.174.235.202]>

56. From: Stephen Brenner <sbrenner@efn.org>
Date: Wed, 16 Nov 94 05:07:24 -0800
Subject: Re: [REDEFUS:31] Re: Public Access
Message- ID: <9411161210.AA17284@efn.efn.org>

57. From: Carol Deering <deering@odi.cwc.whecn.edu>
Date: Fri, 18 Nov 1994 09:33:14 -700 (MST)
Subject: rural areas
Message- ID: <Pine.SCO.3.90.941118085624.725A-100000@odi.cwc.whecn.edu>

58. From: Marilyn Letitia Korhonen <korhonen@tenet.edu>
Date: Fri, 18 Nov 1994 07:52:32 -0600 (CST)
Subject: Re: [AVAIL:100] Re: Rural areas
Message- ID: <Pine.3.89.9411180704.C27478-0100000@Gayle-Gaston.tenet.edu>

59. From: Ron Choura 517-334-6240
<CHOURA%A1@COMMERCE.STATE.MI.US>
Posting-date: Mon, 14 Nov 1994 15:37:00 -0400 (EDT)
Subject: NARUC Comments D.J Miller

60. From: Frank Whittle <WHITTLE@SMTPGATE.sunydutchess.edu>
Date: Mon Nov 14 21:53:09 1994
Message- ID: <9411150254.AA51246@admaix.sunydutchess.edu>

61. From: Brent Wall <brentw@freenet.scri.fsu.edu>
Date: Wed, 16 Nov 1994 19:39:09 -0500 (EST)
Subject: Universal Access – an Equivocation
Message- ID: <Pine.3.89.9411161905.A19851-0100000@freenet3.scri.fsu.edu>

62. From: Henry Huang <hwh6k@fulton.seas.virginia.edu>
Date: Wed, 23 Nov 1994 12:52:37 -0500
Subject: Some Thoughts on Public Access (and this Conference)
Message- ID: <199411231752.MAA45745@fulton.seas.Virginia.EDU>

63. From: Rey Barry <rbarry@hopper.itc.virginia.edu>
Date: Thu, 17 Nov 1994 17:19:34 -0500 (EST)
Subject: Re: [REDEFUS:133] REDEFUS digest 15
Message- ID: <199411172219.RAA15419@Hopper.itc.Virginia.EDU>

64. From: Paul Weismantel <weismant@esd.dl.nec.com>
Organization: NEC America Inc.
Date: Wed, 16 Nov 94 13:31:46 -0600
Subject: Re: [REDEFUS:80] Re: NT67IA Virt
Message- ID: <E15CCA2E011C0000@smtp.esd.dl.nec.com>

65. From: Martin Kessel <mkessel@world.std.com>
Date: Wed, 23 Nov 1994 15:29:57 -0500
Subject: BNN Cablecast on Universal Access
Message- ID: <199411232029.AA16911@world.std.com>

66. From: RICHARD M KENSHALO <PMRMK@tundra.alaska.edu>
Date: Tue, 15 Nov 1994 08:16:08 -0800
Subject: Universal Service
Message- ID: <01HJI2DC28PIHSJAJE@UA.ORCA.ALASKA

