Community Networks or Networked Communities?

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The article provides an overview of the state of the art in community networks. Forty community networks were reviewed. A protocol was developed to guide the evaluation of each site. The protocol covered the types of information currently provided and whether the network contributes to the social capital of the community. It was found that communities are now served by several types of Web sites: nonprofit community networks, those administered by local governments, and various commercial sites. It does not appear that either individually or in combination the Web sites are working to strengthen the social capital of the communities they serve. It is recommended that a community’s information networking organizations work together to provide integrated resources and programs that foster community dialogue and help people better meet their citizenship responsibilities, as well as up-to-date information on community events and real-time information about traffic, weather, and the like.

Keywords: community networking, social capital, public Web sites, government services

1. INTRODUCTION

This article presents an overview of the state of the art in community networks. The term “community network” is broadly defined to mean a computer-based system or set of systems designed to meet the social and economic needs of a spatially defined community of individuals. The Boulder Community Network is one excellent example. This network serves the greater Boulder, Colorado community and is maintained by a nonprofit organization staffed by volunteers. It provides links to a comprehensive set of topics directly related to life in the community of Boulder, from government to the environment to business to issues of interest to senior citizens. It is accessible over the World Wide Web (WWW). Santa Monica, California’s Public Electronic Network (PEN) system is another outstanding example of a community network. These networks are distinct from other cyberspace networks in that they serve on-the-ground communities rather than communities that are not defined by spatial boundaries.

There are two motivations behind this research. The first motivating factor is a general curiosity about the state of the art of community networks. What features does the typical...
community network have? What cutting edge functions are some networks experimenting with? How do community networks complement other types of networks that may be serving their communities, such as those administered by local governments? What might be around the corner?

The second motivating factor is a concern about the state of community in the United States at the beginning of the 21st century. What factors are contributing to worries about civic life in the United States? How are community networks helping to overcome these factors? How can community networks be designed in the future to help foster an increase in social capital in the communities they serve?

This article addresses these types of questions. Section 2 presents discussions about why people are concerned about the health of communities and about constraints people face to their participation in community life. How community networks might be able to help build social capital in communities is outlined in Section 3. Section 4 presents the research method and describes the sample of community networks reviewed for this article. Section 5 presents the results. Section 6 offers concluding thoughts and several recommendations. Appendix A contains a list of the community networks and other portal sites reviewed as part of this research.

2. CHALLENGES TO COMMUNITY LIFE

Many people are concerned about the state of civil society in the United States. Voting rates are at or near all-time lows, especially for local elections. Few people participate in public affairs (Verba, Schlozman, & Brady, 1995). There is widespread cynicism about government (Gore, 1994). Organizations such as the League of Women Voters and the Pew Charitable Trusts have initiated programs to revitalize democracy in the United States.

One can assess problems of civic life from many perspectives. This article views the problem from the perspective of individual citizens. Why are not more people engaging in public life? This is a useful perspective to adopt for this research because community networks have the potential to be particularly useful in helping individual citizens overcome constraints they may face to public participation.

Tonn and Petrich (1998a) identified six broad categories of constraints that individuals face in becoming more involved in community affairs. The first area of constraint is work. Not only is a sizable fraction of the population working more hours than ever before (Schor, 1992), but many of these workers work night and odd-hour shifts, have unstable work schedules, and hold down multiple jobs. The “blur” of today’s computer-driven work world (see Davis & Meyer, 1998) leaves little time for volunteerism (Daspin 1999). Too much work and nonstandard work schedules reduce the time available to contribute to public affairs, disrupt patterns of behavior that might foster volunteerism and involvement, and reduce people’s energy and attention available for nonwork activities.

The second constraint is lifestyle. Generally, when people are not working they are driving to and fro (e.g., with kids to soccer or music lessons), watching television, shopping, or otherwise engaging in consumer-related behavior, which consumes almost all remaining time and energy that could be devoted to public affairs. It is well known that overconsumption can lead to higher personal debt, which prompts additional hours spent working, which promotes more spending on conveniences, and so forth.

