



Rural **RESEARCH REPORT**

Spring 2007
Volume 18, Issue 6

Published by the Illinois Institute for Rural Affairs

Stipes Hall 518
Western Illinois University
1 University Circle
Macomb, IL 61455-1390
309/298-2237

www.IIRA.org

The Need for a Dynamic Rural Web Presence

by Paul Schuytema

Introduction

Small rural communities of fewer than 4,000 residents are at a strong advantage if they have a solid Web presence. This paper explores how rural communities with limited financial resources and technical expertise can have a useful Web page along with the ability for community and business leaders to maintain this presence.

Context. The Internet has become the dominant communication tool in the global “information economy” of the 21st century and the World Wide Web (along with e-mail) is the dominant form of information exchange across the Internet. Already, nearly 10 billion Web pages exist, an amazing statistic given that the world population is slightly more than 6 billion persons (Sullivan 2005).

The “Web” has reached such a level of ubiquity that it is now the primary “first stop” for individuals and businesses seeking information on any specific topic. This is a fundamental change in the research pyramid that dominated information retrieval only 15 years ago. Any entity, whether a business, a community, or an organization, without a presence on the Web will be excluded from the primary searches of individuals looking for goods, services, or information. The huge number of Web pages now on the Internet and the powerful search engines that put these pages within easy grasp of Internet users make it essential that Web pages be professional, well-designed, and well-placed to be found, and instantly useful, to Web users.

Beyond simply conveying information, the initial one-way information flow of Internet connection, the Web, can now accept and act on user information. The Web is no longer just an encyclopedia; rather, it is an entire service

bureau that handles banking, shopping, travel planning, entertainment, and business-to-business commerce. These factors mandate that communities have a solid Web presence, both to provide information for external users (for economic development, etc.), and even more importantly, to provide a two-way information exchange with Web users.

Why is the Web Important? The Internet is very often the first stop that site selectors use to evaluate potential communities for potential business expansion or relocation (Ady International Company 2007). If a community’s website is not professional and informative, a community will be overlooked or dismissed in the first step of the site selection process. A well-prepared Web presence, on the other hand, helps to create the potential for a community to be “lucky” in attracting new businesses.

In addition, as residents demand more responsiveness and action from elected officials, a solid community website can become a cost-effective means for local administrators to provide vital, up-to-date information to constituents while also creating an accurate impression that the community is forward-thinking and responsive.

A community website is a primary means of communicating community assets or characteristics, as well as available goods and services, to the outside world. While small rural communities are at a disadvantage in this age of large companies relocating offshore, they nevertheless provide valuable assets—namely, a quiet, safe, peaceful lifestyle or quality of life and recreation opportunities that celebrate a shrinking great outdoors.

¹The author is an Educational Technology Specialist for the University of Illinois Extension program where he designs, produces, and implements software simulations and serious games that support faculty research and the University of Illinois Extension’s outreach mission. He works with IIRA and the Stark County Economic Development Partnership on a project to update Web pages for businesses in Stark County.

A website is the perfect tool to promote the quality of life in a community and its personality to those knowledge and creative class workers with flexible lifestyles or who are independently employed. The Web also is a great vehicle

for promoting a community to weekend adventurers or those people seeking to escape for longer periods of time. These advantages of a community website justify why a strong Web presence is vital for small rural communities.

Goals for a Community

A community may seek an enhanced Web presence for many internal and external reasons. First and foremost, a community should see the Web presence as a chance to communicate its positive attributes. A community website can provide accessible community data as well as portraying a sense of the multiple aspects of a community's tapestry of residents, groups, and organizations.

the Internet for marketing and selling goods. Often, small businesses in rural areas underestimate the opportunities that arise from an effective website. Communities with an effective Web presence can serve as a powerful catalyst for inspiring new initiatives with local businesses and organizations.

Not to be overlooked are several beneficial economic impacts of having a strong Web presence. As previously mentioned, site selectors use the Web as the first step in evaluating a community for possible business relocation or expansion. A community lacking a strong Web presence will be passed over long before anyone in the community even is aware of an organization's relocation interest. Communities with a strong Web presence certainly benefit when their website attracts external investment contacts.

