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Exploring Web 2.0 in Urban Planning
A collection of six white papers
Volume 1 (2009)

The six white papers in this collection were researched and written by authors in the School of Policy, Planning, and Development at the University of Southern California as part of a Spring, 2009 graduate-level course on Internet Technologies and Urban Planning.

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Abstract
Emerging technologies are fundamentally changing how we plan, develop and manage our urban areas. Likewise, planning professionals are increasingly being called on to adopt new technologies to plan, communicate planning concepts and engage citizens in the planning process.

This collection of articles introduces a range of Web 2.0 technologies that can be applied to the field of planning, including Web surveys, Twitter, Web-based geographic information systems, Google transit, citizen engagement strategies, and image visualizations.

The six white papers in this document were researched and written by authors at the School of Policy, Planning, and Development University of Southern California as part of a Spring, 2009 graduate-level course on Internet Technologies and Urban Planning.

Background
Between January - May, 2009, the School of Policy, Planning and Development at the University of Southern California offered a graduate-level course, PPD 599 Internet Technologies and Urban Planning.

The course offered a fast-paced and practical introduction to fundamental technology concepts needed by planners to evaluate and manage planning-related technology projects. The course built on these fundamental concepts to introduce a variety of Internet technologies that can be used to support planning efforts. The course also provided a conceptual framework for evaluating new technologies.

Through a series of projects, students gained hands-on experience with each of the technologies discussed. Students in the course then researched and authored papers further exploring technologies introduced in the course. The best six white papers were selected for publication in this book.

The course was delivered by adjunct faculty member Chris Steins. Chris Steins is CEO of Urban Insight, Inc. (www.urbaninsight.com), a Los Angeles-based Internet consulting firm which provides consulting services to the urban planning industry, and Editor of Planetizen (www.planetizen.com), a popular urban planning community website.
Introduction

By Dr. David Sloane

David Sloane, Ph.D., is Professor, School of Policy, Planning & Development, University of Southern California

Planners have long pioneered technologies as ways to better understand communities and communicate with the public. At USC, my late colleague, Mel Branch, promoted the use of aerial photography, while a current one, Martin Krieger, is teaching students to use video as a planning tool.

USC alumnus and current instructor, Chris Steins, has assembled six white papers from his Master of Planning course that explore the use of Internet technologies in the fields of planning and public policy. This course is one of several methodological courses that the USC School of Policy, Planning, and Development offers students to improve their skills in preparation for entering the planning profession. As with other leading planning programs, we believe that students should be aware of not only the theory and history of the profession, but also of cutting-edge tools and best practices.

These six white papers suggest the diverse uses of the computer applications. Planners and policymakers are clearly going to utilize the web as a convenient, accessible means to reach their constituencies, as detailed in Jason Wise’s “Candidate Obama vs. President Obama,” which was selected for inclusion in the School of Policy, Planning & Development’s Second Annual Academic Capstone Student Exhibit, Josie Noah’s examination of the efforts of local authorities to plan the recovery of the southern Louisiana region after Katrina, and Sen Sugano’s discussion of Councilman Garcetti’s use of Twitter technology. Menchen Sun, Chin-Yee Wong, and Simon Vuong demonstrate that technologies can be effectively used to make trips more efficient, locate projects more effectively, and visualize the impact of sprawl.

The white papers are a fascinating window into the changing practice of planning in the twenty-first century. The issues have evolved very gradually, but the technologies that we can use to assess, evaluate, and implement programs in response to identified needs are rapidly changing, as these essays demonstrate.
Introduction

As planning projects begin to rely more heavily on Internet technologies to engage the public in the planning process, it is important to understand whether they are successful. Following the devastating aftermath of hurricanes Katrina and Rita, the Louisiana Recovery Authority established the Louisiana Speaks Project in order to begin the rebuilding and planning process. The Project faced many challenges, including a largely displaced population. The goal was to reach out to the public and develop a vision for the future of Southern Louisiana.

To do this, Louisiana Speaks utilized a variety of public participation methods, including web, television, radio, mailings and community meetings and workshops. The outreach resulted in over 27,000 responses to a survey and thousands of participants in meetings and workshops. This article will examine the use of Internet technologies as a participatory method in the Project and analyze the effectiveness of this tool in the planning process.

Background

The Louisiana Speaks Project aimed to engage the residents of Southern Louisiana in rethinking and rebuilding the future following the devastating effects of hurricanes Katrina and Rita. The Project was spearheaded by the Louisiana Recovery Authority, and was an attempt to turn the tragedy of the damage into a plan for recovery and growth in the region for the next 50 years.

The challenges facing the project team were enormous, including:
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a largely displaced and cynical population, reduced access to technology, a range of socioeconomic backgrounds and situations, and an area that had been inundated with programs. Joe DiStefano, the Project Lead for Louisiana Speaks, reflected that it was challenging to get residents to focus on the future when they were so concerned about the present (2009). To tackle these issues, the Project utilized a variety of community outreach techniques, including a traditional methods as well as a significant web component.

Figure 1 shows the breadth of outreach that was undertaken during the Project’s 18-month duration, beginning in January 2007. Within each phase, web-based techniques are bolded. The strategies aimed to engage and inform the residents during the planning process.

More than 27,000 residents and stakeholders participated in the Louisiana Speaks Project to develop a vision for the future of Southern Louisiana. “The vision builds on a sustainable recovery that restores coastal wetlands, constructs strategic levees, and reinvests in historic communities. New growth is focused in and
The vision was adopted by the Louisiana Recovery Authority, the Louisiana State Legislature and the Office of State Planning in 2007 (DiStefano 2009). The Center for Planning Excellence, a nonprofit in Baton Rouge, continues to turn the vision into reality, by working with local and state officials to implement its recommendations.

Now we turn to look at the specific web-based tools that Louisiana Speaks used to engage the stakeholders of Southern Louisiana.

**Online Participation**

Three online techniques were developed to engage stakeholders in the planning process:

- Web presence;
- Web-based survey; and
- Email communication (Chavan 2009).

The development of a web presence included the creation of www.louisianaspeaks.org, the official website of Louisiana Speaks. The website’s main purpose was to disseminate information. Figure 2 shows the homepage of www.louisianaspeaks.org.

Today, the website hosts information on the results of the Project and the steps being taken to implement plans throughout the state. Visitors can download results of the survey and read the plan developed from the efforts. Figure 3 shows a portion of the Louisiana Speaks Regional Plan demonstrating to visitors how to move from vision to reality.

Louisiana Speaks also developed a web presence by posting videos on YouTube and linking from other related websites, including the Center for Planning Excellence, www.planningexcellence.org. The three videos posted on YouTube were viewed a total of 1,000 times (Louisiana Speaks, YouTube).
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The most interactive of the online tools developed for Louisiana Speaks was the web-based survey. The online survey modeled the paper and phone surveys. The survey (web, paper, and phone) resulted in 27,000 responses. Online responses accounted for 53 percent, paper accounted for 42 percent, and phone for 5 percent (Louisiana Speaks 2007). Figure 5 shows the first question of the online survey.

Finally, email communication enabled stakeholders to stay engaged through updates and meeting announcements.

Analysis

The Louisiana Speaks Project is the largest regional planning outreach campaign ever conducted in the United States to date. With more than half of its public participation coming through
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online venues, Louisiana Speaks demonstrated an impressive online component of public participation in the planning process. Using the work of three public participation experts, I will analyze the main online and traditional forms of participation (website, survey, and workshops) that were used in the Louisiana Speaks process.

Arnstein’s “A Ladder of Citizen Participation” proposes a ladder of citizen power in decision-making. The ladder ranges from nonparticipation to degrees of tokenism and of citizen power. Louisiana Speaks used a range of the levels with its participatory strategies. The website would fall under “informing,” as a degree of tokenism. The survey would rank slightly higher, as “consultation,” also a degree of tokenism. Arnstein explains that this level of citizen power allows for stakeholders to express their opinions; however, they “lack the power to insure that their views will be heeded by the powerful” (1969, 217).

