An Asset-Based Approach to Community Building and Community Technology

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Introduction

At the intersection between community building and community technology lies tremendous synergy. Each of these domains seeks to empower individuals and families, and improve their overall environment. Surprisingly, approaches that combine these areas have received very little attention. In response to the "digital divide" (NTIA, 1995, 1997 & 1999) the challenge in many minority and low-income communities has been to identify strategies for engaging residents with technology, providing economical access to technology, and encouraging meaningful use of technology. These efforts have largely, and justifiably, focused on establishing infrastructure and providing training. As computers and the Internet continue to penetrate these communities, it begs the question of what can be done to truly leverage a given technological base. From among the three models of community involvement with technology   community computing centers, community networks, and community content (Beamish, 1999) there are a limited number examples where technology has been used to promote community building by regarding residents and other community members as key stakeholders in the process. Conversely, from among the multitude of models for community revitalization, such as community organizing, community development, and community building (Hess, 1999), we are only beginning to witness the benefits that are afforded by incorporating technology into these approaches in a meaningful way.

Asset-based community development (Kretzmann & McKnight, 1993) is an approach to community building that sees community members as active change agents rather than passive beneficiaries or clients. Sociocultural constructionism (Pinkett, 2000; Hooper, 1998; Shaw, 1995) is an asset-based approach to community technology that sees community members as the active producers of community information and content rather than passive consumers or recipients. With anticipated increases in funding for large-scale community building and community technology projects (The White House, 1999), there is a great deal to be learned regarding how community building and community technology can be mutually supportive, rather than mutually exclusive.

This paper will share the results of a current project being conducted in a federally-assisted, affordable housing development located in Chicago, Illinois. It involves an ongoing and comprehensive effort to integrate asset-based community building and community technology. The objectives of this project are two-fold. First, to demonstrate how a community technology center (CTC) located on the first floor of the housing development, can be relevant and meaningful to resident capacity building through the introduction of workforce development programs and broader connections to the local neighborhood. Second, to demonstrate how appropriate online tools can support asset-mapping and mobilization within the designated community by strengthening its economic, human, and social capital.

This project's methodology included: (1) one-on-one interviews with the residents of the housing development; (2) an asset-mapping of neighborhood resources in the community within a 16-block radius of the building, such as businesses, schools, community organizations, churches, and voluntary associations; and, (3) the design and implementation of a comprehensive web system, the Creating Community Connections (C3) system, to facilitate relationship-building, information sharing, and resource brokering among the aforementioned constituencies.

Asset-Based Community Development and Community Building

Community revitalization can begin from one of two underlying paradigms: *needs-based* or *capacity-focused.*

A needs-based paradigm focuses on a community's deficiencies and problems. Such an approach is often *top-down,* beginning with what is absent in the community, and *outside-in,* relying heavily on the efforts of external agents, such as technical assistants. It can be argued that needs-based approaches not only teach local people that they cannot shape their own future, but also that they require services as an answer to their problems. Consequently, "many lower-income, urban neighborhoods are now environments of service where behaviors are affected because residents come to believe that their well-being depends upon being a client" (Kretzmann & McKnight, 1993, p. 2). Thus, needs-based approaches encourage both the residents and the professionals who service them to bypass local assets and resources. With recent reforms in welfare, public housing and job training programs, it is now becoming necessary to understand the resources that are embedded in communities and their residents. In essence, a needs-based paradigm deprives communities of problem solving capacities in the area of community revitalization.

A capacity-focused paradigm recognizes the skills, talents and gifts of local community members. This approach is fundamentally *bottom-up,* beginning with what is present in the neighborhood, and *inside-out,* relying heavily on the efforts of internal agents, such as residents, associations, and institutions. A capacity-orientation lies at the heart of *community building* a model for community revitalization that is focused on "strengthening the capacity of residents, associations, and organizations to work, individually and collectively, to foster and sustain positive neighborhood change" (The Aspen Institute, 1997).

Asset-based community development (Kretzmann & McKnight, 1993), a particular approach to community building, assumes that social and economic revitalization starts with what is already present within a community - not only the capacities of residents as individuals, but also the existing commercial, associational and institutional foundation. This involves pinpointing, or "mapping," all of the available assets in the community, and connecting, or "mobilizing," them in ways that multiply their power and effectiveness. An asset-based approach to community building perceives local residents and other community stakeholders as active change agents rather than passive beneficiaries or clients.