Third, authors such as Putnam (1995) believed that the United States is suffering from a decline in social capital. Wilson (1996) described how a loss of jobs in urban areas has led to middle-class flight from these areas, leaving behind socially dysfunctional and economically distressed islands of poverty. Putnam’s point is that Americans are interacting less with
others in a socially meaningful manner. His argument is summed up by the observation that although the number of bowlers has not decreased, the number of bowling leagues has. People are now just bowling alone. Bellah, Madsen, Sullivan, Swidler, and Tipton (1985) also comment on the decline in participation in volunteer organizations by Americans. A lack of social capital leads to feelings of isolation and alienation within communities. Without a strong sense of belonging, it is difficult for people to connect to and therefore become involved in their communities.

Fourth, one factor that may contribute to a decline in social capital is the demise of the “great good place”, as described by Oldenburg (1991) in his book on that topic. Great good places are bars, cafés, beauty and barber shops, coffee shops, general stores, or any place people find in the community to spend pleasurable hours with one another for no specific or obvious purpose. It is understood that discussions taking place in such settings would lead to increases in social bonds among community members. Great good places have not been replicated to a great degree in the suburbs, and such places have been disappearing both in our urban areas and on Main Street in rural communities. Therefore, places of opportunity for people to build social capital are few and far between.

Fifth, psychological anxieties await those contemplating getting involved. Coles (1993) documents fears facing those who speak out in public settings and many cases of burnout among volunteer activists. Finally, lack of education and capacity for citizenship can act to constrain participation in public affairs. Many people do not feel qualified to discuss many technical issues facing their communities. More generally, people may not know how government works, what their role or roles could be, and how to behave in various public settings. They may not know much about statistics or how to read maps. Van Steenbergen (1994) argues that people need to be intellectually autonomous and self-reliant. These kinds of factors make it easier for individuals to leave public policy making to others.

Singly and in combination, these six factors can be powerful constraints to public participation.

3. POTENTIAL ROLE OF COMMUNITY NETWORKS

How can community networks contribute to overcoming the problems mentioned above? There are several obvious ways. For example, community networks can allow people to contribute to public discussions asynchronously according to their own schedules and not the schedules set for the convenience of city councils and government officials. Enlightened employers could allow employees the use of computers at work to allow employees to participate remotely but in real time in electronic town hall meetings and chat discussions. Well-designed community networks could help people build their own capacities to meet their citizenship obligations (e.g., through online citizenship certificate programs) and provide users with links to educational resources pertinent to ongoing discussions. People may find that contributing to online discussions causes less anxiety than in-person participation because there is no risk of immediate face-to-face personal confrontation.

These points indicate that the potential is high for community networks to overcome many of the problems mentioned above. However, community networks will only succeed in achieving their promise if they can gain acceptance as great good places. In other words, citizens must find that the community networks are indispensable factors in their lives. People must find themselves returning to their community networks every day, maybe even several times a day, to gather information, monitor important discussions, and contribute to discussions as appropriate. They need to enjoy each experience with the community network,
whether it is the excitement surrounding the possibility of meeting someone new or satisfying
their needs to check on the latest developments.

Dowling (1999) surveyed both the traditional and cyberspace literature to develop a
deeper understanding of the potential for great good places on the WWW. As a first step, it
helps to understand important characteristics of communities. The next step is to determine
whether community networks can be designed with these characteristics in mind.

Dowling (1999) summarizes what several other authors have to say about community. For
example, Jacobs (1961, 1992) states that trust and respect are two important factors in a sta-
ble community. Coleman (1988) stresses the need for strong social interactions among par-
ettars, families, schools, and other community institutions. Wellman (1999) ‘understands
community as a network or web of meaningful social interactions. Oldenburg (1991) puts a
human face on these concepts by stating that in strong communities, everyone knows just
about everyone else, there are places to introduce newcomers, and there are sorting and stag-
ing areas for collective accomplishments. Kollock (1998) contributes the notions of identity
persistence, an internal economy, and a rich set of documents recording community history.