The more traditional form of participation, the workshop, expands the level of citizen power to that of “partnership,” a degree of citizen power. During the workshops, participants examined alternatives and discussed tradeoffs with traditional power-holders, characteristics of a higher level of citizen power.

While larger numbers of people participated via the web, the more powerful forms of citizen power occurred in a more traditional format, the workshops.

In “Analyzing the Representativeness of Internet Political Participation,” authors Best and Krueger evaluated factors that influence online and offline participation. The study found that people from higher socioeconomic (SES) backgrounds tend to disproportionately possess the factors, including “Internet skills,” that predict online participation. Whereas Internet skills and SES predict online participation, offline participation is best predicted by the possession of “civic skills” and “political interest.” The study also found that “those with high levels of civic skills also tend to possess high levels of Internet skills” (Best & Krueger 2005, 196).

Best and Krueger discovered that “Whites, compared to non-
whites, possess a moderately greater probability of participating in online political activity after controlling for other relevant factors” (2005, 194). Figure 6 shows the race of survey respondents and the total population of Southern Louisiana as a percentage of the total. While survey respondents were not required to declare their race, the figure shows that African-American survey participation as a share of total survey participation was smaller than their respective share of the total population. This may suggest the existence of a barrier to online participation, through a combination of lack of access and/or comfort with the technology.

**Figure 6: Race of Survey Respondents and Total Population as a Percentage of the Total**

*Source: Louisiana Speaks 2007*
Joe DiStefano suggested that uneven access to internet was a challenge during the Project. Targeting lower SES populations where they had access to the internet was a mechanism that was developed later in the Project (2009).

Best and Krueger’s work suggests that the factors that enable participation, Internet skills, civic skills, and political interest, are not evenly shared among all members of the population. Extra efforts, such as those described by DiStefano, must be employed to overcome the differences among the population.

Creighton’s The Public Participation Handbook discusses methods of public participation and their role in the process. Websites are discussed as useful tools for information dissemination, although, as Best and Krueger identified in their study, Creighton warns of potential barriers to online participation. Surveys serve as an assessment of public opinion at a specific time. As Creighton notes, “public opinion can change rapidly” and surveys are best paired with other more in-depth forms of participation (2005, 129). In the case of the Louisiana Speaks Project, public opinion was heavily influenced by the recent hurricanes and the ensuing devastation. According to Creighton, workshops can provide an opportunity

**Figure 7: Louisiana Speaks Participation Matrix**

<table>
<thead>
<tr>
<th>Method of Participation</th>
<th>Participation Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arnstein</td>
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<tr>
<td>Website</td>
<td>Tokenism</td>
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<td></td>
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<tr>
<td>Survey (All Forms)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Workshops</td>
<td>Citizen Power</td>
</tr>
</tbody>
</table>

*Source: Author's analysis of Arnstein (1969), Best (2005), & Creighton (2005)*

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for more in-depth analysis of data and provide participants an opportunity for high levels of interaction (2005). DiStefano also discussed the importance of an in-depth ground campaign utilizing local leaders, or “Champions,” to engage the public (2009). Each of the three studies provides an opportunity to evaluate the effectiveness of the web as a mechanism for public participation. The analysis suggests that the web, through the website and the web-based survey, was an effective way to engage the public.

Web-based methods, however, did not result in a strong transfer of power to the participants. In addition, web-based technologies may have presented barriers to entry for many stakeholders. The workshops provided the most comprehensive form of public participation. Figure 7 summarizes the findings of the analysis in a matrix depicting the method of participation with the works of the authors identified above.

Conclusion

The Louisiana Speaks Project engaged the Southern Louisiana region in the largest public participation campaign in planning history in the United States. The Project utilized a combination of traditional and web-based outreach techniques. Although groundbreaking in its scope, the Project’s web-based survey and website did not transfer decision-making power to the participants and may have limited participation by stakeholders without access to or ability to use the Internet.

The successful adoption of many of the policies developed during the Project suggests that Southern Louisiana was able to work together to choose its future following the devastating effects of hurricanes Katrina and Rita. While the Project’s use of Internet technologies may have excluded some stakeholders, its attempt to reach out to the displaced members of the community and engage the entire community is laudable. The Louisiana Speaks Vision will help to guide development and planning policy for decades to come in Southern Louisiana.
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By Josie Noah

Works Cited

- Chavan, Abhijeet. (April 2009) Email Interview.
- DiStefano, Joe. (April 2009) Phone Interview.
- Louisiana Speaks, YouTube Channel. Accessed at http://www.youtube.com/user/LouisianaSpeaks
Twitter: An Urban Planner’s Tool

By Sen Sugano

Sen Sugano (sendsugano@gmail.com) is a 2010 Master of Planning Candidate at the University of Southern California

Introduction

Today citizens are stressing the importance of a transparent and more accessible government. In order to address these issues, the government is increasingly focusing on the Internet or “e-government” to provide citizens with up-to-date information on what is going on in their cities, states and nation. Currently, when looking at local government websites, such as the City of Los Angeles website (lacity.org), people can find information about events, city meeting agendas, schedules, emergency information, blogs and the list goes on, but it is still lacking input. It seems that even today in a society that is increasingly reliant on technology, government organizations, including planners, still rely solely on meetings. The fact of the matter is people are extremely busy and are becoming more mobile, using their iPhones, Blackberrys and other pocket devices to follow blogs and Twitters for their information. With millions flocking toward these devices and new technologies, it may be a proactive approach for government organizations and city planners to begin using them as well.

Source:
http://twitter.com/senjamin
Twitter: An Urban Planner's Tool

Twitter

Twitter is a relatively new technology that was developed in March of 2006 in San Francisco, California. The technology is a way for friends, family, and co-workers to simply stay connected through status updates of what they are doing. The service allows for short and quick updates up to 140 characters in length. These quick updates are then loaded onto your page with a list of previous updates that are all sent to people who have subscribed to your page, also known as “followers.” The screenshot on the previous page is my personal Twitter account.

As you can see, the application is simple to use. At the top of the page it asks, “What are you doing?” The user simply types in an update, limited to 140 characters and clicks the “update” button. This update is then automatically sent to individuals who are “following” the user. On the same page, the user can also view updates of people they “follow.”

In an interview with David Sarno of the Los Angeles Times, Twitter creator Jack Dorsey says he wanted the technology to be mobile so people could update and be updated on what they were doing. Dorsey explains that SMS text messaging was what inspired him and pointed him into the direction to limit the character count to 140. He did this so that the SMS text message would not be split into two separate messages (160 total/message: 20 for title, 140 for update) (http://latimesblogs.latimes.com/technology/2009/02/twitter-creator.html).
Recently, new applications for iPhones, Blackberrys and other mobile devices have also been developed for people who are “on the go.” Such applications as “Tweetie,” “Twitterific,” and “Twitterfon,” allow users to easily update their Twitter accounts and follow other users through their mobile devices. On the preceding page are examples of how Twitter is used through applications on mobile devices, such as the Apple iPhone and the Blackberry Bold.

Dorsey originally came up with the idea of Twitter from an interest in what his friends were doing. He then took this idea of a “simple status concept” and developed the technology (twitter.com). The website explains that the project was initially funded by Obvious in San Francisco, was developed within two weeks, launched publicly in August of 2006, and has continued to grow since then (twitter.com).