Strong websites also present a professional and attractive "resource" for start-up businesses seeking a place to set up shop. A professional website, coupled with tangible and useful incentives, can provide a compelling pull for entrepreneurs seeking to start operations in a small but cost-effective community. For this purpose, the website must present the community's quality of life along with other incentives and information needed for a small business entrepreneur to make an informed location choice.

Although industrial relocation no longer is the primary means for stimulating economic growth in rural communities, the economic impact of attracting a large relocation is so significant that most communities want a professional website in order to level the playing field and present their best face.

A community website can also create a compelling pull for self-employed consultants, nano-corps, or telecommuters looking for an attractive community. By presenting an honest and accurate but compelling picture, a community can answer many questions for this Web audience. Chief among the concerns of this group will be the quality of life issues, schools, cultural opportunities and the "digital" infrastructure of the community (Florida 2003).

Of equal significance, a professional and technically advanced website can encourage local businesses to utilize

IIRA Goals

The Illinois Institute for Rural Affairs, recognizing both the advantages for having a robust website and the need for developing community operational skills, undertook the challenge of developing a program that enabled communities to develop and manage their website after a relatively short introduction and learning period. In 2005, IIRA worked with this author's company, Magic Lantern, a software development business in Monmouth, Illinois, to create such a program.

project forward. The program excites stakeholders—not only about the advantages of having a community website, but also about how that website and future growth might help to strengthen and grow the community. Key to success in programs such as this one is that local economic development is integrated into the Web page development and management process.

By creating a solid foundation on which to build a community website, the program helps community and business leaders understand that they can move the

Participants in these programs must understand the community, both from an external viewpoint and from the perspectives of the community leaders themselves. Understanding the community enables the incorporation of specific recommendations in order to work towards a plan

that truly reflects the goals of the community. A community that has gone through the MAPPING process is ideally suited to understanding the goals and outcomes that a website can help service (IIRA 2007).

Also important is helping communities learn to manage a Web page at a low cost to the community, whether the website is administered as part of a large grant and service program or as a stand-alone and paid by the community. To this end, all of the tools used in the IIRA program must be created from open source software to spare the communities from significant software expense.

The program must be designed so that the Web can succeed even in communities without technical stakeholders. Often, small communities may lack available technical resources but that should not prevent the creation of a successful website. The goal must be to provide as much of a turnkey solution as possible. Community leaders need assistance with identifying skilled contractors and affordable hosting providers when those services are required.

This approach blends technology with advising and teaching. After reviewing the existing community website and proposing recommendations, a foundational site is built using a suite of tools that empower participating communities to have an active, dynamic Web presence that local leaders can maintain.

The initial communities selected for this project were represented by community organizations that participated in a USDA-Rural Development-financed Rural Community Development Initiative (RCDI) grant, managed by the IIRA. The community organizations had worked previously with the IIRA, and this website initiative fit clearly within the scope of their grants. Grant funds were used to cover the costs of the three-phase implementation process outlined below.² These first communities were selected because they had a current Web presence that did not fully meet their needs. The communities also had a strong vision for the future and a strategic plan resulting from participation in the IIRA's MAPPING program.

Process

The Community Web Review is a process that critiques a community's Web presence and offers guidance on how that Web presence can be enhanced for both an internal audience of community members and an external audience interested in economic development and/or other purposes.

The basic process of the full Web review is as follows:

- Phase 1: "Blind" review of existing site—This review covers a community's website in its current state as an external, first-time user would observe the site.
 - Site meeting with community leaders
- Phase 2: Recommendation report
- Phase 3: Implementation

The goals of the Phase 1 review are aimed at providing a fair, impartial impression of the community's existing Web presence. The Phase 2 review takes stock of the existing Web presence to determine if additional steps are required. Therefore, both reviews include the following components:

- To provide community members with an external user's view of the website under review.