The focus on local assets redirects attention to the extensive social capital of communities. Putnam (1998) who popularized its application to political civic engagement defines social capital as "the norms and networks of civil society that lubricate cooperative action among both citizens and their institutions" (p. v). Thus, the social capital of local communities represent "mutually supportive institutions within a neighborhood that residents can turn to when the going gets rough" (Temkin & Rohe, 1998, p. 63). The individual capacities of residents are the basic building blocks of any community. As people exercise these capacities, they often find they need the talents of others in their enterprises. This leads them to join with other individuals who will work with them toward a common goal. When they do this, individuals combine their own talents with the capacities of others to form associations and support local institutions that can make extensive and valuable contributions to their community.

For example, Stagner and Richman (1996) found that both friends and extended family members were the main source of support in low-income families. They recommended that "[i]nformal supports in the community which encourage and enable friends and neighbors to care about each other should be strengthened" (p. 54). Thus, a significant premise of asset-based community development is to involve as many community stakeholders residents, voluntary associations, and neighborhood-based institutions in the creation of plans, visions, and projects that support community building.

Naturally, technology can play a significant role in promoting community building by facilitating communication, and information and resource exchange, from among a host of other activities. However, not all technologies are created equal. While e-mail and listservs are useful and valuable tools, we are advocating a new class of community technology, that is specifically designed to support asset-based community development, and is based on the theory of *sociocultural constructionism* (Pinkett, 2000).

Sociocultural Constructionism and Community Technology

A "digital divide" (NTIA 1994, 1997 & 1999) is being created within society as many low- to moderate-income, urban individuals and families have little to no access to computers and online services. Disproportionate racial and ethnic access further deepens this divide. Furthermore, in addition to the digital divide, a closely related "content divide" has also emerged that is characterized by a lack of "material and applications that serve the needs and interests of millions of low-income and underserved Internet users" (The Children's Partnership, 2000, p. 4).

In Chicago's metropolitan community — where the scope of this project was conducted — there are obvious disparities in PC-ownership and usage across residence, income, and race/ethnicity. In 1997, Chicago's Metro Chicago Information Center (MCIC) collected data from the city and six surrounding counties about computer use and ownership, and access to on-line services. According to their findings, computer use in metropolitan Chicago is nine percentage points below the average use of surrounding counties. When controlling for income, MCIC also found that only 41 percent of low-income Chicago residents have ever used a computer. Access to on-line services was also disproportionately low among Chicago's low-income residents. When low-income residents were asked about Internet use, less than 40 percent of the sample reported any activity.

Three primary models have emerged as solutions for addressing the disparities in computer and Internet access, use and content (Beamish, 1999). The first model is *community networks,* or community-based electronic network services, provided at little or no cost to users. The second model is *community computing centers* or community technology centers (CTCs), publicly accessible facilities that provide computer access for people who can't afford a computer, as well as technical instruction and support. The third model is *community content,* or the availability of material that is relevant and interesting to some target audience (e.g., low-income residents) to encourage and motivate the use of technology. These approaches can be classified according to what they provide: hardware, software, and training, infrastructure, online access, or content. They can also be classified according to the groups they target: individuals, schools, youth, community organizations, and the general public, or specific groups such as a neighborhood, racial or ethnic minorities, the homeless, and the elderly (Beamish, 1999).

Community technology is "a process to serve the local geographic community - to respond to the needs of that community and build solutions to its problems" (Morino, 1994). Our approach to community technology is rooted in the theory of *sociocultural constructionism* (Pinkett, 2000), a synthesis of the theories of *cultural constructionism* (Hooper, 1998) and *social constructionism* (Shaw, 1995):

- Cultural constructionism argues that individuals learn particularly well through creating objects in the world that express their cultural identity and have shared meaning within their home cultures (Hooper, 1998). A cultural construction could be a personal website, electronic community newsletter, or any other project that is an expression of cultural identity, and at the same time facilitates an engagement with new knowledge. Cultural constructionism is a useful framework for identifying ways technology can advance the interests and needs of an *individual*.

- Social constructionism states that individual developmental cycles are enhanced by shared constructive activity in the social setting, and the social setting is also enhanced by the developmental activity of the individual (Shaw, 1995). Shared constructive activity refers to the creation of "social constructions," of which there are five types: 1) social relationships, 2) social events, 3) shared physical artifacts, 4) shared social goals and projects, and 5) shared cultural norms and traditions. Social constructionism is a useful framework for identifying ways in which technology can advance the interests and needs of a *community*.