**Twitter: A Possible Tool For City Planners**

With new Web 2.0 applications such as Twitter being developed, the government can come up with creative ways of utilizing them for their own purposes. Dorsey explains, “Twitter has been my life’s work in many senses. It started with a fascination with cities and how they work, and what’s going on in them right now” (http://latimesblogs.latimes.com/technology/2009/02/twitter-creator.html). Essentially, this is Twitter. It is a way to connect to one another and be updated on what is going on in the world or locally. Planners, as well as other government officials can utilize these new mobile applications to update citizens on what is going on, when meetings are, or even to get opinions on what they think about specific topics. It would all depend on how open the government agency wants to be. There is also speculation that these new technologies, such as blogs and Twitter, are unprofessional and can sometimes be too comfortable with the public on important issues.

As Web 2.0 applications become more common, there is concern about the fine line between personal and professional. Los Angeles City Councilman Eric Garcetti uses his Twitter account for both personal and professional purposes. Included in the screenshot

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**Twitter: An Urban Planner’s Tool**

By Sen Sugano
below, is Garcetti’s Twitter account. He uses his Twitter for multiple purposes, such as city issues pertaining to traffic, budgeting and billboards, but also for personal reasons to keep in touch with his friends and family members.

Although Garcetti is able to combine the two, some would argue that it is unprofessional. Los Angeles Planning Commissioner Michael Woo notes that whoever uses applications like Twitter needs to be very cautious about what he or she is putting into writing. He also mentions the constraint that comes with Twitter and the difficulty in explaining important issues in a limited 140 characters. He says that this can cause problems, and people may not understand the issue that is being presented.

Davis Park from the Little Tokyo Service Center, a Los Angeles-based community development corporation, explains that using Twitter can sometimes blur the line between professional life and personal life, and can potentially cause damage peoples’ reputations. Based on discussions and interviews, it seems that many professional
planners are concerned about the implication of Twitter causing more harm than good. This leads to the question: are there better applications out there?

<table>
<thead>
<tr>
<th></th>
<th>Twitter</th>
<th>Facebook</th>
<th>WordPress Blog</th>
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</thead>
<tbody>
<tr>
<td>Ease of Use</td>
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<td>MEDIUM</td>
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<td>Cost</td>
<td>FREE</td>
<td>FREE</td>
<td>FREE</td>
</tr>
<tr>
<td>Ability to Respond</td>
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<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Customization</td>
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<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Monitored</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Membership to View</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

With new technologies being developed everyday, there are a myriad of options of tools for planners to use. Numerous Web 2.0 applications, such as Twitter, Facebook and blogs all exist to facilitate communication. The Comparison Matrix above shows the capabilities of each of the three technologies (Twitter, Facebook, WordPress blogs) and compares them.

As compared above, Twitter, Facebook and WordPress blogs are all somewhat similar communication tools. Deciding which of the three is most effective is dependent on the individual. For planners, Twitter can be used for quick and short updates for followers, but cannot go into detail. Facebook and WordPress, on the other hand, offer the capabilities to write lengthier notes or blogs that go into detail about the issue at hand.

Woo points out that using Web 2.0 technologies can be unfair; some citizens have access and others do not. In using these technologies to take opinions about planning issues, Woo says the decision-making process can be swayed because it lacks input from the entire population. Arguably, many Web 2.0 applications present an unfair advantage to those with access to them. They
also leave city officials in a difficult situation, because on one hand they provide useful feedback and opinions, but on the other hand they do not properly represent everyone. Aside from Web 2.0 applications, other technologies exist as well.

Although Web 2.0 applications are new and exciting, they are not necessarily better. Woo explains how older technologies, such as emailing can be just as, if not more effective. It seems that people are quick to jump on the bandwagon of new applications like Twitter but forget the fact that just because it is new does not mean it is better. Luz Reyes from the Downey City Planning Department agrees. She notes how regular city websites that allow for citizens to leave comments can work just as well as Twitter can. It is ideal for planners to be proactive and quick to adapt to changes, but from speaking with planners, it also does not make sense to replace something that works equally as well. This is especially true for these new applications, in comparison to an older way of emailing or providing information on a website.

**Conclusion**

Through analyzing Twitter and the possible advantages it possesses for city planners, it becomes apparent that it can be helpful, as long as it is properly used. Planners Michael Woo, Davis Park and Luz Reyes all agree that there is a fine line that sometimes gets blurred in using applications such as Twitter. However, by using them with discretion, these Web 2.0 applications can be very useful. Instead of putting important and possibly confidential information on Twitter, planners can simply use it for informing the public about developments and planning issues that are to be discussed at hearings, planning commission meetings or city council meetings. As seen in Councilman Eric Garcetti’s Twitter, both personal and professional updates can be done as long as discretion is used.

Through this analysis, it also becomes apparent that these new technologies present access issues to citizens, making them somewhat ineffective in gathering the entire community’s opinions. While this is true, new technologies and Web 2.0 applications can still provide useful feedback and help engage
Twitter: An Urban Planner’s Tool

Exploring Web 2.0 in Urban Planning

By Sen Sugano

citizens in planning issues. The goal in using these Web 2.0 applications is not necessarily to replace existing means of communicating with citizens, but rather to supplement them. Twitter may not be capable of replacing emails, a city planning homepage, or a public meeting, but it does open up another way of educating the public on planning issues, while allowing them to voice their opinions. Using these new Web 2.0 applications depends on the individual planner and his or her preferences. Ultimately, he or she is best at determining which technology or application, if any, is best for them and the entities they represent.

Works Cited

• Park, Davis. Personal Interview. 8 April 2009.
• Woo, Michael. Personal Interview. 8 April 2009.
Introduction

This paper examines the use of geographic information systems (GIS) technology on the web, and particularly the role it plays in economic development.

Planning professionals have long worked intensively with geographic information. The emergence, affordability and maturity of geographic information systems (GIS) empower planners with the ability to process and evaluate information that was not possible just two decades ago. By linking statistics with geographic information, the technology creates an integrated system that not only generates an extensive range of maps but also visualizes once obscure space-based relationships. Efficiency is significantly enhanced and communication is visually supported.

Despite the obvious strengths of using GIS in planning practice, the obstacles to adopting GIS are also significant. Building GIS applications requires the performance of powerful computers, extensive staff training, and often expensive licensing. These prerequisites make GIS a far less accessible technology for use by the public.

The marriage of GIS and the Internet, however, changes the situation. Web-based GIS applications are easy to use and do not require a significant financial or technical commitment of resources, and the interface for users is also often greatly simplified, reducing the need for training.

Although all websites that use or display GIS (including websites providing static maps created by GIS software) might be regarded by some as web GIS, for the purpose of this paper, the use of the phrase web GIS refers only to interactive web-based GIS applications that are capable of dynamically updating data and maps based on user input.

I will first briefly discuss the significance of web GIS in planning, review the major applications of this technology in planning, and then focus on its effects on advocating economic development. I will then evaluate three economic development GIS websites.
developed both by leading GIS companies and local government. Finally, I will present my conclusions about web GIS applications in planning, and offer several recommendations based on my observations and interviews.

Planning and Web GIS

Like many industries in modern society, planning attaches great importance to communication and cooperation. Planners utilize various tools and technologies to increase public awareness, facilitate participation, and involve private resources. Internet technologies are among the most celebrated new strategies, and web GIS is a recent addition to this family. Web GIS adds several unique geographic features into the family and represents key breakthroughs in ways of integrating information technologies.

Web GIS has been employed by planners in a number of fields. Communicating zoning information is among the most typical practices. Zoning and general plan information is updated online so that the public has convenient access. Sometimes zoning information is also incorporated to assist with permit processing. In some cases, cities use web GIS technology to display tourism-related city features to help visitors plan their travel. Explore Santa Monica (http://gismap.santa-monica.org/imf/imf.jsp?site=exploresm) is a good example of this type of website.