Dowling (1999) cites several authors who believe that community can be fostered in
cyberspace. Mantovani (1996) argues that through the general process of social construc-
tion, virtual social processes and structures can be built that are as real as those processes
associated with physical settings. Jones (1995) argues that “once we can surmount time and
space and ‘be’ anywhere, we must choose a ‘where’ at which to be, and the computer’s func-
tionality lies in its power to make us organize our desires about the space we visit and stay in”
(p. 32). It can be argued that for many individuals, sites such as those run by America Online,
the WELL and ECHO, are indeed great good places.

Community networks as great good places need, first and foremost, to be places that fos-
ter community-based dialogue. Schneider (1996) states that “conversation is the foundation
upon which all political behavior is built.” To support his point, he quotes John Dewey, who
wrote in 1959 (as quoted in Post, 1993) that “democracy begins in conversation”; Barber
(1984), who states that “there can be no strong democratic legitimacy without on-going talk”; and Ackerman (1989), who agrees that “dialogue is the first obligation of citizenship.”
Although the Internet is inundated with talk in the form of e-mail, Usenet groups, chat rooms,
and instant messaging, it is probable that a very low percentage of these discussions pertain
to community.

Community networks need to facilitate collaboration between members of the commu-
nity. Economic collaboration is one important area (e.g., through online cooperatives or ser-
vice swapping). Another would be collaborative efforts on new developments (e.g., where a
new grocery store should be located, how the brownfield should be redeveloped). Community
networks can provide the homes for online, continuously evolving community histories. Special attention can be paid to disadvantaged and senior communities. Community net-
works can help people find mentors and allow young people to become more involved in
community life. Community networks can be places where people share life’s lessons. Edu-
cation should also be fostered by community networks. These are the kinds of characteristics
that community networks could possess to help improve community life and are the kinds of
characteristics that are the focus of this research effort.

4. RESEARCH METHOD AND SAMPLE
OF COMMUNITY NETWORKS

Forty communities with a presence on the WWW were visited. Most of the community
networks visited are associated with communities in the United States; only six were from
outside the United States. These sites were identified in several manners. First, there are several Web sites that list community networks and provide hyperlinks to those networks. Second, search engines were used to identify Web sites associated with several cities not included in the lists of community networks. A point was made to visit several of the better known community networks, such as Blacksburg Electronic Village and Santa Monica’s PEN. Several less well-known networks were also visited, such as KORRNTE, which serves the Knoxville, Tennessee region, and MAIN, which serves the Champaign, Illinois region. The resulting sample is not a random sample in the strictest sense, but is the result of a sometimes directed and sometimes serendipitous search through the space of hundreds of existing community networks to develop a picture of the state of the art in this area. The appendix contains the names and Web-site addresses of the sites visited.

A range of community types was sought, defined primarily by their degree of urbanness. Using this variable, the sample of communities shows this breakdown:

- large urban (9)
- mid-sized urban (13)
- suburban (8)
- rural (5)
- regional (4)
- other (1)

The kind of entity that administers the network was also noted. In many of the communities, there was no one Web site that provided all pertinent information. In these cases, the type of organization managing the community network was deemed to be the one with the most comprehensive information base and most links to other community sites. The breakdown of the type of organizations that manage community networks is as follows:

- nonprofit organization (24)
- local government (12)
- state government (1)
- tourism organization (1)
- newspaper or media company (1)
- other kind of business (1)

Each community network visited was evaluated in several ways. The first task was to evaluate whether the community network provided pages containing standard community information or at least provided links to other sites containing standard information. Specifically, we examined whether these types of information resources were readily available:

- community events
- government services
- police and emergency services
- weather
- education
- environment
- religion
- business

A second task was to evaluate how the community network or networked community actively supported the creation of social capital. Specifically, we examined whether the site(s) had any explicit functions to accomplish the following:
help people be better citizens
• foster direct democracy
• enhance interaction of students with larger community
• let citizens comment on proposed new developments
• foster bartering and other alternative economic activities
• build an “organic” online community history
• bring citizens together in mentoring relationships
• pay special attention to seniors
• pay special attention to low income communities

A third task was to note aspects about the sites that appeared unique and cutting edge. Particular attention was paid to the manner in which geographic information system (GIS) technology was used for various purposes. Finally, any other unusual or cutting-edge feature or application was noted.