- To provide the community with a baseline interpretation of the intended audience for the website, based on Web presentation and content.
- To provide an evaluation of strengths and weaknesses of the website from both internal (community member) and external (noncommunity member) viewpoints.
- To provide an evaluation of the design and function of the website.

Phase 1 explores the following areas of an existing community website:

- *First Impressions:* How well does the website capture the viewer's attention on the front page? What message does the first few seconds of viewing send about the community?
- *Implied Audience:* Every website caters best to a specific audience, and exploration demonstrates how the content of the site itself implies a specific audience. Often, the audience addressed is not the intended audience.
- *Timeliness:* The Web is an immediate technology, so how well does the community website present viewers

²The Community Web Review process was designed by the author, Paul Schuytema.

with the impression that the information is fresh and current?

- *Ease of Use:* A website presents an interaction between a viewer and the site. How comfortable and natural is that interaction? Does the viewer become lost or confused? Is the “grammar” of the site consistent from page to page?
- *Effectiveness (Local and External):* A website is only as good as it is useful. So, how well does the site function? Does it serve target audiences properly?
- *Performance:* Computers are tools, and websites can drag those tools down or make them seem sharp and efficient. Audiences in rural communities often do not have access to broadband. How efficient and fast does the site load? How fast are the page changes?

Phase 1 culminates in a site meeting to present the evaluation results, to learn about the community firsthand, and to receive answers to the above questions from the community: Who is the audience for the website? What are the goals? What are the limitations? Based on the notes from the Phase 1 meeting, Phase 2 offers recommendations for the next step in the community’s website evolution, taking into account stated goals, limitations, and opportunities. The intent is to present a series of recommendations to the community that lead to an enhanced Web presence for the community.

Phase 2 offers recommendations in the following areas:

- *Audience:* The identity of the primary and secondary audiences to be reached by the enhanced website to ensure best matching the audience targets with the site content.
- *General Recommendations:* Recommendations begin with listing software and hosting goals, cost and timing goals, and other targets shared by the website as a whole.
- *Specific Recommendations:* The proposed website is disaggregated into parts with each component

described along with each page and each feature. This part of the report then becomes the “roadmap” to Phase 3 implementation.

- *Process:* A detailed process is developed that leads the community up to and past Phase 3. Often, communities are unsure what to do next, what to organize, what to track down, and what to prepare. This section of the report serves as a checklist and a path for stakeholders to follow.
- *Next Step Ideas:* The final component of the Phase 2 report outlines potential next steps beyond the creation of the community website. The goal of this short section is to establish an ongoing process of asking “What next?” and “What can we do better?”

The structure of the new website is created during Phase 3. The hosting server is selected prior to building the foundation for the site outlined in the Phase 2 recommendation report. The back-end administration interface and placeholder front-end pages are constructed, and the site is tested with sample content.

During the Phase 3 session, the foundation website is visited so participants can see how the various pieces of the Phase 2 report have come together. The community provides guidance on the style and feel of the site in terms of color, font, and logo. Phase 3 concludes with a training session on the administration site, providing the knowledge needed to populate and maintain the site.

Phase 3 continues as the community works through data entry and website population. During this stage, technical support is provided to answer questions, correct errors, and generally work to help build confidence as the site becomes more and more locally owned. Usually, this technical support requires four hours or less. When the community is ready, we adjust the DNS (Domain Name Server—the server that connects the site with the chosen URL name) entries to make the new site “live.” The community is now ready to serve potential users with a dynamic Web presence.

Tools

The Phase III website described above is built from a suite of elemental “tools” designed to work together and present the information on the site to users. The core is a set of database tables designed in *mySQL* that holds the site content. Php is then utilized as a scripting language to pull the information from the database and display it as a Web

page. This system is called “dynamic” because the Web page seen by the user on his or her system is created on the server the moment the page is requested. Since the data is pulled from a database upon request, the content is always fresh and current. A back-end administration site manages each tool. This password-protected site allows

community leaders to log in and add, edit, or delete Web content via simple Web forms (no special software needed). As soon as they change content, it is available on the site.