Among all the current uses of web GIS, employing the technology to advocate economic development is an increasingly common and well-defined application of the technology in planning. Many economic development GIS websites function as property locators. On reflection, this would appear to be a natural evolution of web GIS in government; by attracting companies to locate in an area, local government expands its tax base, reduces vacancy rates, and potentially creates jobs. Cities have been providing property information to businesses through traditional mediums for decades. Web GIS applications greatly enhance this service and streamline the practice. Most economic development web GIS applications come with three major functional components: mapping, searching and reporting.

By Mengchen Sun
The Use of Web GIS for Economic Development

I will examine three websites to demonstrate how each works:
• Humboldt County Web GIS Prospector http://gis.co.humboldt.ca.us/Freeance/Client/PublicAccess1/index.html?appconfig=prosperity
• Pittsburg Economic Development Viewer http://pittsburg.mygeoprise.net/economicdev/
• Carson Makes Sense http://198.179.206.8/website/carsoned/ed.asp

Function: Mapping

Mapping is the conventional way to present geographic information. It is also the foundation on which GIS applications are built. All web GIS applications should come with a mapping system. Humboldt County Web GIS includes the basic features of an elegant mapping system.

The map above is a screenshot from the homepage of Humboldt Web GIS. The vertical bar on the left provides tools for basic map manipulation. Users can zoom in, zoom out, identify features, or measure distances with the assistance of those tools. The overview map embedded at the bottom left shows where the current view is on the overall map. The map display bar allows users to choose a map outlook from the options: default layer, air photo or terrain. Some web GIS applications mix the map display options with layer control functions, which could confuse the users.

By Mengchen Sun
can turn on or off depending on their interest. For an economic development web GIS, road networks, aerial photos and zoning information are three widely-adopted categories of layers.

**Function: Searching**

Web GIS technology enables interactive property-searching. This search typically takes the form of task-specific dialogs between the users and the system. Pittsburg Economic Development Viewer is among those websites equipped with those new searching dialogs. Users set preferences on the system about price range, land type, property status and square foot ranges. The system then looks into the property database and responds with a list of matched properties. Users can also search by specific addresses or intersections as well.

As potential properties are listed, users can click on each property to locate it on the map, check its physical settings, or review brokerage information. Some properties may also include associated images.
The Use of Web GIS for Economic Development

Function: Reporting

Assisting users to create reports unique to a selected site is the third powerful feature that most economic development GIS websites offer. Although the detail and presentation of reports vary widely, the main categories of reports available are similar. Carson’s Economic Development GIS is a simple yet handy application which demonstrates how reporting function works.

Economic Development GIS is a simple yet handy application which demonstrates how reporting function works.

Once a property is selected, the next item that a business analyst will likely examine are the demographic and economic profiles of the surrounding neighborhoods. Those profiles indicate local market conditions, availability of human resources and aggregations of certain industries or uses. This type of information is often crucial for businesses in selecting a site. Through combining statistics with locations, GIS applications can automatically generate business reports, covering a reporting area centered around the chosen location.

The screenshot above from Carson’s website is a basic demonstration of reporting options. A user can select the type of report from a pull-down menu. There are three types of reports available: demographic report, consumer expenditures,
The Use of Web GIS for Economic Development

and business and workforce. After choosing a particular report, the user will then type in a radius around the property that the report should cover. The system then automatically generates the requested report.

Reasons to use Web GIS

At the same time local governments are competing to attract and retain business, companies are seeking the next ideal location. The Internet emerges as a dynamic and nearly real-time marketplace, which facilitates these attraction and location-finding efforts.

First of all, GIS attaches a “location” component to real estate, reducing the effort in evaluating demographic and economic information in the surrounding area. It is a revolutionary way to enhance convenience. Barry Waite, a city administrator and

<table>
<thead>
<tr>
<th>Targeted Users</th>
<th>Humboldt</th>
<th>Pittsburg</th>
<th>Carson</th>
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</table>

By Mengchen Sun
The Use of Web GIS for Economic Development

supporter of the City of Carson’s Economic Prospector, views the system as a “very handy way to showcase properties.” He has recommended the system to many others and advocates a county-wide application.

A GIS-powered economic development website also provides “notable public relationship value” by representing the city of Carson as the “modern and advanced city” that it is, says Waite. As local governments endeavor to expand their tax bases, reduce unemployment and drive down vacancy rates, the city’s image can be a decisive asset in attracting attention, boosting confidence and revitalizing the economy.

Conclusion and Recommendations

The matrix above compares the key features of websites reviewed above. The evaluation also include Vallejo Economic Development Information System (http://www.vallejoprospector.com/).

Based on the web GIS applications reviewed, I respectfully offer several recommendations for consideration when developing web GIS applications.

1. Decide the number of layers based on users’ need. Keep unrelated information out of the system, or available through an advanced search option. Several useful categories of layers include:
   - Transportation: road network, railway, public transit, airport, traffic counts, etc.
   - Facilities and amenities: parks, schools, fire stations, hospitals, etc.
   - Districts: land use, zoning, jurisdictional boundaries, etc.

2. Categorize various layers into several easy-to-understand groups rather than hoping that users will select a series of related layers.

3. Update parcel information, demographic and economic profiles, and properties in a timely manner, such as weekly, or daily if possible.

4. Limit the search criteria options to the most useful options.
The Use of Web GIS for Economic Development

Present additional or complex search options in an advanced search interface.

5. Preprocess raw data and present the data in an appropriately analytical way.

6. Provide alternative document formats (doc, xls, pdf, etc.) for web reports.

In conclusion, web GIS is a powerful technology to be applied to economic development. Web GIS applications leapfrog traditional marketing options such as brochures and posters, newspaper, and static web pages. Fundamentally, a web GIS for economic development is a database application which takes advantage of the geographic component present in most data to offer a visually compelling and efficient interface.

However, the use of web GIS for economic development is still in its infancy. Some of the problems that need to be overcome include:

- There are relatively few software options for building web GIS applications, and developing an application requires extensive experience and is often expensive.
- Local government staff often do not receive the level of training that would enable them to be expert web GIS administrators.
- The interfaces of many web GIS applications are overly complicated.
- Finally, individual web GIS applications are often limited to arbitrary jurisdictional boundaries, and do not reflect the real and cross-jurisdictional searches that many businesses regularly perform.

By Mengchen Sun
An Evaluation of Transit Agency Trip Planners vs. Google Transit

By Simon S. Vuong

Simon Vuong (simonsvuong@gmail.com) holds a Master’s degree in Planning from the USC School of Policy, Planning, and Development and is an intern at the Los Angeles County Metropolitan Transportation Authority.

Introduction

Mass transit has always played a crucial role in daily travel, allowing residents to travel within and between communities and cities. With the advent of the Internet and the proliferation in recent years of more sophisticated web technology, anyone with Internet access has the ability to use online trip planners to gather accurate routing information for navigating the city.

As we discover new ways of harnessing web technology to improve the quality of and rate at which we receive information, it becomes useful to evaluate these applications to understand what is missing, what works, and what can be improved upon. We will compare online trip planners as our case study, investigating the usefulness of each based on interviews and sample trips.

Using Google Transit as a model for transit planning, each of the surveyed trip planners will be compared to Google and amongst one another, displayed in tabular form in the sections that follow. Through this process we will be able to quickly recognize what features certain trip planners lack, and what qualities Google Transit is unable to capture on a local level.

About Google Transit

Now that Google has launched its own trip planner in the form of Google Transit, an alternative to in-house trip planners is now available. Recognized for its simple interface and clever features, Google Transit offers the ability to plan travel itineraries by foot and/or by mass transit, an option that was until recently limited to automobiles via Google Maps. Trips can be filtered by method of travel, routes can be easily altered, and more than one destination can be mapped for added detail in trip planning. Google Transit also experiences the added benefits of Google Maps functionality and the ability to plan regional trips outside many local jurisdictions’ boundaries (Figures 1 & 2).