.EDU>
67. From: Jeanne Gallo (using BNN Television) <bnn@world.std.com>
Date: Fri, 18 Nov 1994 12:22:53 +0001 (EST)
Subject: Community Centers
Message- ID: <Pine.3.89.9411181228.A2135-0100000@world.std.com>
68. From: BHARRIS@ntia.doc.gov
Date: Mon, 21 Nov 1994 16:04:59 -0500
Subject: Interim Summary for Availability List
69. From: Carl Hage <hage@netcom.com>
Date: Wed, 23 Nov 1994 18:27:53 -0800
Subject: Re: Some Thoughts on Public Access (and this Conference)
Message- ID: <199411240227.SAA08168@netcom13.netcom.com>
70. From: Viraj Jha <jhav@bcvms.bc.edu>
Date: Wed, 16 Nov 1994 09:48:34 +0000
Subject: Re: [REDEFUS:37] Re: Public Access
Message- ID: <MailDrop1.0b13.941116094834@onra01p6.bc.edu.>
71. From: Christine Weiss <chrisw@muskox.alaska.edu>
Date: Thu, 17 Nov 1994 09:28:56 -0900 (AST)
Subject: Who will fund?
Message- ID: <Pine.HPP.3.90.941117091241.9833A-100000@muskox.alaska.edu>
72. From: Carl Hage <chage@rahul.net>
Date: Thu, 17 Nov 94 12:23:44 PST
Subject: Re: Cheap Public Access
Message- ID: <9411172023.AA19431@slick.chage.com>
73. From: Stan Witnov <74543.720@compuserve.com>
Date: 18 Nov 94 02:33:42 EST
Subject: FOUR DAY CONFERENCE THOTS
Message-ID: <941118073341_74543.720_EHH62-2@CompuServe.COM>
74. From: Jawaid Bazzyar <bazzyar@netcom.com>
Date: Fri, 18 Nov 1994 18:34:41 GMT
Subject: Re: Need for Federal Oversight of Access and Availability
Message-ID: <bazzyarCzH7Lu.HoE@netcom.com>
75. From: howland@nsipo.nasa.gov
Date: Wed, 23 Nov 1994 19:35:33 -0800
Subject: Re: [REDEFUS:253] REDEFUS digest 56
Message- ID: <199411240335.TAA13844@noc.arc.nasa.gov>
76. From: Martin Kessel <mkessel@world.std.com>
Date: Wed, 23 Nov 1994 15:29:57 -0500
Subject: BNN Cablecast on Universal Access
Message- ID: <199411232029.AA16911@world.std.com>
77. From: Carl Hage <chage@rahul.net>
Date: Tue, 15 Nov 94 05:21:42 PST
Subject: Redefining Universal Service and Open Access
Message- ID: <9411151321.AA18686@slick.chage.com>
78. From: Hubert Jessup, General Manager at BNN Television <bnn@world.std.com>
Date: Thu, 17 Nov 1994 11:20:11 +0001 (EST)
Subject: Need for on-going public access sites
Message- ID: <Pine.3.89.9411171052.A20944-0100000@world.std.com>
79. From: Public Access Site <vcavail@latte.spl.lib.wa.us>
Date: Wed, 23 Nov 1994 12:46:30 -0800 (PST)

Subject: Affordability
Message- ID: <Pine.OSF.3.91.941121204346.1399A-100000@latte.spl.lib.wa.us>
80. From: Henry Huang <hwh6k@fulton.seas.virginia.edu>
Date: Wed, 23 Nov 1994 12:52:37 -0500
Subject: Some Thoughts on Public Access (and this Conference)
Message- ID: <199411231752.MAA45745@fulton.seas.Virginia.EDU>
81. From: Sean <sconnell@silver.ucs.indiana.edu>
Date: Fri, 18 Nov 1994 15:01:16 -0500 (EST)
Subject: Re: [REDEFUS:155] REDEFUS digest 20
Message- ID: <199411182309.PAA21212@virtconf.digex.net>
82. From: Henry Huang <hwh6k@fulton.seas.virginia.edu>
Date: Tue, 15 Nov 1994 22:04:37 -0500
Subject: Re: [AVAIL:1] NTIA Virtual Conference KeyNote Address
Message- ID: <199411160304.WAA57037@fulton.seas.Virginia.EDU>
83. From: Henry Huang <hwh6k@fulton.seas.virginia.edu>
Date: Wed, 23 Nov 1994 12:52:37 -0500
Subject: Some Thoughts on Public Access (and this Conference)
Message- ID: <199411231752.MAA45745@fulton.seas.Virginia.EDU>
84. From: Carl Hage <chage@rahul.net>
Date: Thu, 17 Nov 94 23:00:22 PST
Subject: Comments on Susan G. Hadden Essay
Message- ID: <9411180700.AA19595@slick.chage.com>
85. See the opening speech by C. P. Snow in *Management and the Computer of the Future*, Martin Greenberger, MIT Press, 1962.
86. The NTIA Virtual Archives are available via the World Wide Web at <http://ntiaunix2.ntia.doc.gov:70/11s/virtual/> (No longer available.)

[Editor's Note: A version of this article appears as Chapter 15 of *Netizens: On the History and Impact of Usenet and the Internet* by Michael Hauben and Ronda Hauben published in 1997 by the IEEE Computer Society Press, pp. 280-285. An earlier version appeared in *Computer-Mediated Communications Magazine* Vol. 2, No. 5, May 1, 1995, p. 9.]

