

Community Technology and Public Discourse

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Introduction

For those familiar with community media and its free speech and public discourse roots, it is often difficult to understand exactly where community technology fits. On the surface, there seems to be an affinity between the two movements. Complex communication tools, lack of access, needs for training, combating corporate control of the infrastructure, and serving grassroots communities are shared by both. Yet, the two movements come from different historical and philosophical roots.

With a clear understanding that access to information and communication systems is the foundation for a democratic society, community media has grown out of a need to bring the tools of the modern town square to the people. While personal expression and free speech are fundamental in the movement, the overriding concern is for a vibrant sphere of public dialogue and discourse. The distribution of ideas, which necessitates access to the tools of production and the knowledge to use them, is paramount.

Community technology, on the other hand, finds its ideological roots within progressive education and community development environments. Where community media concerns itself with social transformation, community technology tends to focus on individual empowerment with the hope that it leads to community development. It is clear that education and access to computer-based technologies has a direct individual impact. The potentials for personal enrichment, educational advancement and access to employment are the most tangible benefits offered by the community technology movement. Laudable social and economic justice activities to be sure, but how does providing an individual with access to a computer affect the public sphere in general and public discourse in particular?

The answer to this question can be found in the space where community technology centers (CTC) intersect with community networks (CN). The convergence of time-based / dynamic media (audio and video) with the interactivity offered by multimedia and online infrastructures are creating

environments in which individuals and communities are accessing tools that have the potential to transform our communication networks. Never before have so many people had the opportunity to communicate with one another and the potential for content produced in grassroots communities to reach a massive international “audience.”

As the tools for media production become increasingly digital and computer-based, traditional environments for creating and distributing content (i.e. media arts centers, cable access centers, universities) are bleeding into non-traditional environments (i.e. youth centers, churches, housing developments, homes). Like the Public Access Television and Independent Media movements of the early 1970s, these community technology centers and community networks are building the foundation for the next wave of telecommunications access and democratic participation.

However, unlike Public Access Television and Independent Media, it should be noted that this movement is young. Like the early days of television and cable, infrastructure is still being built, citizens are still seeking access and knowledge, and the form of the medium is still not solidified. One should also keep in mind that the nature of community technology is fundamentally different than that of traditional media. Rather than a “broadcast” model of distribution, the model is one of “conversation” and “interaction.” These differences can at times be frustrating for those comfortable in their understanding of community media.

The U.S. Community Technology Center Movement & Community Networks

The community technology center (CTC) movement in the United States¹ has its formal roots in the early 1980s’ personal computing revolution that transformed work and learning environments. The first recognized public community-based computer lab was established by Antonia Stone in Harlem² to address the lack of technology access for inter city communities. Stone’s Playing To Win Network (PTWN) articulated a mission that recognized “. . .that, in an increasingly technologically dominated society, people who are socially and/or economically disadvantaged will become further disadvantaged if they lack access to computers and computer-related technologies.”³ This mission realized itself in public access to computers combined with training and education in the effective use of these new tools.

In the early 1990s, Ms. Stone cooperated with the Educational Development Center in Newton, MA on an application to the National Science Foundation. This successful grant resulted in a five-year (\$1.9 million) grant to support the extension of the network's services, the expansion of its membership and its evolution into an independent, self-governing nonprofit organization. The grant also supported the sustained, professional evaluation of the Network and its affiliates. At the start of the grant PTWN changed its name to the Community Technology Centers' Network (CTCNet). Consistent with its NSF grant goals, CTCNet has now incorporated in Massachusetts as a non-profit, tax-exempt organization with a board of directors representing its affiliate organizations.

¹ The international equivalent to the US CTC movement is the ICT (Information and Communications Technology) movement.

² See Playing2Win website - http://www.playing2win.org/finalweb_for_upload/html/history.html

³ From the CTCNet Website memorial to Antonia Stone - <http://www.ctcnet.org/tonistone/index.html>

In 2003, the Community Technology Centers Network (CTCNet – <http://www.ctcnet.org>) is a national, non-profit membership organization of more than one thousand independent community technology centers where people get free or low-cost access to computers and computer-related technology, such as the Internet, together with learning opportunities that encourage exploration and discovery. While CTCNet represents a significant number of community-based technology endeavors, hundreds of unaffiliated centers operate outside of the organization's scope. However, CTCNet is one of the strongest voices advocating for grassroots access to computers and the knowledge to use them.