Yet some local trip planners provide information that is only explicitly available in-house, such as the sorting of routes by fare, travel time, or number of transfers. Other trip planners have the
Exploring Web 2.0 in Urban Planning

An Evaluation of Transit Agency Trip Planners vs. Google Transit

ability to view all stops available along any given route, options to view fares for different legs of the trip, and the capability to view exact compass corner locations of bus stops. Recognizing that there is room for improvement and responding to customer needs.

By Simon S. Vuong

Figure 1. Sample trip using Google Transit, from Redmond, WA, to Bremerton, WA. Suggested route includes, walking, bus, and ferry. Alternate routes provided, as well as the ability to switch to another transportation mode (i.e., the car).

Figure 2. Another trip using Google Transit, from Portland, OR to Gresham, OR. Suggested route includes, walking, light rail, and bus. Option to manipulate arrival and departure time available.
An Evaluation of Transit Agency Trip Planners vs. Google Transit

demand for a more optimal trip planner, many transit agencies have made their own information available to Google for inclusion in Google Transit, while others have not.

The question I will propose to answer is: Does Google Transit provide a superior alternative to local trip planners, and what lessons might be learned from Google’s approach to trip planning?

Methodology

In order to fairly evaluate these trip planners, a survey questionnaire was developed to gather more detailed information. A total of 30 transit agencies were contacted via email, as communication by telephone yielded a poor response rate. Nine agencies and one service aggregator successfully completed a survey. Aside from these interview questions, sample trips were conducted online using transportation agencies’ respective trip planners to gauge user accessibility, availability of features, and website navigability.

Comparison of Google Transit and Agency Trip Planning Routes

Trip planners serving the areas of Los Angeles (Metro), Phoenix (Valley Metro), Philadelphia (SEPTA), Dallas (DART), San Francisco Bay Area (Transit 511), Austin (Capital Metro Transit), Seattle (King County Metro Transit), Denver (RTD), Washington D.C. (WMATA), and Portland (TriMet) returned survey responses.

Of the ten trip planners, five made data publicly available to Google Transit. They include:
- Portland (TriMet)
- Seattle (King County Metro Transit)
- Dallas (DART)
- Austin (Capital Metro Transit)
- Denver (RTD)

Comparisons of these in-house trip planners are made against their Google counterparts to examine how transit routes are mapped in Google Transit as opposed to their in-house Trip Planner, condensed as a matrix in Table 1.
Exploring Web 2.0 in Urban Planning

Trip routes were standardized across all agencies, including trips from a local university to city hall, from one city hall to another city hall, and from city hall to a hospital, the latter measuring whether or not disabled access information was available.

These three trips were conducted for each agency and compared against the same route on Google Transit. If the trip planner provided itineraries that displayed common transit routes, they were considered similar. Please refer to the Appendix for a more detailed overview.

Only Portland and Seattle produce routes that are similar to the trips conducted using Google Transit, while Dallas and Denver had markedly different trips than Google (Figures 3 & 4).

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Exploring Web 2.0 in Urban Planning

An Evaluation of Transit Agency Trip Planners vs. Google Transit

But what is more interesting is the nature of the relationship these transit agencies have with Google. Dallas and Denver were motivated to provide data to Google to give customers other

By Simon S. Vuong
alternatives to their own trip planners, “to give transit patrons a choice”, according to Dallas. Likewise, Portland has maintained an open position on data sharing and information disclosure, being “the first transit agency to provide data to Google Transit”.

Seattle and Austin emphasize that Google Transit is separate from their own trip planners; Seattle is only providing data to Google as they felt they “could not withhold it [public information]”, while Austin maintains its independence from Google’s trip planner. Both assert that data is simply made available to Google, that there is no active relationship between the two.

However, only Seattle was able to provide the necessary information to disabled populations when planning trips. All other agencies had no such option, including Google.

**Comparison of Google Transit and Agency Trip Planning Features**

The results of the survey are summarized as a matrix in Table 2. Comparing all transit agencies with Google Transit, we can quickly see which features each agency lacks and which features Google has yet to incorporate.

Criteria used for the comparison are further explained below.

**Accompanying Maps**

Does the online trip planner provide a map with trip routes? If so, are they navigable or static? In other words, can they be manipulated by the user (zoom in/out, scroll to navigate map, etc.), or are they fixed?

**Map Multiple Destinations**

Is the trip planner capable of adding another destination to the leg of the trip (on top of the origin & original destination)?

**Alternate Routes Provided**

Does the trip planner recommend more than one travel itinerary?

**Number of Transit Modes Included**
How many different kinds of transit does the trip planner offer? Transit modes include: Bus, Light Rail, Heavy Rail, Commuter Rail, Trolley, Ferry, Monorail, Shuttle, Cable Car, Street Car, Tram, and Taxi (excludes walking).

Regional Routing
Can the trip planner manage trips outside of its municipal jurisdiction?

Fastest Trip, Fewest Transfers, Walking Distance
Are options presented to sort the numerous itineraries by fastest trip, fewest transfers, or shortest walking distance?

By Simon S. Vuong
Fare, Trip Time, Distance Traveled
Does trip planner calculate fare, duration of trip, or length of trip for each trip?

Service Advisories Available
Does the website provide notice of service disruptions or delays, either directly on the agency’s website or via SMS or email?

Recognizes Landmarks
Are landmarks, popular destinations, or places of interest listed under a drop-down menu within the trip planner or recognizable via user input (without the need to enter an address)?

Available on Web-Enabled Mobile Devices
Is the trip planner available as a mobile version on web-enabled handheld devices?

It is obvious that certain features are much more common than others. Take for example the provision of alternate routes. Universally, all the profiled transit agencies accommodate multiple trip itineraries. Similarly, most transit agencies have the ability to sort routes by fastest trip, walking distance, and fewest transfers, although Los Angeles, Dallas, and Philadelphia lack one or more of these options. Google Transit does not have the ability to sort trips in this method.

All trip planners are capable of recognizing landmarks, while a majority of transit agencies offer service advisories regarding delays or service disruptions on their websites. Again, Google has no such feature. However, no transit agency provides information about the distance of the trip, while more than half provide fare and travel time. Dallas and Denver omit fares, and Washington D.C. and Seattle do not include travel times.

Four out of the ten trip planners do not provide maps with trips, while three provide static maps and three enable navigable maps like Google. Almost none of the transit agencies can map multiple destinations in the manner Google Transit can. San Francisco and Austin can plan more than one destination, but not simultaneously. Half of the transit agencies supply some form of their trip planner
in a mobile version, while the other half have expressed strong desires to provide this feature.

### Pros and Cons of Google Transit and In-House Trip Planners

The following is a summary of the collected responses from the survey questionnaire that were not easily distilled in tabular form:

- Most agencies that have Google Transit as an alternative were motivated to provide their customers more choices and increased flexibility for trip planning.

- The most frequently cited advantages of using Google Transit were:
  - Simple interface;
  - Features such as street views and aerial views; and,
  - Low cost.

- Agencies that did not utilize Google Transit as an alternative to their own in-house trip planner referred to the following as deterrents:
  - Nature of proprietary information;
  - Format of data;
  - Unreasonable legal requirements;
  - Contractual issues; and,
  - Investment in preexisting trip planners.

Although these profiled trip planners are useful and provide a much needed service, they are not void of limitations. When questioned what improvements each agency thought would enhance its trip planner:

- Portland suggested better integration of “multi-modal” trip planning, “allowing trips that include public transit as well as autos and bicycles”;
- Philadelphia is “constantly exploring new ways to make the site easier to navigate and more useful to our customers”;
- while Seattle hopes to include “a map of the itinerary or
service location” when routes are displayed;
• Denver wishes to “promote better stability, improve ease of use, integrate with our interactive system map, and return improved trips based on a better algorithm”;
• Seattle, Los Angeles, and Washington D.C. recommend adding “next bus” information, “real-time service updates”, “service disruption information” and “enabl[ing] access by more types of mobile devices” a la GPS technology.