Exploring New York City's Online Community: A Snapshot of nyc.general

by Michael Hauben

Something new is gradually sneaking into every part of our world. The agent of change is the global computer communications network, "the full map of [which] no one knows; it changes every day."¹ Not only is the change on a world scale, the Net is having local effects as well. Local social communities are being redefined more and more by the global online community. This is happening in New York City.

The topic of community is one of the themes which Sally Banes explores in her book, *Greenwich Village 1963*. Banes' study of this bohemian community at the beginning of the 1960s presents an interesting model with which to compare today's growing online community in the Big Apple. Community has traditionally been understood to mean a body of people who affiliate with one another based on family ties, location, shared religious practices and common work places.² There are, of course other definitions, such as that of historian Thomas Bender, who Banes says "prefers to reconceptualize community, suggesting that it is not a static social form that is disappearing, but rather that new, dynamic, overlapping forms of small-scale networks have arisen"³

Bender proposes that it is important to examine the technological structure behind a community. The technological structure upon which today's online communities exist is that of the Internet. The Internet is the interconnection of smaller networks. As such, the Internet provides the glue which connects other networks together. This means by being on the New York State Education and Research Network (NYSER-NET), I can send email from New York City to someone on a different network, for example Michnet in Michigan, because the networks automatically route my message from my network to the intended recipient's network through intermediate networks. As such, the global computer communications network consists of small-scale networks of computers (and in turn of people) connected to each other.

Banes' initial definition of community translates into saying people living in New York City are part of the community of New York City. As everyone knows, New York City is a large place. Yet people are proud to say they are from New York City and relate to things New York. New York can also be an isolated and alienating place, however. Thanks to developing technology, the contemporary concept of community in New York is evolving in ways similar to Bender's model leading to less isolation.

The '60s had the soapbox, the '90s have computer networks. People are communicating with other people both locally and globally in public discussion forums such as Usenet newsgroups and mailing lists and through private email, forming in the process new communities of common interests. Before these communities became a reality, their possible benefits were envisioned by J. C. R. Licklider, along with Robert Taylor, in their paper, "The Computer as a Communi-

cations Device."⁴ Bender's idea of ever-changing, overlapping communities is similar to what Licklider foresaw for social communities as a result of developments in computer communications. Already today, computer assisted networking allows groups to form to discuss an idea, focus in or broaden out and reform to fit the new ideas that have resulted from the process.

In the new forms of communication technologies, the distinction between a stranger and a friend is becoming blurred. Strangers are no longer strange; rather they are people who might prove to be a valuable resource. One example of the public discussion areas is a Usenet newsgroup called New York City General or nyc.general (see the appendix for a partial listing of other New York City-related online resources). Following is only a little of what I found in one day's browsing, which represents about a week of discussion in this public space. Just a warning – you are about to witness a little of the composite of life in New York City.

"My boss is going to fire me," begins the first of the discussions I decided to read. The subject line read "Getting Unemployment," but the message left that as a last recourse. The person continued in the request for help, "What can I do? I'm not a minority or member of a protected group so that rules out the labor board, EEOC, etc. Could I find a lawyer to take the case on contingency? Else, how easy is it to get unemployment after being fired. No questions asked or do they give you the third degree? Thanks in advance!"⁵

A genuine problem was posted. As such, responses were likely to be sent by others, and indeed they were. The first public response went: "If you're being fired by your boss, and you've been on the job for a certain period of time (6 months possibly?), and you were being paid legally on the books, unemployment compensation is guaranteed. Just go to the unemployment office and do the bureaucracy dance."⁶

Conceivably neither the original poster nor the person who responded knew the other. The fact that these two are probably strangers and, before this point, totally unconnected could be why the response was posted publicly. The time and effort the person put into publicly responding potentially could be helpful to yet another person reading this discussion.

The next public response in sequence provided some clarification which could or could not be seen as being unfriendly. This man added that unemployment insurance could not be collected if that person was "fired for cause, such as stealing."⁷

The last public response in this discussion that I saved brought up the right of the boss to contest the granting of unemployment insurance. The response ends with some support: “It is just another long, tedious hassle to get you to give up and forget about it. But if you feel you deserve the unemployment benefits because he/she did not fire you with just cause, fight till the very end Good luck.”⁸

All in all, these three public responses helped to define the previously tenuous concept of unemployment compensation held by the original poster. However, the picture is not complete. I am sure the person with the question, who could be reached via an email through the Delphi online service, probably received private email with suggestions and comments which are not available as part of the public record of nyc.general.