Like CTCs, community networks (CNs) have evolved out of technological development and expansion, specifically of the Internet in the early 1990s and are locally formed and independent entities. In general, community networks are concerned with two activities: 1) ensuring access to the Internet and online environments by providing infrastructure (both wires and code) that is transparent and easy to use and 2) to build and promote a range of content models that allow for virtual public spaces. "Over the past decade a wide variety of projects have been launched to bring the benefits of electronic networks to citizens, students, government agencies, small businesses, libraries, schools, and non-profit groups. There are currently about 150 of these community or civic networks, and they have taken many forms: Free-Nets, InfoZones, bulletin board systems, Tele-villages and smart cities. The result has been the beginning of a new grassroots movement in the United States."⁴

Unlike CTCs, community networks have not had access to the same levels of funding and public support.⁵ However, they do have formal organizational representation through the Association for Community Networking (AFCN – <http://www.afcn.org>). "The AFCN is the national organization seeking to help find common-sense, practical ways to use the power of both electronic and personal contact to build healthy communities, and help each community decide for itself how they want to use technology."⁶ The AFCN is also concerned with the appropriate, community-based, applications of information and communication technology that will reconnect people and empower them to decide for themselves what is best for their communities. According to Douglas Schuler, "[c]ommunity networks offer a new type of 'public space' with similarities as well as major differences between other public spaces that our society currently offers. . . . community networks offer an important and rare opportunity for communities to develop and manage democratic technology."⁷

Guiding Philosophies

The philosophical underpinnings of community technology (CTCs and CNs) at first and foremost concern themselves with individual empowerment and the struggle for more equitable, self-determining communities. The CTC movement works to lead and advocate for equitable access. The movement is committed to "...achieving universal technological enfranchisement, where people of all ages who typically lack access to computers and related technologies are equitably empowered in an environment that encourages exploration and discovery, the development of personal skills and self-

⁴ From the AFCN Website – <http://www.afcn.org>

⁵ Schuler, Dougals, New Community Networks: Wired for Change, New York: Addison-Wesley Publishing Company, 1996, p. 26.

⁶ From the AFCN Website – <http://www.afcn.org>

⁷ Schuler, p. 26.

confidence.”⁸ CNs see the potential for new telecommunication advances to “. . . help diminish the social, economic and physical isolation of our time. They can connect isolated communities to urban areas and allow one region to learn more about neighbors as well as distant towns and counties.”⁹

With strong roots in education, access, and community development, community technology (both CTCs and CNs), has the potential to create a vast communications network rooted in communities. As the goals of personal empowerment and access are being met, the needs for communities to leverage these new “public spaces” for the common good are growing.

Programs & Stakeholders

With over thirty years of growth and development, the community media movement is quite adept at identifying local organizations that conform to the mission of providing citizens with the tools and means to enter into public discourse. Identifying and detailing complimentary organizations within community technology, those that combine public education and access with dissemination of content, is a bit more difficult. However, as the field develops, the ability to classify and understand the range of activities within community technology becomes easier. For the purposes of this discussion, one can think about programs and stakeholders as moving in and through four main types:

- **Community Media Centers Entering the Digital Age** – PEG access and media arts centers that have embraced community technology as a complimentary activity to their traditional community media mission.
- **Community Technology Centers Becoming Content Providers** – specifically technology education and access programs that have come to understand the importance of voice, message, and grassroots content production.
- **Independent Media and Community Content Online** – traditional content and information providers that have realized the potential of the Internet as a powerful distribution medium and are harnessing it
- **Partnerships and Collaborations** – collaborations that have brought together content, infrastructure and community organizations to create opportunities to create and distribute new forms of content with an intent on developing virtual and real public spaces.

Community Media Centers Entering the Digital Age

It might be of help, to begin with the example of Lowell Telecommunications Corporation (LTC – <http://www.ltc.org>) which has struggled to reconcile the various influences and forces that make up the combined fields of community media and community technology. I came to LTC in 1997 and have been privileged to see the organization mature its concept of what community technology means within an organization dedicated to community content production and distribution.

Founded in 1992, Lowell Telecommunications Corporation is a community media and technology center serving the diverse urban population of Lowell, MA. The organization is committed itself to first-come, first-served telecommunication services to anyone in the city. For LTC it’s about people

⁸ See CTCNet website – <http://www.ctcnet.org>

⁹ See AFCN website – <http://www.afcn.org>

harnessing technology to provide meaningful content to their community. It is also committed to providing training and access to the media communication skills of the 21st century. The organization's vision has always been about telecommunications' technology (everything from video cameras to computers, from cable channels to the Internet) and its uses in community information and content production.