This research is limited in a number of ways. It is not known how many users each site draws each day, week, or year. Profiles of users are not known, nor is it known what aspects of the sites are most used. In a few cases, there were password-protected discussion areas that limited our evaluations. In other cases, public Usenet groups associated with the community network were examined. These were found to be mostly inactive. Data about discussions on community issues that could be taking place in other forums, such as in America Online chat rooms or via personal e-mails or listservers, were also not collected.

5. RESULTS

Table 1 presents summary statistics concerning the type of information resources accessible from the networks that were reviewed. Information was considered accessible from the portal site visited if the information was within a reasonable number of clicks from the portal site home page and the path to the information was straightforward. For example, government information was considered accessible from a community network if a user was able to click on an information category related to government and then click on the desired jurisdiction to get to that jurisdiction’s home page. Conversely, weather information was not considered accessible if a user had to figure out that the best source of weather information was the

<table>
<thead>
<tr>
<th>Type of Information Resource</th>
<th>Number of Community Networks Providing</th>
</tr>
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<tbody>
<tr>
<td>Community events</td>
<td>23</td>
</tr>
<tr>
<td>Government services</td>
<td>35</td>
</tr>
<tr>
<td>Police and emergency</td>
<td>25</td>
</tr>
<tr>
<td>Weather</td>
<td>20</td>
</tr>
<tr>
<td>Education</td>
<td>32</td>
</tr>
<tr>
<td>Environment</td>
<td>23</td>
</tr>
<tr>
<td>Religion</td>
<td>19</td>
</tr>
<tr>
<td>Business</td>
<td>27</td>
</tr>
<tr>
<td>All types provided</td>
<td>5</td>
</tr>
<tr>
<td>Average number of resources provided</td>
<td>5.3</td>
</tr>
<tr>
<td>Average for U.S. nonprofit networks</td>
<td>6.5</td>
</tr>
<tr>
<td>Average for U.S. government networks</td>
<td>4.0</td>
</tr>
</tbody>
</table>

a. The Los Angeles Freenet was dropped from this analysis because access to it was user-identifier protected.
local newspaper site but had to click on links to businesses to find a hyperlink to the newspaper and eventually to the weather forecast.

Several interesting observations can be made about the results presented in Table 1. First, few community networks provide access to a comprehensive set of information resources. Only five community networks provide straightforward access to all of the representative set of eight information topics listed. Second, information about government and education are much more often provided than information about the environment, religious activities, community events, weather, and police and emergency organizations. Third, community networks administered by nonprofit organizations provide access to a more varied set of information resources than do sites administered by government organizations.

Few community networks exhibited characteristics that could be associated with building social capital or acting as great good places. Only between four and eight sites showed any indication of seriously helping people be better citizens, fostering direct democracy, helping students interact with the larger community, letting citizens comment on proposed new developments, or fostering bartering and other alternative economic activities. Only one to three sites address building an organic online community history, bringing citizens together in mentoring relationships, paying attention to low-income communities, and paying attention to senior communities. The Boulder Community Network is the furthest along in providing a broad range of information to support community building.

These observations support two general conclusions about the state of the art of community networks. The first conclusion is that most community networks run by nonprofits are simply Web portals to other Web sites in the community. In other words, the main task for most community networks, over 60% in our sample, is to provide hyperlinks to other sites in the community, much like Yahoo provides hyperlinks to Web sites of various types around the world. There is little uniformity of information provided by the networks other than the observation that the lowest maintenance links are usually available (government and education). Fewer than 10 sites exhibited features beyond this simple task.