Clearly forward-thinking, it is becoming painfully obvious that trip planning technology is changing the way we travel, capturing the attention of transit agencies wishing to capitalize on as many resources as they can to improve patron experience.

**Conclusion/Lessons to be Learned**

It has become clear that no single trip planner profiled here is perfect, that all could use some improvements. Some are not available on web-enabled mobile devices, others do not offer trip times, and most cannot map multiple destinations or provide navigable maps.

Although Google Transit provides a comprehensive set of features, it too cannot provide all types of information for a seamless travel experience (availability of service advisories, sorting trips by duration, distance, and number of transfers). However, based on the surveys and sample trips conducted, Google Transit does offer a more user-friendly, inclusive, and superior trip planner than the in-house trip planners.

Local transit agencies may find it useful to mimic some of the features Google Transit includes. Providing navigable maps for patrons is essential. Displaying routing information visually will alleviate the unintuitive task of reading routing directions. The ability to map more than one destination would significantly improve the ease of planning multiple trips, instead of forcing the user to input new queries for itineraries with multiple stops.

Of course, transit agencies that do not currently contribute data to Google may opt to do so, giving patrons the opportunity to plan...
trips using features unavailable in current proprietary trip planners.

The push to have Google Transit as an option for trip planning is growing amongst transit users. Informal surveys conducted online regarding trip planning usage returned informative answers. Many survey-takers felt that transit agency trip planners were inferior to Google Transit, citing flexibility as an issue with in-house trip planners, as well as a “clunky, cumbersome interface”. Others claim local trip planners are “not interactive”, frequently comparing them to Google Transit. Even Facebook groups have arisen, titled “Los Angeles wants Google Transit”, alleging Google Transit “provides superior usability, familiarity and reach to any proprietary transit trip planning option.”

Although much research and data collection has been completed, there were limitations to the scope of this white paper. Of the thirty transit agencies contacted, only ten responded. A much more accurate portrayal of the current climate on trip planning can be obtained if the number of survey questionnaires completed increased. Because interviews were executed via email, there is the possibility that questions may be misinterpreted.

Sample trips conducted may not yield completely precise information. Addresses recognized by Google Transit may not be familiar to local trip planners. Certain trip planner features may be buried within the website and overlooked, or information may not be current on Google’s website (as expressed by Austin).

Despite these potential shortcomings, the overall procedure for evaluating and comparing these various trip planners to Google’s is sound, providing a faithful and objective assessment of current online trip planning capabilities across different transit agencies.

**Website Addresses of Profiled Trip Planners**

**Google Transit**  
http://www.google.com/transit

By Simon S. Vuong
An Evaluation of Transit Agency Trip Planners vs. Google Transit

Los Angeles (Metro)
http://www.metro.net/

Phoenix (Valley Metro)
http://www.valleymetro.org/

Philadelphia (SEPTA)
http://airs1.septa.org/bin/query.exe/en?

Dallas (DART)
http://www.dart.org/

San Francisco Bay Area (Transit 511)
http://transit.511.org/

Austin (Capital Metro Transit)
http://www.capmetro.org/

Seattle (King County Metro Transit)
http://tripplanner.kingcounty.gov/cgi-bin/itin_page.pl?resptype=U

Denver (RTD)
http://www.rtd-denver.com/

Washington D.C. (WMATA)
http://www.wmata.com/

Portland (TriMet)
http://trimet.org/

By Simon S. Vuong
Candidate Obama vs. President Obama:  
A Study of Web 2.0 Strategies

By Jason Wise

Jason Wise (jasondwise@gmail.com) is Assistant Director of Government Affairs, AIDS Project Los Angeles

Background

The use of Web/Government 2.0 technologies by local and national United States politicians is becoming increasingly popular. The full effect of this more open line of communication to and from the American public has the potential to not only better inform the public on policy proposals but also for the public to better inform politicians about their ideas and opinions on policy.

President Barack Obama used many Web 2.0 technologies throughout the 2008 campaign season, which the Pew Internet Research Project believes made him appear as a more honest, transparent, and attentive candidate. Using these technologies is also believed to be one of the reasons that candidate Obama was able to expand the voting and donor electorate by reaching out to younger generations.

As President of the United States, however, new concerns and questions arise regarding privacy of confidential information and safety in this high level position. Exploring how Obama is now using these technologies in office, how they have changed in the Presidential administration, and how that might affect his decision making or the public’s perception of his decisions are important to understanding the role the Internet can and will play in the public policy sphere of the future.

Comparison Matrix

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<th><a href="http://www.whitehouse.gov">www.whitehouse.gov</a></th>
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<td>Fundraising/donation</td>
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<td>No – not allowed</td>
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<td>Use of open source</td>
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Candidate Obama vs. President Obama:
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Technology Description
Numerous Web/Government 2.0 technologies were used by the Obama campaign during the 2008 election season. Each had its own impact on the overall Presidential campaign but some of those previously used tools are no longer as prevalent in the Obama Presidential administration.

Social networking

The Obama campaign used many existing social networking sites such as MySpace, Facebook, and Twitter but he also created his own version through my.barackobama.com. Regular communications, campaign updates, volunteer recruitment, and donation requests were all filtered to supporters through this site. Members were given a profile page, much like those found on Facebook, and were able to join groups of common interests, post pictures and become friends with other supporters. The extensive and varying means of communication was one of the many reasons he was able to fundraise at record levels, and enabled better organization of supporters for campaign activities like canvassing and voter registration.

As of April 2009, the www.barackobama.com website has been renamed “Organizing for America.” The ability to login and interact
Candidate Obama vs. President Obama: A Study of Web 2.0 Strategies

with other supporters remains intact but the website is repurposed to encourage community service and to advocate for Obama's policies while in office.

The President's website, www.whitehouse.gov, provides none of the social networking qualities previously found on Obama's campaign website. The activity most closely related to social networking came in the form of the “Open for Questions” online town hall meeting in which questions were submitted and voted on by site visitors. To participate in the questioning and voting process individuals were required to create a user login account, potentially marking a first step in utilizing individual user accounts in a social networking capacity.

Changes and updates to the www.whitehouse.gov website in the first 100 days of the administration are an indication that as president, Obama has not forgotten the benefits of social networking. His administration and staff remains quite active on Facebook,
Candidate Obama vs. President Obama: A Study of Web 2.0 Strategies

By Jason Wise

providing updates on legislation, calling for support of his proposals, allowing comments and feedback, and re-posting his weekly YouTube address.

Online systems using video sharing technology, especially www.youtube.com, have been used by politicians as a communications method for the last few election cycles. Campaign ads are regularly placed on the site as it can be used as a low-cost marketing tool, especially if it is able to receive a high number of views and achieve “viral video” status. Following this trend, the United States Congress recently removed “franking” restrictions that prevented members from placing videos on YouTube and has even begun to encourage participation with the creation of Senate and House video hubs.

The Obama campaign used www.youtube.com/barackobamadotcom to great effect during both the primary and general election seasons. Every campaign event, speech and advertisement was posted to the site, including videos of volunteer activity. “Web ads” were also created to specifically target YouTube viewers. This activity represents a more comprehensive campaigning approach, not merely as a posting ground for television advertisements or verbal gaffes caught on hidden camera, but as a larger communication tool.
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This strategy has not changed much in the Obama administration. Now at www.youtube.com/whitehouse, Obama continues to post videos of events and press conferences, although less frequently than during the campaign: 1,827 videos in 807 days (or 2.26 per day) during the campaign, and only 105 in 73 days (or 1.43 per day) as President. YouTube is also used to post President Obama’s weekly address, marking the first time the traditional radio address has been filmed and made available on open source Drupal software.