When LTC first opened its doors to the public, after a three-year planning and build out phase, it combined the elements of a traditional PEG access center with the emerging form of a community technology center. It was the first center of its kind to embark upon both of these activities from the ground up. Like many community media centers, LTC was attracted by the complimentary missions of the CTC movement and the PEG access movement. The organization was smart to include not only the space for a computer lab, but financial resources to support the human talent needed to run such a facility.

Early on the organization struggled to define what the role of a CTC was within a community media center. Early training opportunities ranged from clearly content oriented endeavors such as desktop publishing and basic multimedia (using presentation software such as PowerPoint) to content questionable offerings such as spreadsheet basics. The CTC movement with its strong technology literacy and workforce development leanings influenced the early nature of LTC's CTC activities.

In 1997, the organization made great leaps forward when it networked its entire facility and brought centralization to the management of its system. Even more importantly, it brought the Internet and the web to every workstation. This allowed training staff to begin offering basic HTML classes as part of its early offerings. However, the public's demand for basic computing and diversion of staff time to address rudimentary non-content related activities was proving a drain on the organization's resources. It must be noted however, at this time, LTC could not clearly articulate why these activities were so difficult to address. The general conception of a CTC as a place where others learn basic computing, find personal enrichment, and prepare more adequately for the job market or school were pervasive.

Other PEG access centers were obviously integrating technology into their media programs during this time period as well. Cambridge Community Television (CCTV – <http://www.cctvcambridge.org>) was actively setting up a technology lab at its center. Unlike LTC, however, it made sure to fund and articulate a separate mission for its "Computer Central" activities and devoted a significant amount of energy in creating strong community collaborations and building a community literacy program out of this activity. Malden Access Television (MATV – <http://www.matv.org>) formed a partnership with a local housing development and began providing computer training to its participants. And later, in 2001, Boston Neighborhood Network (<http://www.bnntv.org>) created its Multimedia Center at its remote studio in Roxbury, MA still with a focus on workforce development, BNN choose to advance traditional workforce activities to clearly focus on multimedia / content production skills. For BNN this was a way to integrate the competing interests of the community media and community technology camps. However, BNN still struggles to integrate these activities within its larger organizational mission. Somerville Community Access Television (SCAT – <http://www.access-scat.org>) embarked on some technology related activities, but mostly within a partnership with the Somerville Community Computing Center (SCCC – <http://www.sc3.org>).

While a handful of community media centers around the country began to integrate CTCs in their centers, the majority of PEG Access entities had neither the vision, staff, or resources to embark upon these activities. For many such entities, not understanding why a community television station should be involved in these activities has been a hurdle. Add to this a lack of concrete examples and a clear articulate message from those who had begun to integrate these resources, many simply chose not to alter what they saw as their core mission. Despite being part of the avante garde of this type of use of community technology, LTC too has found that the journey to meld these movements has not always been easy or clear as well.

Community Technology Centers Becoming Content Providers

In mid -1998, LTC underwent a strategic planning process that radically changed how we approached our technology programs. Our facility had outgrown its ability to serve its constituents. Too little space, too few staff and overtaxed resources were about to collapse. In part, this was due to heavy requests from citizens who came to LTC to “learn computers.” After a year and a half of training individuals, it became clear that they were not as interested in eventually harnessing the power of technology to achieve voice, but rather were looking for the traditional benefits of a CTC: personal enrichment, workforce skill development, or improved educational opportunities. While LTC was sympathetic to these issues and a strong supporter of technology access, the organization simply could go on pumping resources into endeavors that resulted in activities so clearly not linked to our core mission.

Again, it should be noted that this was a development in LTC’s philosophical understanding of its technology activities. For over a year, the question continued to be “what is the social end product?” of this technology use. While the organization had been willing for three years to be invested in traditional CTC activities, it took time for it to articulate exactly what about these activities were not meshing with the culture of PEG access. The strategic planning process added to this, the strong desire to decentralize LTC activities to relieve stress and strain on the organization.

In early 1999, LTC began working with local community-based organizations that were embarking upon community technology programs of their own. LTC staff designed a train-the-trainer workshop to share its expertise in running technology programs with these organizations. The core group of participants in this training, later became the foundation for the Lowell Community Technology Consortium (Consortium – <http://www.lctc.org>). LTC was also fortunate that its planning process coincided with new funding in the U.S. Department of Education to setup and expand community technology centers in low-income communities. In the spring of 2000, LTC received funds to assist its community partners in establishing what would be 17 computer labs and form the Consortium.

