

Bridging the Digital Divide

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Our society and economy is increasingly reliant on information technology (IT). Many low-income communities are isolated from recent technological advances and do not have access to personal computers, the Internet and the interactions and opportunities these technologies provide. This experience defines the “digital divide” – the separation between those who do and those who do not have access to information technology.

We must work to understand the impact technology transformation has on low-income communities with two key questions guiding our efforts. First, how might existing and emerging technologies be used as a tool to support community-building efforts? Second, can we draw from the decades of experience in the community-building field to inform current efforts to bridge the digital divide?

The current focus of policymakers, community activists and IT industry leaders is largely to create policies and programs that provide low-income communities with training and access to information technologies. Access for what purpose? The policy dialogue must go beyond the current access-centered paradigm. The next steps for IT policy and practice must support the creation of local content and build the technology capacity of community based organizations.

Our community technology policy agenda should include:

1. Promotion of universal access and training;
2. Technology capacity building for community based organization;
3. Creation of community driven content; and,
4. Development of new applications and expansion of relevant local content

Community based organizations are rich storehouses of local information, but they frequently lack the technology capacity to either use this valuable resource themselves or to share it with other community serving organizations. Those who are using it to support their work and extend their impact have developed proficiencies in:

1. Advocacy and online organizing;
2. Community information clearinghouses;
3. Networking and online communities;
4. Innovations in service delivery;
5. Interactive database development; and,
6. Community mapping.

In Minneapolis, a number of community technology centers and technology assistance providers have been established as a result of programs and policies initiated by Federal Government, State of Minnesota, Hennepin County, City of Minneapolis and directed philanthropy. If one goal is to strengthen neighborhoods using the power of information technology, it is critical to understand the importance of the existing infrastructure and its connection to local constituents. Our community based organizations are the gate keepers of local information and are, therefore, the appropriate actors for creating local content that is relevant, useful and available online.

Local content – relevant and meaningful community and neighborhood based information on topics such as employment, housing, community events, education, childcare and social services – must be able to be understood by limited-literacy users, published in appropriate languages and offered in culturally appropriate ways.

As we develop policies and programs to bridge the digital divide, we must insure that these are linked to broader strategies for social change in two ways. First, we must allow the wisdom and experience of the existing community infrastructure to guide our efforts. Second, we must focus our efforts on using emerging technologies as a tool to strengthen and support our existing community infrastructure. Strategies that promote a culture-of-use in community based organizations, and the constituencies they work with, are critical. Some activities that will promote a culture-of-use include:

1. Developing stronger and deeper links between technologists and community builders to that awareness of technology's impact is better understood;
2. Creating an inventory of community based applications, along with technology descriptions, that illustrate how IT tools can be used as a tool for social change; and,
3. Creating online and offline opportunities for community based organizations to share knowledge and experience around developing content and applications.

Many local communities around the globe have demonstrated that Internet technologies can be an effective tool in boosting local economic and social development. As a result, the social appropriation of Internet technologies is emerging as a research and practice called "Community Informatics." Community Informatics is the application of information and communications technologies to enable community processes and the achievement of community objectives. International researchers and funding agencies have moved towards the term Community Informatics Systems (CIS) as a parallel for Management Information Systems (MIS).

Community Informatics Systems focus on distributed systems and not aggregated ones. CIS is also based on a premise of active interaction in the development, use and appropriation of the systems. Other significant aspects of the "Community Informatics" approach include the development of strategies for the analysis of community and social requirements for designing community based processes of technology appropriation and planning; technology program planning; and, outcomes evaluation research.

In preparing for the next phase of the emerging information and communications technology-enabled environment, a new social contract is required that binds and partners civil, private and public sectors in delivering social inclusion and social cohesion in ways that strengthen

economic, social and cultural benefit in the information society. City of Minneapolis should represent itself as a facilitator and active member of this network of community leaders.