The second conclusion is that most of the sites administered by government organizations are not acting as community networks at all. In most cases, they simply provide information about themselves and frequently do not even provide links back to community networks or any other local Web sites. This observation is consistent with the argument presented by Tonn and Petrich (1998b) that governments do not see themselves as responsible for improving citizenship or public participation except in situations in which the public is needed to help the government make a crucial decision.

This study did not examine many commercial sites. However, given the several that were reviewed, it is clear that those that do provide information about communities, as opposed to serving as advertisements for specific local businesses, are mainly designed to attract tourists or new businesses. Thus, although these sites may have much information about the community, from restaurants and hotels to recreation sites and jazz festivals, they are principally designed for outsiders, not local residents.

In combination, it can be argued that the networks serving communities have not made much headway in realizing their potential for improving social capital in their communities. There are few indications of social interactions being fostered by these sites. There is little evidence of dialogue. Virtually no attention is paid to actively promoting communities’ internal economies. The sites do not engender identification with their communities. Few provide information to help people become better citizens.

Although all of the sites reviewed are accessible over the WWW, and thus from work or home or school or other public places, the sites provide people with little opportunity for situated action. There is nothing about these sites that would support the social construction of
great good places. The closest these sites come to generating some type of action, in our opinion, is the police and emergency pages. These organizations are active. The sites routinely provide lists of the top 10 fugitives, names and pictures of missing persons, lists of unsolved crimes, and crime statistics. Many sites provide maps of where crimes have been committed. As mentioned below, the Evansville Police Department and the City of Chicago even allow citizens to report crimes over the WWW. The police sites are a long way from being great good places, but they do provide some semblance of the kind of situated contexts that are needed for the next generation of community networks.

Not all the news is bad news. Many sites display first steps toward becoming great good places. Here are some examples:

- The Boulder Community Network provides easy access to voter registration information, kids’ voting activities, a service exchange organization (unfortunately, services cannot be exchanged online), volunteer organizations, and information important to seniors.
- The Ramat-Negev Freenet in Israel provides links to Israeli/Jewish news from around the world, hosts residents’ Web pages, and maintains numerous documentary pictures of the Negev and other desert sites.
- VICNET in Victoria (Melbourne), Australia provided up-to-the-minute information on that country’s independence referendum and pays special attention to aboriginal and indigenous populations.
- The home page of Evansville Online provides lists of community events, news, weather, and up-to-the-minute economic information.
- The Naples (Florida) Free-Net hosts a swap shop.
- The Zwolle-City (Netherlands) development site allows residents to comment on proposed local redevelopment and construction plans and allows residents to submit their own designs for consideration.
- The Seattle Community Network provides a wealth of resources to educate people about government processes, voter registration, self-employment, and low-income resident services.
- The Seattle Community Network also allows people to comment on transit station options.
- The Santa Monica PEN provides an online form for residents to fill out to volunteer their time to over 20 different community-based activities, from helping in the animal shelter, to translation, to photography. This site also provides information about proposed ordinances, live netcasts of city council meetings, and newsletters for disadvantaged communities.
- The City of Chicago site allows citizens to report online abandoned buildings.
- The City of Portland site provides information about how to get involved in activities to protect the environment.
- The Blacksburg Electronic Village site provides links to several Blacksburg-centered Usenet discussion groups, although those discussion groups are not very active.