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By Jason Wise

All of the Obama campaign’s public websites either used existing networking and communication sites or, in the case of www.barackobama.com, were created by an outside consulting firm (Blue State Digital).

As president, Obama is currently using the framework set up by the previous administration at www.whitehouse.gov. Marking an expansion into a new Web 2.0 territory, however, the Obama administration utilized open source software to create the economics-focused www.recovery.gov. With the goal of providing transparency related to public funds distributed under the American Recovery and Reinvestment Act of 2009, www.recovery.gov was created using a completely free software code from www.drupal.com, a distinct shift from previous administrations and their use of IT consulting firms for Internet strategy. Unconfirmed sources from within the administration reported that the previous presidential administration recently used an IT firm to reevaluate the www.whitehouse.gov site. Despite this, President Obama hopes to migrate towards an open source-based system in the future, albeit one that continues to use the necessary security tools required by the White House.

Constituent Relationship Management
Candidate Obama vs. President Obama: A Study of Web 2.0 Strategies

By utilizing yet another Web/Government 2.0 tool, the Obama administration is again showing a desire to engage the public in the decision making process in new and innovative ways. Without open source software, www.recovery.gov may have taken months to design and publish, but using code already developed by others, they were able to publish the website on the same day the Recovery Act was signed by President Obama.

The Obama campaign and White House are known for their use of vast email lists, but under that more general list are also a number of data organization methods that use Web 2.0 to make those lists more useful. During the campaign, issue oriented emails were targeted to different areas of the country with economic concerns focused on the mid-west industrial zones and environmental messages focused on the west. Similarly, different requests for contributions were sent to different types of contributors with the size of the request directly correlated to previous levels of support.

This use of database organization technology has continued in the new administration. Account holders on my.barackobama.com still receive communications, albeit under a new banner dubbed “Organizing for America”, which are now entirely based on policy...
Candidate Obama vs. President Obama: A Study of Web 2.0 Strategies

By Jason Wise

rather than campaigning efforts.

In a new use of databases, members of the press have reported a new focus being placed on news releases and conference calls. Previous administrations produced general press releases that covered nation-wide policies, but Obama is focusing his press releases to specific regions. During debates over the economic stimulus package passed in the initial weeks of the Obama presidency, press releases to the media in California specifically discussed how the stimulus would affect California. This is yet another Web 2.0 use, albeit not fully in the public sphere, that creates a more targeted policy making approach.

Technological Impact

The full impact of Obama’s use of technology is a constantly changing discussion. Its effect on the 2008 presidential campaign however is very pronounced: by organizing his most passionate of supporters in new ways he was able to win every caucus state during the primaries and inspire numerous small donations from individuals who had never given money to a campaign before. According to the Pew Internet and American Life Project, Obama’s supporters also felt his “use of communication and transparency was important to his electoral victory.”

Sherry Bebitch Jeffe, Senior Fellow at the University of Southern California School of Policy, Planning, and Development, believes that the lasting effects of the uses of Web 2.0 on political campaigning are still up for debate, however. According to Jeffe the most immediate example can be found in the March 2009 elections in the City of Los Angeles in which “candidates used Obama’s methods wholesale, but to varying effect.” Mayor Antonio Villaraigosa used social networking technology in his reelection campaign but won by a smaller margin than his first election despite having no recognizable opposition. “His campaign for Measure B (the ‘Solar LA’ initiative) is a particularly notable failure” shedding light on the limits of Web 2.0 in political campaigning. Simply creating a Facebook page and posting YouTube videos in and of itself is not a campaign strategy. As Jeffe put it, “the candidate still matters” and perhaps it is the personality of Obama
Candidate Obama vs. President Obama: A Study of Web 2.0 Strategies

By Jason Wise

himself that made his use of Web 2.0 that much more effective.

Following the campaign season, the impact of the continued use of these technologies is still unknown. In a post-election survey, Pew found that 51% of Americans expect to hear more direct messages from the Obama administration than previous presidents. By having such an effective communications strategy using technology in the campaign, President Obama has set a high standard to follow during his administration. Jeffe noted “his use of email networks to canvass in support of his budget proposal,” but that we still “have not seen the effects of technology on policy itself.” Accordingly, Jeffe believes we will not see the real impact social networking can have on policy making until more passionate issues like the environment, health care reform, and Social Security become the focus: “It’s easier to organize people around the environment than around a budget and numbers.”

Conclusion

The use of Web 2.0 technology within government is a constantly expanding field. The inherent need during a campaign season to inform supporters, organize volunteers, and raise funds is one of the primary catalysts of its growth within the policy arena. President Obama used these technologies to great effect during his campaign, which has encouraged other politicians to update their approaches to campaigning as well in hopes of finding similar success.

This research shows that Obama’s level of activity in Web 2.0 technologies has slowed as he has moved from the role of candidate into the role of president. Even with this decline, his use of these technologies still represents an increase compared to previous administrations, especially in his use of open source software, the weekly YouTube address, and with the Open for Questions social networking capability. Advancements in technology and its availability may have also played a role in that increase. Despite the successes of the campaign, the use of these same technologies during the everyday job of a politician, especially the President of the United States, brings with it a host of new challenges. The ability of social networking, for example, to gather support around a specific policy proposal is as of yet unproven.
Candidate Obama vs. President Obama: A Study of Web 2.0 Strategies

Even with differing levels of technological activity, President Obama’s use of Government/Web 2.0 technology in his administration will invariably act as a testing ground for new methods of public communication, transparency, and constituent mobilization. Any successes found in these areas during the coming months and years of Presidential policy making will certainly be closely watched and likely imitated by future elected officials.

References

- “Recovery.gov is using Drupal!” Retrieved from: http://drupal.org/node/376036

By Jason Wise
Introduction

As problems related to sprawl and widespread suburbanization – such as congestion, geographical fragmentation and urban decay – emerged in the 1970s, progressive urban theorists began to advocate for the physical realization of smart growth principles, which endorse growth patterns that are compact, mixed in uses, transit-oriented, walkable and bike-friendly. Meanwhile, other schools of thought based on similar guidelines, like new urbanism, proliferated in the face of accentuating urban sprawl-fueled challenges.

Contemporary urban planning literature such as Kevin Lynch’s *Good City Form* (1981) and Douglas Farr’s *Sustainable Urbanism: Urban Design with Nature* (2007) have played indispensable roles in the advancement of smart growth practices. The messages conveyed by these academic works, however, are not readily accessible to stakeholders outside the field of urban planning. Moreover, practitioners have to overcome the difficulty of implementing theoretical ideas in real spaces – without visual instruments to realistically depict streetscape possibilities, projects developed have often deviated from what concerned communities desired.

Although a variety of visualization softwares and techniques have been utilized to address the aforementioned obstacles pertaining to smart growth design, they are mostly three-dimensional rendering tools that require lengthy sketching processes from scratch. To complicate matters, these applications are often expensive and require extensive training to operate. On the street and neighborhood levels, two-dimensional site plans have become the most common medium employed in community visioning exercises. Although site plans can provide detailed layouts of an area’s street networks, amenities and land uses from a bird’s eye view, they are unable to help stakeholders visualize urban features and building textures from a pedestrian’s perspective – a critical downfall for the implementation of smart growth designs that are largely form-based.

To address the deficiencies of visioning exercises, Steven Price
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Fig 1. 3-D modeling requires lengthy sketching processes from scratch, http://sketchup-components.com/SketchUp3DNCComponents.jpg

Fig 2. Site plans can only show area of focus on a two-dimensional level, http://www.hope.edu/resources/devos/img/05DeVosSitePlan.jpg

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of Urban Advantage began, in 1996, to explore the possibilities of using real-life photographs to yield true-to-life portrayal of smart growth development in barren suburban landscapes. He superimposed cropped images of advocated urban features
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– compact development, greenery and pedestrian-friendly sidewalks – on the pictures of existing suburban streets, yielding realistic imagery that complemented the use of site plans in charrettes. In doing so, he was able to help community members understand the benefits of well-designed urban spaces in a more tangible manner.