During the last three years, LTC, through the Consortium, has been successful in pushing traditional CTC activities out of its facility and into the community. At the same time, our leadership of the project has provided a framework for our partners to approached community technology with content production as a goal. Youth organizations such as United Teen Equality Center (UTEC – <http://www.utec-lowell.org>), Girls, Inc, and the YWCA have been the most adept at integrating multimedia, web design, media production and other content-oriented work into their CTCs.

UTECs computer lab is used for web design and they have expanded their offerings to include regular training and access to video production equipment. Teens in the center have created issue-oriented PSAs, documented programs such as Hip Hop for Peace, created organizational support videos and websites, and integrated these tools in their other activities including their Young Women's Project and Creative Writing programs. UTEC is a by teens for teens organization and as a whole community engagement and organizing are important aspects of their activities. Their use of media and technology tools supports these activities. Girls, Inc. has also used its CTC as a way to engage girls in individual expression and community change. They have created websites, worked on journals, and used digital photography to create photo essays of elements they would like to see changed in their community. The YWCA has used its CTC to publish a regular community newsletter for gay, lesbian, bisexual and transgendered teens.

In general, youth organizations that have been engaged in community technology have made the leap into content production quite easily. This in part must have to do with the ease with which young people harness the potential of a new communication tool. For them, the impetus is not to learn computers or improve educational / work skills. They master these skills early on and their intent is to use them to communicate. Even organizations that have not had the influence of a community media centers, such as the original Computer Clubhouse in Boston (<http://www.computerclubhouse.org>) became actively engaged in content production activities. Even a leading youth policy advocacy group, The Children's Partnership (<http://www.childrenpartnership.org>) has been a leader in identifying content production as the next digital divide (<http://www.contentbank.org> and http://www.childrenpartnership.org/pub/low_income/index.html).

What is interesting to see within the context of community technology centers moving into content production are organizations such as the Saint Julie Asian Center (<http://www.saintjulie.org>). The Saint Julie Asian Center's main mission is to provide hospitality and education primarily to Lowell's huge Asian immigrant population. The organization began using its CTC to support is ESOL, literacy and citizenship classes. These activities were perfectly in tune with traditional CTC activities. In fact, when LTC offered St. Julie Asian Center digital photography tools such as scanners and digital cameras, they really thought they would have no need for them. However, it became clear that the Center's students were excited about creating photo slide shows, sending pictures to families overseas and creating a student newsletter. The center now boasts its own website and is in the process of making video supplements to its ESOL training program. Basically they are teaching their students video production so they can create real-life scenarios where English skills might be required (i.e. in the grocery store, using public transportation). These content creation activities are becoming firmly woven into the daily activities of the organization and its director understands the power these tools have to energize her students.

Other CTCs within the Consortium, such as Massachusetts Alliance for Portuguese Speakers (MAPS – <http://www.maps-inc.org>) and Center for Family, Work and Community at UML (<http://www.uml.edu/centersCFWC>) have used their CTCs to create flyers, websites and valuable data / information (such as GIS maps) that are shared with the rest of the community. Unlike community media centers, community technology centers do not seem to struggle with the role of technology within their centers. However, the use of technology to as content production tools is

sometimes as hard sell. This is especially true of organizations that view themselves as supporting individual empowerment and growth. Yet, when models are presented, these centers seem to be willing to integrate activities that support their original mission. It is hard to convince a program that is preparing people for a 21st century office, that they should instead be focusing on media production. That is why programs such as BNN's WorkForce Development Program, which is a 20+ week intensive multimedia training program, is so unique. Its goals are to prepare its participants with training and skills necessary to become competitive professionals in the multimedia industry.

Independent Media and Community Content Online

As LTC worked with the Consortium to establish CTCs and relevant programs, it became clear that the organization had been successful in pushing basic skills out into the community. Over the last two years, LTC has been able to refocus its use of technology in purely content production (i.e. video editing, web design, multimedia) terms. Yet, the overall technology education needs of the community has been met.

One of the key developments during this time has been the formation of the Community Software Lab (CSL – <http://csl.ltc.org>). This group of dedicated computer programmers originally began their life as an amorphous unit providing technical assistance to Consortium partner agencies. Hardware, software, and network problems were the bulk of this group's original activities. However, as LTC began to focus more and more on web-based activities, the group has redefined its mission to support the infrastructure needs of online community content. The group created and maintains web hosting services, CGI scripting (to support dynamic online content), community calendaring, email (including listservs) and database integration into websites. They also train and support local community-based organization in developing an online presence. The infrastructure this group is building is akin to laying the coaxial cable and head end for a traditional PEG access center. Without this group's activities, LTC's venture into online content would not be nearly as possible or flexible as it exists today.