Additionally, several sites make good use of maps and GIS technology. Here are some interesting examples:

- Numerous police departments accessible with a few clicks from the community network sites provide maps of where crimes take place in their communities (e.g., see police.evansville.net for crime maps in Evansville, Indiana).
- ESRI, the maker of ARCVIEW and other GIS products, has put up an interactive GIS site for Cabarrus County, North Carolina, that allows one to zoom in and out and search and access parcel-level data (e.g., ownership, sales price, soil type).
- Through the City of Chicago site and other sites in the greater Chicago region, one can access maps of the region’s highways that display up-to-the-minute color-coded traffic conditions (also see the Seattle Community Network).
- The Los Angeles FreeNet provides maps of recent earthquake activities.
- The City of Palo Alto (California) site provides a map that shows where sex offenders live.
- One can access maps of construction projects in Eugene, Oregon from Eugene Freenet.
Last, these sites provided unique and cutting-edge applications of information technology:

- The Evansville, Indiana and Chicago police departments allow citizens to report crimes online.
- The City of Charlotte site allows people to pay their parking fines online with a credit card.
- The Zwolle-City site offers several 360-degree, IPIX-system generated views of the city.
- Numerous cities, such as Atlanta, provide live Webcams of key transportation arteries.

Several issues arose during the assessment of the 40 sites that could pose problems for users and/or potential users of the sites. Here are some examples:

- In a few cases, users may need to download browser plug-ins to run an application. Needing advanced browser technology may limit the number of users of the sites.
- Some of the community networks have names and/or Web site addresses that may be difficult to remember and/or spell. Inconvenient names will make it harder for citizens to find the sites.
- Several sites were not aesthetically pleasing, had fonts that were hard to read, and were generally difficult to navigate.
- No sites appeared to have any special design features for the handicapped, those with vision problems, although several sites offered a choice of language (e.g., the National Capital Freenet in Ottawa, Canada provides both English and French options).
- Several sites had clearly not been updated for several years. Links may not have changed during this period of time, but seeing old dates on community events or discussion comments immediately extinguishes any signs of life one may perceive about the site.

6. CONCLUSIONS

The community networks reviewed for this study, whether taken individually or as a collection of sites serving a community, fall far short of being great good places and of meeting their potential to improve civic life in this country. Community networks managed by non-profit organizations typically only serve as Web portals to other community-based Web sites, which themselves typically only provide information. Sites managed by government organizations typically only provide information about themselves. They do not attempt to become hubs of social interaction. Commercial sites are usually designed to serve tourists or prospective businesses, not the communities’ residents. The sites offer little opportunity for social interaction or the construction of social contexts to promote a sense of community belongingness.

In some ways, these conclusions are surprising. As this article is being written, the number of Web pages in the world is approaching and may have even surpassed one billion. The number of Internet users is now numbered in the hundreds of millions. E-mail is becoming a staple of modern life. Indeed, the Internet has spurred a tremendous growth in interpersonal communication and the WWW has put just about any type of information at the fingertips of users. Thus, computer-mediated activity has exploded in the past few years.

Unfortunately, these activities do not directly translate into community-based activities. Most e-mail exchanges are between friends and family or have work-related purposes. Although computer technology can help to overcome many of the constraints individuals face in becoming involved in community life, the community networks have not been designed to take advantage of technology’s potential.

Community networks that incorporated the best features of the sites reviewed would be a big step toward the goal of great good places. Thus, it is suggested that community networks do the following:
Allow citizens to comment on new development and redevelopment efforts.
Provide citizens with information about issues and how to become better citizens—communities could consider developing citizen certificate programs and allow citizens to enroll in the programs online.
Provide up-to-the-minute news and information about community events.
Provide real-time information about traffic, environmental conditions, weather, and the economy.
Provide online means to facilitate the local service-exchange community.
Moderate well-publicized online discussions about community issues.
Host job announcements and resumes.
Facilitate involving citizens with community activities by allowing them to volunteer online to contribute their time.
Allow people to contribute images of their community—past or present—and allow them to provide commentary on the images and links to other images in order to build an online community history.
Help people find mentors, whether these people are students or adults and whether the topic is citizenship or business or science or gardening.

To achieve these goals will require new strategies for several reasons. First, nonprofit organizations do not appear to have the funding needed to support the programming and staff time needed to build sophisticated and active sites. Second, government organizations have not shown the inclination to do more than provide information. Third, other than providing hyperlinks, there does not appear to have been much coordination between the community-based Web service providers. The above goals can only be met with more funding, a more active role of government, and through increased coordination among the main Web service providers.