The current suite of tools consists of the following:

- *Business Database:* Manages all businesses in the community or county. Can be used to filter between Chamber members. Can be used as a basis to build dynamic single-page websites for businesses. Can sort by location, memberships, business types, and other useful indices.
- *Building Database:* This system allows a community to track specific buildings, either for real estate needs or for historical reasons from original occupants to the building architect to historical or current images.
- *News System:* For Community News, “From the Mayor” editorials, or any type of news a community wants to share, this simple news management system features headlines, teasers, full stories, contact information, and image management. It also has an automatic archive system.
- *Agenda/Minutes System:* Communities can use this system to post public agendas for meetings as well as minutes of past meetings. It includes an automatic archive system, and posting minutes is as simple as cut, paste, and submit.
- *Office/Directory System:* This system allows a community to manage all the information about specific civic offices and those who work there, from the city administration to the zoning office.

- *Community Calendar:* This section presents a dynamic community calendar that can include only “official” business or it can be color-coded to allow local organizations or sports teams to enter their own information.
- *Event System:* This section is used to manage recurring events that warrant detailed description such as a Fall Festival or Independence Day festivities.
- *Parks/Points of Interest System:* This part manages information, from services to facilities, about parks, museums, golf courses, and other points of interest.
- *Community Management System:* This section is used for county websites that wish to provide data for multiple communities; this allows for a custom “sub-web” to be built for each community on the fly. This system can hold community demographics, map information, and community history.
- *FAQ System:* This system is used to create and maintain one or more “Frequently Asked Question” pages, whether it be a “New Resident FAQ” or something like “County Clerk FAQ.”
- *Link Management System:* This system can add and manage a library of categorized Web links, from a library of business resources to a list of personal resident homepages.
- *Slideshow System:* This tool facilitates the creation of slideshows, incorporating introductory information captions to accompany each slide. Communities can use this program for virtual tours or for a historical photo gallery.

Case Studies

The next section presents case studies of three communities and their progress through the three-phase development process.

Savanna, IL (www.savanna-il.com). In Savanna, both the Chamber of Commerce and the City wanted to improve their respective Web presences. Both entities already had a website, but these sites were confusing to navigate, visually distracting, and contained so much information that it was easy for users to become lost while negotiating the site. The initial Phase 1 review and recommendations focused on the fact that simplicity was essential, and

duplicated information across the two sites wasted effort and confused the message being communicated.

Savanna was the initial tech implementation. The session was well-attended and the team was eager, but it was clear from the first hour that teaching the detailed nuts and bolts of website creation was not the most effective way to build capacity. After the meeting with the Chamber to get the technology of their new site up and running with as much support as possible, Savanna fortunately found a dedicated local leader who took on the task of Web creation, and the Chamber team worked to enter and update the new content. The Chamber has a simple, clear, and rich site

that they can now maintain. This example emphasizes the need for a visionary and dedicated local team interested in seeing results, not just talking about a problem.

Stark County, IL (<http://starkco.illinois.gov>). Stark County includes several communities, but the entire county population is equivalent to that of a small rural town. Although the county already had a website, which had been created by two dedicated individuals, this site had neither been updated nor maintained.

Of central importance to the county was to use the website to bring together the multiple communities “under one roof” while preserving a separate identity for each. Stark County has an effective county government.

The small size and unincorporated nature of the communities make presentation of detailed county governance information as well as news and information on county board meetings essential. Stark County officials wanted the website to become the primary vehicle for sharing administrative information with residents in several communities in the county.

Stark County officials also wanted the website to promote tourism and visits to the region—a problematic goal common in many small communities. Small communities want tourism but often lack sufficient activities to sustain an ongoing tourism campaign. Despite the availability of regional events, the county was still several attractions shy of creating a compelling “weekend getaway” package.

For Stark County, a “plain Jane” foundation website was prepared prior to the Phase 3 implementation meeting. The Stark County site featured all of the technical capacity listed in the Phase 2 recommendation but was devoid of content and “personality.” The Phase III session in Stark County included a tour of the empty site and development of a color scheme for header text and menu items, which was immediately implemented. Next, a training program was initiated on using the administration tool to enter content on the website.