The financial stability of community information and communications technology initiatives needs policymakers and funding approvers to acknowledge their long-term responsibilities and involvement. “Project culture” and “social experiment” approaches are incompatible with meaningful attempts to build and sustain active and healthy communities in the information society. Communities themselves will ultimately determine the sustainability of community technology. Active participation of a local community – at every stage of the long term responsibilities and involvement life cycle – is essential if the community is to identify with and develop a sense of ownership of an initiative. Active citizenship, human-centered design and communal participation from the early planning stages are therefore prerequisites for sustainability.

A human-centered approach to community informatics recognizes the realities of community life by attempting to incorporate them into the design, implementation and development of community technologies. It is important to evaluate the tensions that exist between the competing social agenda of funding approvers, technologists, community and voluntary groups, public sector agencies, researchers, and communities themselves. Within a community policy context, this requires an understanding that no two communities are alike. Each has different norms and cultural value systems historically constructed as a result of social circumstances. Local information society policies must acknowledge and reflect this diversity.

In the design process, technology should be viewed as a tool to be designed, used and shaped by humans for human purposes. Technological systems are subordinated to community needs across a broad spectrum of considerations – not just in terms of service requirements and applications, but in fundamental system designs, as well.

Because communications is a central dynamic of active community life, social cohesion – which focuses on the promotion of social dialogue – is communications with a view to improving conditions. Communication in which knowledge can be exchanged within and between diverse cultures should be a key goal.

For a dynamic system to successfully operate, all the elements of the system have to share some critical common ground. The common ground is in recognizing that community communication is a dynamic process, with various meanings for the people involved, with varying attitudes toward privacy and published access, with various motives behind the act of communication. Definitions of what constitutes the personal and informal in communication – as opposed to that which is public, external and functional – should come from the communities themselves.

From a technical perspective, given the hard-wired nature of information and communication technology and the commonly practiced top-down approach accompanying it, technocratic values can sometimes invisibly and even unintentionally saturate an entire community technology initiative. Issues around cost, access and control, privacy and distribution, amongst many others, have to be considered at the design stage from a community perspective.

Technological imperatives, which distort human or community actions, are ultimately dysfunctional and form a dangerous basis for determining community policy and practice. The fundamental questions of who benefits from community technology, who owns it, who controls its distribution and applications, and who defines the nature of communication are central to any consideration of the sustainability of community technology.

In recent years, innovative examples of community based organizations using technology as a strategic tool to support the community have begun to surface. Digital technologies are effective tools to support and enhance advocacy and organizing efforts. E-mail listservs, facilitated discussion lists, online action alerts, and other tools, are most successful when they promote and build upon offline activities.

One of the most effective uses of IT tools is to facilitate coordination of activities, improve communication and build or strengthen relationships. These tools can also be applied to improve the delivery of social services. For example, the strategic use of technology can streamline service delivery, help social service organizations serve a larger number of constituents, and facilitate collaboration across organizations.

The Internet is moving more and more towards interactivity, with complex back-end databases allowing users to create individual online experiences by accessing information that is customized to their needs. Community groups use interactive databases to help their constituents find employment, community assets, and other local information. GIS and other information systems help identify and organize data according to location. These tools are being used for public policy development, neighborhood planning, advocacy and research.

City of Minneapolis (COM) has the opportunity to take a leadership role in closing the “digital divide” by establishing a set of principles to guide the operations of a collaborative effort. COM can help to coordinate community technology initiatives to create a common technical platform and ensure the usefulness and consistency of applications. We can help to decentralize access to information and database tools, promote communication and cross-learning across our community technology centers, provide strategic seed funding, and provide accessible and affordable central support and technical assistance.

Access for individuals, capacity building for organizations, content and applications development, taken together, constitutes a comprehensive strategy for bridging the digital divide. The Minneapolis Broadband Wireless and Fiber Network initiative serves the important function of building the infrastructure upon which we can develop strategies for greater social and economic inclusion. Parallel to this universal access strategy, we need efforts that promote the development of relevant content for residents, businesses and visitors and innovative applications that can support the work of community based organizations focused on promoting equity and, economic, social and cultural benefit for the residents, businesses, visitors and employees of City of Minneapolis.