Rather than sharing the goals of CTCs, the CSL's activities are more consistent with early community networking endeavors. Organizations such as Blacksburg Electronic Village (<http://www.bev.net>) provided communities with tools such as Internet connections, email and web space as early as 1991. It is important to understand that without this infrastructure any hope for grassroots online content will not be possible unless these resources are put in service to communities. Unlike early cable television, the ability to hook into this international content distribution network does not require federal regulation, massive municipal contracts, or even huge sums of cash. Hardware is cheap, software is free (thanks to the Open Source community that has ensured that the code on which this information is conducted remains in the public domain) and the bandwidth is increasingly affordable.

However, with most software design challenges, the key factor is human knowledge. LTC has been fortunate to have a dedicated volunteer lead, direct and provide vision for the CSL. Additionally, the CTC VISTA Project (<http://cpcs.umb.edu/vista>) has allowed us to secure dedicated programmers seeking to be involved in community service. This access to knowledge assets is by far the greatest challenge that many communities face who want to enter into online content support and production at this level. One need only look at the extensive documentation

(<http://docs.indymedia.org/view/Main/WebHome>) that exists as part of the Independent Media Centers (IMC - <http://www.indymedia.org>). This extensive, distributed network of online content has only been made possible by dedicated groups of volunteers with appropriate programming and system administration skill to create and continuously build the infrastructure.

It is no coincidence that Seattle (<http://www.ci.seattle.wa.us>), where IMC was birthed, has one of the most comprehensive and inclusive city websites to serve its citizens with online content. With Microsoft a stone's throw away, the Puget Sound area has ample technical experience to draw from. Another community network site, RTPNet (<http://www.rtpnet.org>) draws its expertise from the Research Triangle Park in North Carolina which is conveniently located near UNC-Chapel Hill. Blacksburg Electronic Village began its life through the auspices of Virginia Tech and the Lowell CSL is a partnership between LTC and the Computer Science Department at University of Massachusetts-Lowell. Camfield Estates (<http://www.camfieldestates.net>) has build an online community for its housing residents through the auspices of MIT.

Yet there are other examples of community content that simply use tools or purchase talent in order to put valuable information and resources out via a web "channel." In Lowell, the Merrimack Valley Hub (<http://www.mvhub.com>) is an example of how a group of CBOs worked together to collect and distribute via a web enabled database current community programs and resources. Looking for childcare? Simply go to MVHub.com and enter the words "child care" into the keyword search and a myriad of agencies and programs are culled from the database. ConnectLA (<http://www.connectla.org>) is another example of an agency, in this case a statewide research organization – Center for Governmental Studies, pulled together useful content to distribute online. This same agency also created the California Channel, a state C-SPAN.

Working within a PEG access channel, one of the most difficult cases to make for online content is how it is relevant to the mission of community media. Just as television could capture theatre in a new way, the Internet and things like email lists present community content in a new way. It must be said the power of this medium is really not streaming video, but the interactive content that is made possible through database-backed applications. This is often difficult for those immersed in PEG access to understand. Especially when the distribution model for the Internet is so very different than broad- or cablecast. For LTC, it is crucial to continue to refine and define our online content activities in a manner that consistently makes the links and describes the differences effectively.

Partnerships & Collaborations

As LTC has become more and more adept at understanding the Internet, broadband and other new communication technologies such as wireless, the organization has begun to work closely with other like-minded organizations. LTC's most significant involvement in this arena at this time is with the Commonwealth Broadband Collaborative (<http://www.cbcmedia.net>)

The Commonwealth Broadband Collaborative (CBC) was established to help meet the need and demand for locally informative content accessible to those who do not quite recognize themselves as they are presented in mainstream media. The CBC looks to provide an integrated approach to delivering content. Currently the CBC involves the simultaneous development of a vital and dynamic

broadband public information infrastructure; an increase in the amount of relevant content delivered over broadband that engages individuals, communities and the civic sector, especially underserved populations; and access, education, training and support in advanced applications. CBC is being developed as a regional model of how communities can work together to create a comprehensive, public information system that uses broadband to address these needs and interests. To date the collaboration has concerned itself primarily with distribution of video content that is supplemented by web tools such as chat and hyperlinked content.