Stark County populated much of the content on its website quickly. In the next several weeks, they worked to add depth to the online content. When it went live, the new site presented a professional impression of the county and of constituent communities. In Stark County, the process was enhanced by a dedicated county board director and economic development director who worked long and hard to present the best face for the county on the Web.

Bushnell, IL (www.bushnell.illinois.gov/index.php). In Bushnell, the community did not have an official Web presence, but the Chamber of Commerce did have a website. The City wanted its Web presence to be unified—to showcase the City, the Chamber, and economic development efforts under the umbrella of a single site. The community also was interested in providing a method of handling municipal utility payments online. A key aspect of economic development in Bushnell is the retention and growth of the existing manufacturing base to sustain the community economy. Bushnell developed a “spider site,” which is a set of several smaller sites linked via a central access portal. This solution allowed audiences to view the site for different reasons using a simple process; it was effective and not cluttered with needless information.

As in Stark County, the Phase 3 meeting reviewed the new website, the administration tools, and preferences for a logo and color scheme. Bushnell is fortunate to already have a visually compelling “Agriculture and Industry” logo that formed the basis of their Web logo. The header and text colors were built using the colors of the logo.

Bushnell, as a whole, was very involved in the process—all meetings included city administrators, the mayor, and representatives from the Chamber and economic development. Bushnell was fortunate also to have a community college Web instructor available locally to take up the mantle of Web design for the site. Bushnell preferred not to use the website for two-way communication, however. The website initially featured an “Ask the Mayor” form as well as an information request form for the Chamber, and both were pulled because the community was unsure as to what sort of response they would get.

Risks/Problems

Of course, no technical implementation project is without significant risks. Probably the greatest risk in creating a dynamic, information-driven website is that the information itself becomes stagnant. When updates are forgotten, the site lies dormant. Nothing sends a more resounding negative message to a site selector than a sparse out-

of-date site, or worse yet, a community calendar without community events.

Another risk is the too common “death by committee” fate—too many stakeholders often blur clear-cut leadership or vision. For a Web project to succeed long-term, there

must be a single (or at most just a few) individuals charged with implementing the vision. The purpose of the Phase 2 review is to provide the basis of this requirement and a map for leaders to follow over time.

A common problem with small communities is the perception that there are no funds for Web development and that the only way that a strong Web presence can be achieved is through the intervention of an entity such as the IIRA. While money is clearly tight in many small communities, it is imperative that civic leaders embrace “digital infrastructure” as a vital component of the community’s ongoing budget. Once an initial website is up and running, a continuous but modest stream of funds must be budgeted for hosting fees, logo and art design, new page additions, digital camera and equipment maintenance for creation of a community image archive, and other needs.

Another common issue in smaller communities is that they rely on the volunteer services of a local “tech guru” who may become territorial about his or her work. This is a risk during the initial recommendations and critique stages, and even more so when the implementation stage is reached. The local “guru” may feel threatened by outside involvement in his or her “turf,” so care must be taken to engage such persons in the process from the outset. It is also vital for the long-term health of the community Web project that the site evaluator be able to evaluate the local tech resources to determine if they will be a long-term boon or bane to the project and then gently let the stakeholders know of potential problems before they arise.

Next Steps

There are several “next steps” that will guide a website development program as it moves forward into the future. One obvious point is to continue to grow the suite of available and useful tools that are the building blocks of a dynamic community website. The more choices available to a community, the easier it will be to create a dynamic Web portal that both fits their unique needs and also reflect the community’s personality.

The refinement of tool deployment is a “capacity building” that should be done by experts rather than by communities. In order to quickly and effectively configure a custom Web portal for each of several communities, deployment systems must be sufficient. Currently, it takes two to three days with two programmers working on the task to create a functional portal. The time will be reduced by using several techniques, including more strict code and variable naming conventions and by using the power of php to script the installation and configuration of multiple tool suites via a single script.

Another long-term risk is that a community may embrace an expanded and growing Web presence but then fail to simultaneously steward the technical education of residents. The “digital divide” often discussed is a real issue and, in a small rural community, it can be divisive but eventually solvable. It is divisive because the information conduits are so few and far between that any move towards a more digital information repository leaves those without access even further in the dark.