As Price’s work collection grew with the number of entities he worked with, he was able to amass a library of images for more than seventy locations across the United States. In 2008, the smart growth program of the National Resources Defense Council (NRDC) took notice of Price’s success and utilized the library to create an online visualization tool that is accessible to all individuals with an Internet connection. The application can be found at http://www.nrdc.org/smartGrowth/visions.

Dissecting Picturing Smart Growth

The Website and Its Navigation

Picturing Smart Growth is a free, interactive and easy-to-navigate application that allows anyone with an Internet connection to see the urban possibilities brought by the application of smart growth principles. Upon entry into the website readers are able to see clearly the intended goals of the application, as explanations of smart growth and its benefits are clearly on display. An illustrative example of a hypothesized urban transformation is also presented on the front page to help users understand how the instrument helps them visualize phased smart growth development.

When users click on the “Explore Locations” tab, they are led to the library of images created by Price for various neighborhoods across the nation. The available locations are comprehensively marked on a Google map of the country: as shown in Figure 4, the software carries more than 40 examples across the continental United States, as well as two from the island state of Hawaii. What makes this a remarkable tool is that it allows users to single out the types of smart growth examples they wish to see, based on criteria in four main categories displayed in Figure 5. For instance, if a user chooses to see how a decrepit urban commercial area can be adaptively reused, he or she can check “Urban” in “Area”, “Adaptive
Reuse” in “Smart Growth Improvement”, and the locations that fulfill these criteria will appear on the Google-powered map. Practitioners aiming to guide themselves or stakeholders through a design process can click on an example to illustrate the impact of simple additions in each development phase. Upon clicking on a logo, the user is led to an aerial map showing the exact location of the concerned site, and the area surrounding it. In addition, a vignette containing the municipality’s demographic information and images of its current condition is layered on to help users understand the site’s urban context. In Figure 6, the area statistics and existing street conditions of Dana Point, CA are displayed.

The user can then view how incremental installations, such as creating wider sidewalks and planting trees, can transform the street depicted. Each transformation is completed with a series of three to five consequential images.
Another noteworthy component of Picturing Smart Growth is the “Featured Scenarios” section that contains five examples of drastic, hypothesized transformations of dead spaces. Each transformation is portrayed by images formulated by the aforementioned phased approach, and accompanied by a description of the incrementally-added features and their impact on livability.

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Creative Process and Technology Used

Despite its comprehensiveness, Picturing Smart Growth is developed with applications that can be manipulated with ease. It is essentially a mash-up of Google Maps, and the pool of images Price had created for his past clients. The images were assembled with Adobe Photoshop.

According to Price, the incremental layering of urban features was executed based on the following smart growth principles:

- Streets should be interconnected and segmented with small blocks to allow for alternative routes and greater walkability;
- Public spaces designed to foster social interaction should be incorporated. Such spaces should be reachable by multiple forms of transportation, and surrounded by multi-modal streets that are visually appealing;
- Entrances and windows of buildings should face the street to make it enticing for pedestrians. Structures should also be contiguous and not separated by parking lots and public spaces.

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Assessment

Usage in Urban Planning Processes

Despite its simplicity, Picturing Smart Growth offers both practitioners and regular residents a highly intuitive and navigable...
instrument that facilitates smart growth envisioning. Scenarios built upon real locations also confer the benefits of smart growth development in a highly tangible manner. In addition, its deployment as a cost-free tool on the NRDC website bolsters its potential to serve as a catalyst for smart growth movements at the grassroots levels. As Price asserts, “I wanted to create an application that not only helps with visualization, but can also act as a proponent of education and outreach.”

Price’s sentiment was echoed by Carolina Gregor, a Senior Regional Planner at the San Diego Association of Governments (“SANDAG”). To strengthen its smart growth initiative, SANDAG used Picturing Smart Growth as a catalyst to spur buy-in from local jurisdictions under its umbrella. “We were using site plans and maps to mark up possible locations for smart growth development, but many local government officials and planners did not know what that term meant. The simulations were able to help them visualize growth that follows smart growth principles,” Gregor said. “Two-dimensional simulations are also more cost-effective and convenient than three-dimensional modeling. We have encountered problems with three-dimensional simulations in workshops as they didn’t run at times. Audiences also did not

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have the attention-span for these simulations that last more than a minute and a half. With the two-dimensional images you can go back and forth easily to illustrate your point.”

**Shortcomings and Future Considerations**

Despite the software’s ease of use, several aspects remain to be improved upon. A glaring shortfall is the absence of a public input mechanism; it currently functions as a one-way information engine without the ability to address specific queries users have. Carolina Gregor also notes the regulatory and political roadblocks towards realizing what is portrayed on the images. “Some examples used in Picturing Smart Growth are not directly applicable to our work as land use regulations are different from place to place.

Also, the implementation of what may look like simple additions in an image requires a lengthy political process, which is not addressed on the website.” Rachel Sohmer, an associate at NRDC’s Smart Growth Program, also adds, “with the exception of green roofs and street trees, the image sets do not show many of the stormwater management techniques that NRDC advocates, like curb cuts leading to rain gardens.” The best way to maximize Picturing Smart Growth’s effectiveness and value in workshops, as

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Price, Gregor and Sohmer all agree, is for practitioners to clarify the application’s chief function—envisioning smart growth and the benefits it brings—to participants prior to usage.

Another area ripe for further research is the expansion of the software’s three-dimensional capabilities. As Price alludes, the current two-dimensional simulation methods are unable to portray the outcome of neighborhood-wide improvements; an accessible and cost-effective tool that combines realistic chronological imaging with three-dimensional block and neighborhood sketches would help users visualize the urban forms of concentrated smart growth development.

Lastly, the NRDC may also want to consider modifying the application to an open structure such that other simulation creators can add to the existing library of examples, provided that the images are of high quality and assembled according to the smart growth guidelines.

According to Sohmer, the NRDC is currently devising plans to create an interactive “Sim-City” like tool that quantifies the impact of externalities—location, neighborhood design, land uses, etc—on the environment and quality of life or urban areas. The further development of this initiative, however, is hampered by the NRDC’s lack of funding.

**Conclusion**

With the physical and political environment calling for more aesthetic, sustainable urban forms, progressive urban planners and land use professionals have to garner greater political support from relevant constituents and stakeholders. Without an effective medium to depict realistic scenarios, parties critical to the political process are often unable to fathom the amplified benefits of incremental improvements. As a consequence, many smart growth initiatives have either been unable to proceed as planned, or worse, stalled.

Picturing Smart Growth is an application designed to help target audiences nurture a plausible vision for development based on...
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smart growth principles. Through the presentation of hypothetical modifications on chronological images, stakeholders are able to visualize the profound impacts generated by small-scale changes such as pavement widening and tree planting. Compared to its three-dimensional counterparts, Picturing Smart Growth presents itself as a much more economical and easy-to-navigate option, while carrying a larger potential to act as a catalyst for education and outreach due to its accessibility.

Going forward, the NRDC may want to let other creators participate in Picturing Smart Growth through image contributions in an open structure. In doing so, the current library of examples can be expanded at a faster pace while allowing new concepts to gain greater exposure. Software developers should also think about developing an accessible application that hybridizes two-dimensional and three-dimensional presentation formats, such that audiences can envisage the greater benefits and geographic impact of smart growth development. The ability to implement these changes, though, is ultimately dependent on the financial and political support from pertinent authorities.

References

• Gregor, Carolina. Personal Interview.
• Price, Steve. Personal Interview.
• Sohmer, Rachel. Personal Interview.

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