Sociocultural constructionism argues that individual and community development are reciprocally enhanced by independent and shared constructive activity that is resonant with both the social setting that encompasses a community of learners, as well as the cultural identity of the learners themselves. Technologies that are consistent with this paradigm empower residents to express their cultural heritage, enable broad community communication, and information and resource exchange. Some examples include personalized web portals for residents, an online community newsletter, a community asset-mapping database, and customizable templates for residents, associations, and institutions to create their own home pages. Such an approach empowers residents, local associations and institutions, and neighborhood businesses to share information and resources that they deem important such as recipes or artwork, volunteer opportunities, and hiring needs. Sociocultural constructionism is an asset-based approach to community technology that sees community members as the active producers of community content rather than passive consumers or recipients.

In summary, the best practices of community building see community members as active change agents. Asset-based community development is firmly grounded in this belief. The best practices of community technology see community members as the active producers of community information and content. This is the fundamental premise of sociocultural constructionism. We believe an asset-based framework is useful for conceptualizing how these perspectives can work in concert to bridge the aforementioned digital and content divides. In the following

section of this paper, we describe the results of a project that is integrating community building and community technology, based on the principles of asset-based community development and sociocultural constructionism.

Project Methodology

The Neighborhood Technology Resource Center (NTRC) is located on the first floor of the Northwest Tower Apartments, which is a federally-assisted, 150-unit housing development situated in Chicago's West Town community. Approximately 89 percent of Northwest Tower residents are receiving some sort of housing subsidy or pension. In 1996, Northwest Tower residents purchased the building under HUD's Low-Income Housing Preservation and Reservation Act (LIHPRHA) program to maintain affordable housing at the site. As part of this program, residents formed a non-profit organization called the Northwest Tower Resident Association (NTRA) to manage building operations. In 1998, the NTRA was provided seed money through the U.S. Department of Housing and Urban Development's Neighborhood Networks program. The goal of HUD's Neighborhood Networks program is to develop on-site computer learning centers (CLC) for privately-owned low-income housing sites. Founded in 1999, the Neighborhood Technology Resource Center (NTRC) is a newly created non-profit corporation that will create, administer, and track the educational, career development and job placement initiatives offered at the CLC.

Located northwest of Chicago's downtown area, the NTRC services the southeast section of Chicago's West Town community. According to the 1990 U.S. Census, West Town's population of 87,703 was predominantly Latino (61%). Twenty-eight percent of the population was white, 9 percent African-American, and 2 percent of Asian or Native American origin. In 1989, the average family income of West Town was $21,000, much lower than the citywide average of $31,000. Whereas the immediate community area is predominantly Latino, residents of Northwest Tower are primarily African-American (89%) with all but the balance being Latino. Of the 750 residents of Northwest Tower, 65 percent are female and 42 percent of residents are under the age of 18 years old. As a subsidized housing development, 30 percent of building residents receive public assistance, and 36 percent receive some sort of pension. Forty percent of the resident population is employed in wage-earning jobs that typically fall at or below the 50 percent of Chicago's median annual income.

To incorporate community building and community technology with the residents of Northwest Tower Apartments, three phases were completed: 1) individual capacity mapping, 2) neighborhood asset-mapping, and 3) design and implementation of a comprehensive web system, the Creating Community Connections (C3) system. Residents were directly involved in the identification of neighborhood assets (steps 1-2), and influenced the design of the C3 system (step 3). Each of these phases is summarized below.

Phase I: Individual Capacity Mapping

In the Fall 1998, a resident capacity inventory was conducted at the housing development. Five residents were retained to administer a pre-designed *resident capacity survey* instrument (Turner, 1999). Personal interviews were conducted over a three-week period with adult residents between the ages of 18 and 55 years old. In all, 72 of 105 adult residents completed the resident capacity survey. The survey was divided into the following sections:

● Demographics
● Community satisfaction and homeownership
● Employment experience
● Educational background
● Individual skills and abilities in a variety of employment categories
● Use of technology
● Involvement in community organizations and associations
● Purchasing patterns

Overall, the results of the individual capacity mapping demonstrated that residents of this federally-assisted housing development are rich in occupational skills and capacities that can significantly meet local/regional employment demands. By far, the highest number of reported skills fell in the categories of office, creative, and educational training. Some of these skills were highly specialized, such as ordering supplies, while others were more general. In all of the skill categories, there were also a number of individuals interested in learning a new skill or occupation. At least 10 percent of all respondents were interested in learning construction-related skills, and/or moving into professional occupations, such as social services, accounting, or human resources. This apparent willingness to

move into vocational or career-oriented jobs most likely reflects respondents' desires to obtain livable wage scales, as opposed to minimum wage jobs.

While respondents' current expertise in technology is low, their willingness to learn computers and computer-related fields was also quite significant. An average of 25 percent of respondents was interested in acquiring computer skills. The interest in the specific skill-sets peaked the other categories mentioned in the survey, despite respondents' disproportionate use of the NTRC. This information was subsequently adapted and entered into the C3 system that will be described more fully in Phase III.