One suggestion is to create new hybrid organizations in communities to provide comprehensive community network services. The private sector needs to be involved to provide the financial resources. Nonprofit organizations must stay involved in order to provide nonpartisan oversight over the design and administration of the social interaction aspects of the sites. Government needs to be more actively involved because much community discussion needs to address public policy issues and much community involvement can center on government-led community services.

Additionally, the virtual community network enterprise, now more broadly conceived, must be undertaken in concert with as many face-to-face situations as possible. The more people can meet each other in person and get to know each other in full communication-channel settings, the more they will be likely to build on their relationships in cyberspace. The virtual great good place can be complemented by new, physical great good places that foster dialogue while providing, yes, access to cyberspace and other enticements.

Future research needs to focus on designing virtual great good places as well as complementary physical great good places. Use of the Internet outside of community networks needs to be studied for indications of dialogue leading to community-based behavior. New organizational designs to support networked communities need to be developed, tested, and implemented. Additional technological sophistication also needs to be explored. The use of sound is one suggestion (e.g., audio clips of residents). Multichannel video conferencing is another. In the future, the use of haptic devices and virtual reality environments should be explored.
APPENDIX

Community Networks Visited

Naples (Florida) Free-Net, www.naples.net
MAIN: Metropolitan Austin Interactive Network (Texas), www.main.org
PrairieNet Community Network (Champaign County and East Central, Illinois),
   www.prairienet.org
Los Angeles FreeNet, www.lafn.org
National Capital FreeNet (Ottawa, Canada), www.ncf.carleton.ca
St. John’s/Newfoundland Infonet (Canada), www.infonet.st-johns.nf.ca
Big Sky Telegraph (Montana), macsky.bigsky.dillion.mt.us
Aurora Online (Illinois), www.aurora.il.us
Alachua Free-net (Gainesville, Florida), www.afn.org
Bloomington Free-net (Pennsylvania), www.bafn.org
City of Zwolle (Netherlands), www.zwolle-city-development.nl
Atlanta, Georgia, www.atlanta.com
State of New York, iloveny.state.ny.us
KORRNET: Knoxville Oak Ridge Regional Network (Tennessee), www.korrnet.org
Eugene FreeNet (Oregon), www.efn.org
IthacaNet (New York), www.ithaca.ny.us
Seattle Community Network (Washington), www.scn.org
The Rio Grande Free Net (El Paso, Texas), rgfn.epcc.edu
Santa Monica Public Electronic Network (California), pen.ci.santa-monica.ca.us
La Plaza Telecommunity (Northern New Mexico), www.laplaza.org
City of Cambridge (Massachusetts), www.ci.cambridge.ma.us
Blacksburg Electronic Village (Virginia), www.bev.net
RAIN: Regional Alliance Information Network, www.rain.org
Village of Glenview (Illinois), www.glenview.com
Maryville, Tennessee, www.ci.mariville.tn.us
Cabarrus County (North Carolina), www.co.cabarrus.nc.us
Evansville Online (Indiana), www.evansville.net
Boulder Community Network (Colorado), bcn.boulder.co.us
Ramat-Negev FreeNet (Israel), ramat-negev.org.il
VICNET (Victoria, Australia), www.vicnet.net.au
CamNet (Cambridge, England), www.cam.net.uk
Community Information Network of Northern Ireland (Belfast), www.cinni.org
City of Berkeley (California), www.ci.berkeley.ca.us
City of San Francisco (California), www.ci.sf.ca.us
Neighbornet (San Francisco, CA), www.neighbornet.org
City of San Jose (California), www.ci.san-jose.ca.us
City of Portland (Oregon), www.ci.portland.or.us
City of Palo Alto (California), www.city.palo-alto.ca.us
Charlotte’s Web (Charlotte, North Carolina), www.charweb.org

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