Manhattan Neighborhood Network (<http://www.mnn.org>), Brooklyn Cable Access Television (<http://www.bcat.net>) and the Public Internet Project (<http://www.publicinternetproject.org>) in the New York Metro area are also working through new uses of the Internet through wireless technology. Their Public WiFi 2 Public Cable (P2P) network is using WiFi to send video content from various locations throughout the city to video streaming servers. This content is then uploaded and cablecast via the Public access channels. This is very similar to some of the CBC partners who download the webstream of CBC productions and cablecast this stream in their communities. Both the P2P and CBC are in their early stages of development and are still trying to define what content distribution in this context is about. It remains to be seen how effective a model this is.

Divergences & Challenges

While it is clear so far that there are several areas in which community technology and community media intersect and don't, it might not be so clear about conflicts within community technology specifically CTCs and CNs. Unlike the PEG access movement, community technology endeavors find expression in a multitude of forms. This diversity at times makes it difficult to define exactly what a community technology entity is. It is clear, however, that CTCs and CNs have different missions. CTCs are physical places with training and or access programs in place. CNs most often are infrastructure and information resources.

Because so many CTCs are integrated into the programmatic agendas of larger organizations (i.e. YWCA, public housing), the organization might not define itself as operating a CTC. This makes it difficult to build a public dialogue about community technology. CNs on the other hand have had difficulty in actually defining their mission and agenda in a way that has allowed them to keep pace with technological change. As the Internet and email have become more and more affordable and accessible, some of the early CNs have found their missions increasingly irrelevant. A ground breaking organization in this arena La Plaza Telecommunity (<http://www.laplaza.org>) in Taos, NM will soon be closing its doors stating its original mission has been served.

What has been challenging is to keep the discourse about community technology broad enough to address the communication and information needs of grassroots communities. The tendency is often to focus on the tools and access alone. Failure to move beyond such tendencies will result in movements that will become increasingly obsolete as the tools become ubiquitous. This is clearly an area where community technology can learn from the community media field. Freedom of expression and democratic participation in public discourse are foundations of American society, no matter what tools are used.

Funding & the Challenge of Sustainability

Clearly the community media work that is involved in PEG access has created a mechanism for funding media at the grassroots level. Whether or not these funds have been wisely used in all places is open for debate, but the precedence and structure is there. CTCs and CNs probably have more in common with the media arts field in that the infusion of significant federal funds have created a foundation to move small local organizations into a larger landscape and have helped codify a movement. The primary sources for these funds have come from the Department of Commerce's TIIAP/TOP and Department of Education's CTC programs. The NSF played a significant role early on and HSS currently is. However, the shift in funding priorities at the federal level has stagnated and the battle to retain what is there continues. Luckily CTCNet has been fortunate to band with other grassroots entities and policy folks in a national campaign (<http://www.digitalempowerment.org>) to keep these funds in the federal budget. Federal funding will continue to be a high priority in supporting this work.

Of course the late 90s brought lots of corporate funding especially from places like AOL/TW, AT&T, Hewlett-Packard and Cisco. These have dwindled or become extinct as the market has tanked. The community technology field continues to nurture the partnerships with these entities. However, it may be some time before funding from corporate sponsorships returns. The field may never reap the same level of benefit that it did during the 90s tech bubble.

As for private funders, the Morino Institute (<http://www.morino.org>) has been an early private supporter of this work on a national level and has jump started several key community content endeavors. Benton Foundation (<http://www.benton.org>) also has been key in the policy arena these areas.

Yet the greatest opportunities for sustainable funding and policy work at this time seems to be happening at the state level. Both Ohio (<http://www.occcn.org/history.html>) and Illinois (<http://www.icc.state.il.us/ci/docs/010410ctfaward.pdf>) have successfully used statewide class actions suits and / or state regulation to provide for community technology. Texas has also formed a statewide telecommunications fund (<http://www.tifb.state.tx.us>), but to date it has focused mainly on libraries, schools and health care providers. California, Vermont and Hawaii are also involved in legislative, advocacy and regulatory work involving telecommunications on behalf of grassroots communities.

As for harnessing community technology for democratic expression and public discourse there are several areas where funding and / or policy work could catalyze this work:

- 1) Continue to fund infrastructure that connects communities and homes to the Internet via high speed connections (wired or wireless). No vast communications change will occur until access is within reach, not only for those in the United States but for the majority of the world still on the other side of the "digital divide"

- 2) Support those who are expanding and building the discourse and definition what this new medium's possibilities are.
- 3) Create opportunities and promote innovative uses of emerging technology that create community dialogues and democratic expression. Basically, those in community technology are flexible and if funding presents itself that encourages social action and democratic participation through the use of these tools, they will rise to the challenge.