Phase II: Neighborhood Asset-Mapping

Two resident surveyors conducted the inventory of neighborhood resources. In this phase, neighborhood resources included churches, agencies, schools, municipal buildings, libraries, voluntary associations, and local businesses that existed within a 16-block radius of the housing development. Hereafter, the 16-block radius will be referred to as the "neighborhood focus area." Several methodologies were utilized in the neighborhood focus area to locate resources, including the following: public data sources, contacts with local institutions, field visits, informal interviews with residents, business owners, and church leaders, and library research on local business information.

In all, 188 local businesses were identified in the neighborhood focus area. Where possible, the following information was obtained for each business:

● Name and address
● E-mail and web address
● Name of owner, hours of operation, and number of employees
● Type of business (according to a defined typology)
● Standard Industrial Classification (SIC) code and division

This information was subsequently adapted and entered into the C3 system. A revised *business capacity survey* is currently being distributed that will obtain the following additional information:

● Products and services sold
● Products and services purchased
● Hiring needs

In all, 96 community organizations were identified in the neighborhood focus area. Where possible, the following information was obtained for each organization:

● Name and address
● E-mail and web address
● Contact person, and meeting times
● Type of organization (according to a defined typology)

Once again, this information was subsequently adapted and entered into the C3 system. A revised *organization and association capacity survey* is currently being distributed. It is based on the survey used in the asset-mapping project for non-profit organizations that is coordinated by PrairieNet and the Community Networking Initiative (CNI) at the University of Illinois-Urbana Champaign (Contractor & Bishop, 1999). This survey will obtain the following additional information:

● Community needs targeted
● Community members targeted
● Assets typically needed
● Assets available to share
● Projects and activities
● Community partnerships

Phase III: Design and Implementation of an Online Asset-Mapping System

The data obtained from Phases I and II were published in a database that could be accessed for job training and placement. The first instantiation of the database resided on a single computer at the on-site lab and included the resident database with a résumé creation function, local business database, and community organization database. The second instantiation of the database resulted in a more holistic solution, the Creating Community Connections (C3) system, an online tool that facilitates asset-mapping and resource sharing. C3 is shown in Figure 1. Local stakeholders were involved in testing the C3 system for its functionality. C3 is designed to leverage and strengthen the economic, human, and social capital of West Town for the purpose of community building.
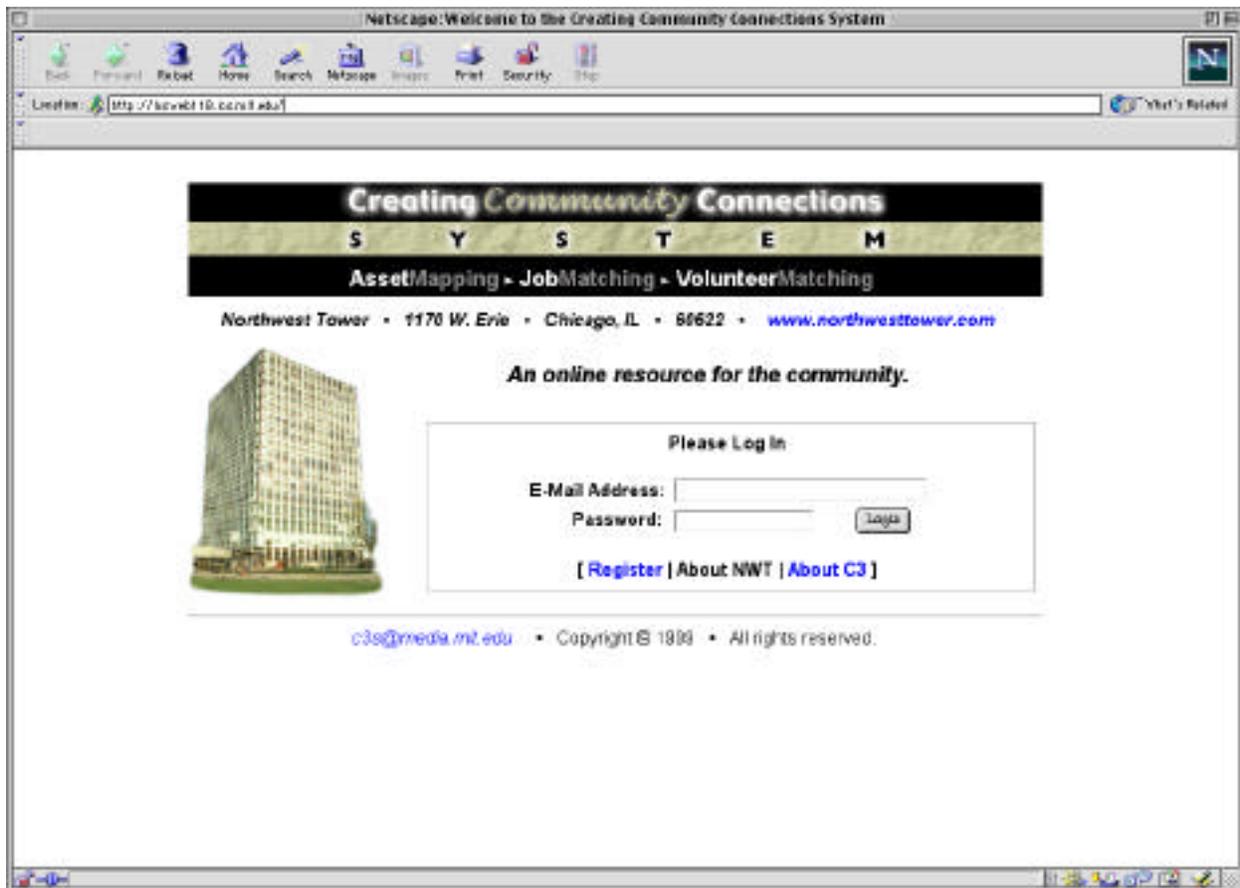
Figure 1: The Creating Community Connections (C3) System