What other things are discussed? Concerns about public living conditions – such as discussions about the past, present, and future of the subway system – happen on a regular basis. Even an employee of the Metropolitan Transportation Authority, who claimed to be acting in an unofficial capacity replied to questions and concerns about the subway. Nyc.general presents an open public forum where this person could talk about his job in a way he felt was helpful to many people. Such is not yet apparently true for any New York politicians entrusted to represent their constituency. However, such attempts are happening. Former Governor Cuomo ran a gopher information server in his campaign for re-election, and New York State law and pending State Assembly bills will be online in the next few months. The currently proposed method is via telnet at assembly.state.ny.us.

Some examples of questions by people on how to survive in Manhattan include where to get cheap checking accounts (Amalgamated Bank of New York with true no-fee checking), what dentist or doctor to visit for particular problems, what rights tenants have, how and when to approach the Department of Motor Vehicles, and what’s the best slice of pizza in town (one person voted for Koronet, while another voted for Famous Famiglia).

Other issues raised were not so cut and dried. The pros and cons of rent control were discussed in the following exchange:

Well, having just moved from the West Coast, I can tell you this about New York in general: there is no such thing as a nice

place for a reasonable rent. This place is absurdly expensive – God only knows how rents can be so high in a place where roughly 10 million people live.⁹

The first response was not much of a discussion, but would definitely start one. The person wrote an answer: “Two words: Rent control.”¹⁰

A second answer about rent control went like this:

Your solutions might be okay for the burbs, but this is New York you’re talking about. These regulations were not the *cause* of high rents, they were enacted *because* of high rents. Removing them will harm the city in the short term and cause unpredictable results in the long term, as deregulation always does.¹¹

In these and other cases, the open quality of debate and discussion on nyc.general make it not only a helpful neighborhood, but a living newspaper that both criticizes current newspapers and provides features.

My next brief example is a post about the quality of the *New York Times*. The Subject of the message was “New York Times technology coverage.” the poster argued: “No one should expect the New York Times . . . to cover underlying technology well – that’s not their specialty. The Times is a general-interest paper.”¹² One of the responses was, “Sorry, they should do a better job. That they don’t is an indication of the generally low level of scientific literacy in the U.S. Cutting them slack over stuff like this just reinforces this tendency.”¹³

From this criticism of the *New York Times*, we go to an unusual experience that I could call a feature. The person wrote:

Reminds me when I was homeless and still had a valid VISA card which was maxed out. Apparently, between approximately 2:50 A.M. and 4:25 A.M. at night, Safeway stores would not check the validity of the transaction, and would just put it through. All the charges would show up on my VISA bill (which I never paid), and I would eat that day. It’s funny because the bank decided that I needed a higher limit, and raised the limit twice, even after seven months of delinquency! My card wasn’t canceled until one day I called and asked what the balance was – and a letter was

promptly sent saying there was suspicious activity, and the card was thus canceled. Thank god I've since filled in the missing links between me and a job, and may even start making enough to pay past debts. Depends on a few factors ...¹⁴

These examples paint a picture of people today with a common interest, and only secondarily of a common location, making themselves available to be helpful to others with that interest. The obvious interest is life in New York City. These exchanges appear similar to both the Village Community presented in *Greenwich Village 1963* and to Licklider's observations on online communities in the 1960s. Greenwich Village in 1963 was made up partially of a community of artists and intellectuals who "formed a constructed network, based on work, school, and other interests."¹⁵ Licklider asked the question, "What will online interactive communities be like?"¹⁶ He answers by writing, "They will be communities not of common location, but of common interest."¹⁷

The community life made available in Greenwich Village gave residents "the warmth of face-to-face, 'authentic' experience in the midst of escalating metropolitan anonymity."¹⁸ Villagers also felt a part of the community because people were active politically to protect their community from large structural changes which other organizations wanted to make happen.¹⁹ The online examples both demonstrate a friendliness of a good neighborhood in the midst of an ever growing city, along with showing the active character. To be part of the online community one must become a part of the discussion, otherwise that which is discussed will be less helpful, and the online lurker will not be in touch with anyone else.