Future Considerations

This has been a very brief scan of community technology and its links to public discourse. There are certainly additional areas to explore and further detail can be provided. Some items not explored fully in this memo are:

Influences & Molders: Funding, Regulation and Technological Development

- Federal funding (National Science Foundation, Department of Education, Department of Commerce, Department of Housing and Urban Development),
- State Telecommunications Regulation and funding (including education, workforce, and transitional assistance)
- Advancements in the tools for production and distribution of content (including Internet, Broadband, WiFi, and Open Source)

Media & Technology: Intersections and Diversions

- Similarities – education, access, pooling resources
- Differences – artist vs. community developer, individual empowerment vs. community info needs
- Lessons for meeting the information and content needs of communities
- Combating the interests of government and corporate control in the interest of the disenfranchised
- Social change, freedom expression, democratic participation, economic / social justice

Some Additional Resources

Alliance for Community Networking - <http://www.afcn.org/mission.html>

The Children's Partnership Report on Online Content -
http://www.childrenspartnership.org/pub/low_income/index.html

Community Technology Review – <http://www.comtechreview.org>

Community Media & Technology Program – College of Public and Community Service at UMass Boston – <http://cpcs.umb.edu/cmt>

Contentbank – <http://www.contentbank.org>

CTCNet and the Community Technology Center Movement by Peter Miller -
<http://www.ctcnet.org/peterm3.html>

Interviews with George Stoney & Antonia Stone - <http://www.cbcmedia.net/archives.htm#gbbn>

Organizational Profiles

Community Media Centers Entering the Digital Age

Boston Neighborhood Network Multimedia Center

Redefining community technology education within the community media tradition

(Boston, MA – <http://www.bnntv.org>)

In 2001, BNN opened its Multimedia Center next to its Roxbury television studio. The Multimedia Center is an all-digital environment that offers open access to its computers and the Internet, multimedia job training programs for low-income adults, digital art programs for youth and a full curriculum on topics such as web design, DVD authoring, video editing and digital imaging. The new digital technology is integrated into many areas of BNN and the result is an extraordinary opportunity to communicate.

BNN Multimedia Center members have access to computers and digital equipment up to three times per week, for up to four hours per day. Access includes 13 multimedia PC compatibles and 5 Macintosh G4 computers, high-speed Internet access for creating digital imaging, web and digital video/audio projects, scanners, color printers, digital equipment, and the latest multimedia software.

Unlike other CTC training and education programs, BNN created community technology opportunities that meshed well with its interest in content production and distribution. The WorkForce Development Program is a 20+ week intensive multimedia training program. Its goals are to prepare its participants with training and skills necessary to become competitive professionals in the multimedia industry. The DigitalArt Youth Program (DAY) provides young people with a comprehensive arts and technology education and fosters a collaborative network across the country through the use of technology as a tool for personal development.

Lowell Telecommunications Corporation

Working to redefine community media to include new distribution networks and content models

(Lowell, MA – <http://www.ltc.org>)

Lowell Telecommunications Corporation is a community media and technology center serving the diverse urban population of Lowell, MA. The organization is committed itself to first-come, first-served telecommunication services to anyone in the city. For LTC its about people harnessing technology to provide meaningful content to their community. It is also committed to providing training and access to the media communication skills of the 21st century. The organization's vision has always been about telecommunications' technology (everything from video cameras to computers, from cable channels to the Internet) and its uses in community information and content production.

For LTC and its community, the future is one in which access to media distribution networks in whatever form they may take, are open to communities and are without commercial intent. LTC also sees a future where the distinction between a public education government access center, a community technology center, a media arts center, a telemedia center, a free speech organization, a cyberartist

hangout, a community center, and countless other nomenclature melt away as we all explore, learn, make and share information, content, knowledge and each others company. As such, LTC has worked with over a dozen community partners to expand the number of technology resources available to the community. The organization's leadership of the Lowell Community Technology Consortium (<http://www.lctc.org>) has also meant that these community-based organizations are encouraged to think about technology as a means for social expression and discourse. Currently, the organization is engaged, through the Community Software Lab (<http://csl.ltc.org>) in building the infrastructure and tools necessary to bring its community content mission online.

Community Technology Centers Becoming Content Providers

Edgewood Terrace (Washington, DC – <http://www.edgenet.org>) and
Camfield Estates (Roxbury, MA – <http://www.camfieldestates.net>)

Providing housing residents with an online community and the technology to access it

Edgewood Terrace and Camfield Estates are both located in low-income housing developments. As such they have a range of activities and resources designed to serve the needs and interests of residents. Both developments have active community technology centers and train hundreds of individuals (from youth to seniors) every year. However, each of these developments has attempted to expand access to vital community information and content beyond the center.