The main features of C3 include the following:

● Individually customizable **Web Portals** that bookmark popular websites and allow users to track their system activity. Users also have access to predefined web portals targeted at specific areas such as seniors, college preparation, and small business development.

● An interactive **Resident Database** that allows residents to enter, track, and update both their employment/volunteer skills and capacities, as well as create and print a contemporary résumé.

● An interactive **Metropolitan/Local Business Database** that allows residents to review, query, locate, and research goods and services that fall within their immediate neighborhood. Users can also query the hiring needs of participating businesses, as well as link to business websites and/or email addresses. Businesses can also enter and update their capacity record.

- An interactive **Community Organization/Association Database** that allows residents to review, query, and connect to neighborhood resources, such as schools, churches, social service agencies, libraries, neighborhood associations, and health care facilities. Users can also query organizational capacities, such as assets needed, assets willing to share, as well as link to organizations' web and/or email addresses. Organizations and associations can also enter and update their capacity record.

- An interactive **Job and Volunteer Posting Board** that allows residents to respond to employment and volunteer opportunities and includes automatic e-mail notification of potential job/volunteer matches. Community organizations, associations, and businesses are able to post opportunities, track responses, and view résumés from any online location or via e-mail notification.

- Full **Search Capabilities** of resident, business, and organization capacity records such that users can identify assets and resources within the community.

- A built-in **Case Manager** that provides real-time statistics on system users and community resources.

The future vision for C3 is to incorporate additional features that support community communication, such as a bulletin board and calendar of events, as well as information sharing and expression, including templates for residents, businesses, and organizations to create their own home pages.

The final phase of the project, which is currently underway, is to solicit the participation of local businesses, community organizations, and associations to provide their complete capacity records and begin populating the C3 system with job and volunteer postings.

Towards a New Paradigm of Community Building and Community Technology

In this paper, we have described a project that is currently underway at the Northwest Tower Apartments a federally-assisted, 150-unit housing development situated in Chicago's West Town community. This project demonstrates: 1) how a community technology center (CTC), the Neighborhood Technology Resource Center (NTRC) located on the first floor of the Northwest Tower Apartments, can serve as a locus for social and economic programs that increase the capacity of residents and the broader community, and 2) how a comprehensive web system, the Creating Community Connections System (C3), can support residents, local associations and institutions, and neighborhood businesses, in mapping and mobilizing community assets and resources.

The project's methodology is grounded in the practice of asset-based community development and the theory of sociocultural constructionism. Asset-based community development is an approach to community building and revitalization, while sociocultural constructionism is a theory regarding individual and community engagement with technology. Both asset-based community development and sociocultural constructionism promote community members as active, rather than passive, participants in the process. Here, we have shown that an asset-based approach to community building and community technology can be effective in strengthening a community's economic, human, and social capital.

Our research contribution to the fields of community building and community technology add to the current debate of how to build information infrastructures that can address the digital divide and closely related content divide. Since many low- to moderate-income citizens have not been engaged in this debate, the combination of community organizing principles through an asset-based framework, and individual and community engagement with technology through a sociocultural constructionist paradigm, can provide a holistic approach towards their integration.

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