The examples of online activities are not provided to say there are no problems online, and I will not go into the whole phenomenon of flaming, but I feel the advantages are more important and overwhelm the disadvantages. I have presented a snapshot of a fairly new entity which is both making New York a much more friendly place and providing a forum for people of disparate beliefs to meet on equal grounds. In the end, online communications can help to enrich local community and community relations rather than diminish that ability. Taking a serious look at the actual dynamic of the communication reveals the community of online New York City.

Notes

1. Ithiel de Sola Pool, *Technologies Without Boundaries: On Telecommunications in a Global Age*, edited by Eli Noam, Cambridge, Massachusetts, 1990, p. 56.
2. Sally Banes, *Greenwich Village 1963: Avant-Garde Performance and the Effervescent Body*, Durham, North Carolina, 1993, p. 37.
3. *Ibid.*
4. J. C. R. Licklider and Robert W. Taylor, "The Computer as a Communication Device," in *In Memoriam: J. C. R. Licklider 1915-1990*, Digital Research Center, Palo Alto, California, August 7, 1990. (Originally published in *Science and Technology*, April, 1968).
5. nyc.general, Message-ID: <B6009I1.sorter@delphi.com>
6. nyc.general, Message-ID: <mbayerCzvyp.187@netcom.com>
7. nyc.general, Message-ID: <3bg5nb\$bbu@titan.imsi.com>
8. nyc.general, Message-ID: <3beb21\$461@dockmaster.phantom.com>
9. nyc.market.housing, Message-ID: <3bdkcr\$fn5@syko.cosmic.com>
10. nyc.market.housing, Message-ID: <3be4jp\$8eo@apakabar.cc.columbia.edu>
11. nyc.general, Message-ID: <39jbf\$3bo@cmcl2.NYU.EDU>
12. nyc.general, Message-ID: <D07EM1.3H3@world.std.com>
13. nyc.general, Message-ID: <3bq5hp\$s0a@nntp.Stanford.EDU>
14. nyc.general, Message-ID: <3bjcvl\$i9l@panix3.panix.com>
15. Banes, *Greenwich Village 1963*, p. 78.
16. "The Computer as a Communication Device," p. 37.
17. *Ibid.*, p. 38.
18. *Greenwich Village 1963*, p. 15.
19. *Ibid.*

Appendix

New York City Online Resources

Addresses for most sites listed available at: <http://www.columbia.edu/~hauben/nyc-guides.html>.

I. Public Decentralized Newsgroups

- nyc.* hierarchy – general, food, market.housing, jobs.*, politics, announce, seminars, singles, personals, transit, etc.
- ny.* hierarchy for State wide issues – general, for sale, wanted, seminars, etc.
- alt.sports.* hierarchy – such as baseball.ny-mets, football.pro.ny-giants, etc.
- Moderated Newsfeed – clari.local.nyc, etc., clari.* groups

II. Public Listserv's and Mailing Lists

- ebikes – Metro NYC bicycle discussion list
- NYCOMNET – NY Community Networks lists
- NE-RAVES – electronic watercooler for Ravens
- Etc.

III. Local Newsgroup Hierarchies

- panix.*
- dorsai.*
- mindvox.*
- Local hierarchies – serving other communities such as universities, etc.

- Etc. – All local and serving the community on the associated Internet providers. Usually only available on the particular system with which it is associated.

IV. Information Servers

• Gopher

- Rutger's Net Person's Guide to NYC
- CUNY graduate Center's Guide to NYC
- NYU's New York City and Greenwich Village Communities
- New York Book, Bike, and Art ... from Panix
- Echo's Cool Stuff in NYC contributed by members of ECHO
- Weather forecasts

• FTP

- Lists of NYC Bookstores
- Lists of NYC Record Stores
- NYC Beer Guide

• WWW

- Lists of WWW web sites in NYC
- Theater on Broadway – listings
- Dining Information and menus
- Web sites for performance spaces (Kitchen, Knitting Factory)
- Mediabridge.com's NYC "Tourist" Info (previously Columbia CS Department)

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<http://www.ais.org/~jrh/acn/>

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