It is a solvable problem because we are generally talking about a smaller number of residents who need to be brought online in terms of education. Installing public access points in either the library, community center, or city hall can help eliminate this risk.

The final issue facing a small community just beginning to embrace “life on the Web” is the lack of understanding of the Internet communication and governance. The Internet is not merely a tool for information dispersal; rather, it is a tool for communication and interaction. Too often, small communities are eager and ready to disperse information on the Web, but at the same time, they are very reluctant to allow the Web to be used as a tool of communication between residents and civic leaders and administrators. Rural communities must take steps to learn about new models of communication that can be facilitated through a community website, and they must embrace open communication as a way to grow and enhance the community as a whole.

Another important next step is to develop a robust online manual and Help Desk knowledge base to provide instruction for communities to facilitate answering their easier questions. The goal should not be to leave communities to their own devices, but, rather, to support them as they learn to use their new and dynamic information tool. A basic tool manual online can help, but there is need for even deeper support systems and tools.

Finally, communities must be encouraged and coached to see beyond their new website and aggressively think of ways to strengthen their community’s Web presence and their sense of community. There is a need for mechanisms to show communities opportunities in eGovernance, eCommerce, community building, and community marketing that exist as the next steps to be taken once a dynamic community website is in place.

Conclusions

This paper has outlined a flexible but powerful model to assist rural communities in creating a dynamic community website presence. The tools to be employed are not new to the Web, but they can certainly be called “cutting edge” when it comes to a rural community’s Web presence.

The goal is to build the capacity of small communities—to give them the tools to be able to grow and prosper. As this program was initiated, it was thought that building capacity required teaching community members to become programmers of this new Web technology. This approach proved to be flawed as the gap in the required technical skills exceeded expectations. The case studies demonstrated that everybody was better served by the creation of a foundational, dynamic website, devoid of style or content but built to be functional. With the core site in place, the community could be trained to utilize these tools to add content and personality to the site and to grow the site from something sterile to something that truly reflected the community’s personality and goals.

The approach described herein can empower communities to create, edit, and maintain their own content, and to

have full ownership of their website, its content, and its message. Not only will these communities have a site that serves their needs today, but with this new capacity, they will be able to maintain and enhance the site going forward on their own.

Based on the results that can be observed on the Web, and the reactions of the communities who have participated in this program, it appears the program described has helped meet a very real need. During the first year, 12 organizations were served in seven communities. Already, many new websites have “gone live” and the others are on their way.

For rural Illinois communities, it is hard to imagine a target better suited to reap the benefits of an enhanced community Web presence. By combining the hard work of community leaders with an innovative results-oriented process and a suite of tools built on open source technologies, those communities involved are already starting to see results . . . and it’s just the beginning.

References

Ady International Company. 2007. Homepage. Retrieved May 28, 2007, from www.adyinternational.com.

Discover Bushnell. 2007. Retrieved May 29, 2007, from www.bushnell.illinois.gov/index.php.

Florida, R. 2003. *The rise of the creative class*. New York: Basic Books.

Illinois Institute for Rural Affairs (IIRA). 2007. *MAPPING the future programs*. Retrieved May 28, 2007, from www.iira.org/outreach/mapping.

Savanna Chamber of Commerce. 2005. *Welcome to the Savanna Chamber of Commerce*. Retrieved May 29, 2007, from www.savanna-il.com.

Stark County. 2007. *Stark County Illinois*. Retrieved May 29, 2007, from <http://starkco.illinois.gov>.

Sullivan, D. 2005. New techniques to count all pages in Google index, sort of. *SeachEngineWatch.com*. Retrieved May 31, 2007, from <http://blog.searchenginewatch.com/blog/050909-094556>.

The Rural Research Report is a series published by the Illinois Institute for Rural Affairs to provide brief updates on research projects conducted by the Institute. Rural Research Reports are peer-reviewed and distributed to public officials, libraries, and professional associations involved with specific policy issues.