Edgewood Terrace, in partnership with the Community Preservation and Development Corporation (CPDC), a local, nonprofit neighborhood revitalization organization, has worked to create a "community-based residential computer network and electronic village" in their newly renovated Northeast DC apartment complex. As a result the CPDC has installed a broadband telecommunications system that reaches every apartment. Now they are in the process of arranging access to the network for every resident, via personal computer or a CPDC-supplied "thin client" box. The technical challenges have been daunting, but the system is adding some seven new residences a week. And nearing 500 people on "Edgenet," the online community for the complex. Edgewood Terrace is looking to pioneer ways to create a neighborhood-based, technologically sophisticated learning environment.

Camfield Estates has put computers and high-speed Internet access into a third of its apartments. Additionally, through support of MIT, the development has worked to build an online community that is asset based. They have involved community residents to map and mobilize community resources and back them by web-enabled databases. The interesting feature of the Camfield model is its focus on infrastructure and training that then allows individual residents with the ability to create information and content that would be of interest to the larger community. This is highly complimentary to the public access cable model.

Independent Media and Community Content Online

City of Seattle (Seattle, WA – <http://ci.seattle.wa.us>) and

Bringing online community information and community media in service to citizens

The **City of Seattle** is committed to promoting a technology healthy community. This includes ensuring that residents have the information technology training and access needed to ensure civic and cultural participation, employment and lifelong learning. The city's main website provides access to a variety of community content, including access to the city's public access television channel. Additionally, the city is involved in a number of infrastructure and education activities that allow community users and organizations to access and use technology, including online content, effectively.

The City's community technology programs are developed with guidance from the City's Citizens Telecommunications and Technology Advisory Board (CTTAB). Most of these programs are operated through the Department of Information Technology and have been funded since 1997 with money derived from the City's cable franchise fees.

Partnerships & Collaborations

Commonwealth Broadband Collaborative

Creating a distribution and programming network that blends community, media, and technology into a whole

(Boston Metro Area – <http://www.cbcmedia.net>)

The Commonwealth Broadband Collaborative (CBC) was established to help meet the need and demand for locally informative content accessible to those who do not quite recognize themselves as they are presented in mainstream media. CBC is looking to provide an integrated approach involving the simultaneous development of a vital and dynamic broadband public information infrastructure; an increase in the amount of relevant content delivered over broadband that engages individuals, communities and the civic sector, especially underserved populations; and access, education, training and support in advanced applications. CBC is being developed as a regional model of how communities can work together to create a comprehensive, public information system that uses broadband to address these needs and interests.

In addition to the [College of Public and Community Service](#), the [Community Media and Technology Program](#), the [CTC VISTA Project](#), and the [Adult Literacy Resource Center](#) at UMass/Boston, other partners include [Boston Neighborhood Network](#), [Allston-Brighton Free Radio and Citizens' Media Corps](#), [Codman Square Health Center's Technology Center](#), [Cambridge Community Television](#), [Somerville Community Access Television](#), [Malden Access Television](#), the [Lowell Telecommunications Corporation](#), and two regional/national associations, the [Community Technology Centers' Network](#) (CTCNet), the country's oldest and largest membership organization of community technology centers, and the [Northeast Region of the Alliance for Community Media](#). Newest partners are the [South End Technology Center](#) and the [Timothy Smith Network](#).

Public WiFi Network 2 Public Cable Network

Fusing community technology and community media infrastructures
(New York, NY - www.mnn.org/tech/projects/laika)

Manhattan Neighborhood Network (MNN – <http://www.mnn.org>), Brooklyn Community Access Television (BCAT – <http://www.bcat.org>), and the Public Internet Project (<http://www.publicinternetproject.org>) are partnering with a number of New York-based media activists on the use of WiFi technology as a distribution model for remote productions. The goal of the project is to establish procedure and criteria for broadcasting to the cable or satellite TV network from remote locations, using a laptop, camera and any type of available broadband Internet connection - preferably WiFi.

The motivation for such an exercise is the attempt to break away from classical TV production requiring hundreds of thousands of dollars in specialized infrastructure and enable immediate and on-the-fly transmission from remote locations to the TV network, ultimately leading toward creative production of programming from within a P2P network.

The primary concept uses current consumer-level technology coupled with broadband internet to offer a viable framework for distributed TV production via the Internet. Hardware and software are deliberately composed to be within the reach of a mid-skilled Internet user. Public wireless nodes provide enough bandwidth to carry IP video streams at sufficiently high quality, acceptable for TV transmission.