interactive multimedia:
a community participation tool
interactive multimedia:
a community participation tool
Abstract

Undergraduate Landscape Architectural Thesis
Interactive Multimedia: a community participation tool
Joseph E. Mayes
4.26.2006

This project focused on developing an interactive multimedia tool for a design process involving community members. Through the course of this project, participants had the opportunity to interact with the inventory, analysis, programming, conceptual, and the final design within a website. This interactive multimedia format provided a non-confrontation forum for the community members to learn about the design process and voice their opinions anonymously.

The ability to use movies, still images, models, text, digital walk-throughs, motion graphics, and interactivity within design communication increased the awareness of good design, design process, and the importance of site responsive design. The use of interactive multimedia also provided new techniques of communicating complicated design issues and concepts that was more successful than traditional means of design communication.

Community participation was vital throughout this project. Community members gave their opinions on what they wanted the space to become and then help guide the design process by giving feedback on design concepts developed from their input. The final design is a show case of the input of many Ball State University community member's desires, dreams, and concerns.
There are many people that have been influential and supportive during this last year of my undergraduate career. Without these people I would not be able to be increasingly inspired and strive to do my ultimate best while staying somewhat sane through it all. These are a few of the people that made my life easier and memorable this past year:

To mine and Katie's family you have always been there and supportive in all my endeavors and even though you probably didn't totally understand my profession or my thesis you your best to learn, act genuinely interested, and kept asking how I was coming along in my thesis. Thank you for your love, support, and teasing me about how I am a landscaper.

Advisor Joseph Blalock: your Creativeness and ability to question everything I did even though frustrating at times was very motivating to complete my thesis to the depth and scope that it became. Thank you for giving your time and your brain power to inspire and encourage me this semester. Even though you probably didn't totally understand my profession or my thesis you did your best to learn, act genuinely interested, and keep me going in my last semester through this topic as my thesis. Thank you for always leading your ear and making sure I had thought of every angle.

Professor Ron Spangler as a studio professor and my academic advisor you were very influential and encouraging me to choose Digital Media as a second minor which inspired me to choose this topic as my thesis. Thank you for showing me that there is more to the profession than designing beautiful places.

Professor Chris Marlow: you were a great source of encouragement and excitement through this entire semester. Your ability to critically and thoroughly support my process was invaluable. Thank you for always leading your ear and making sure I had thought of every angle.

Class of 2006: all through this semester it was great to spend the late nights with such a highly dynamic and entertaining crowd. The all nighters in studio will only be missed for the entertainment and the friendships made. Thanks for keeping the stressful times light hearted!!

Last and not least to my wife Katie who was put through literary torture this semester. Thank you for all your love, support, encouragement, and humor when I didn't feel like laughing. Your willingness to sacrifice and help me throughout this semester and hear me vent about frustrations was always right when I needed it the most. Thank you for being you!
# Table of Contents

- **Abstract** ......................................................................................................................... i
- **Acknowledgments** ............................................................................................................ ii

- **Table of Contents** ............................................................................................................ ii
- **Introduction** ...................................................................................................................... ii
- **Literature Review** ............................................................................................................. iii
- **Project Significance** ......................................................................................................... iv
- **Problem Statement** .......................................................................................................... v
  - Goals and Objectives
- **Project Requirements** .................................................................................................... vi
  - Software
  - Operating Languages
  - Use of Phases
- **Site Setting** .................................................................................................................... vii
- **Design Process** ................................................................................................................. viii
  - Web Site Design
  - Phase Design
- **Conclusion** ..................................................................................................................... viii

- **References** ....................................................................................................................... ix
- **Appendix A: Definitions** .................................................................................................... x
- **Appendix B: Software** ....................................................................................................... xi
Design professionals are increasingly faced with the challenge to design spaces and places that will best address the community's social, psychological, environmental, contextual, cultural, economic, and political needs and desires (Wulz, 1986). In the past 60 years of design development, community participation has been effectively used as a tool to include community members in the design process (Sanoff 2000, Riddick, 1971). These processes have helped elevate the importance and success of design with the use of community participatory design techniques (Sanoff 1988, 1990, 2000). To eliminate division between designers and community members and to encourage greater participation, there is a need for visualization, design education, and flexible community participatory techniques that will not limit the input to community members that come to scheduled meetings (Al-Kodmany 2001, Sanoff, 1990, Sipes 2002, Schirmer, 2001).

This project used interactive multimedia within a website to receive community input within a design process. This project supports the need for the development of an interactive multimedia model as a design tool. This form of communication is under utilized within the profession of landscape architecture and this study shows how communication barriers can be broken between community members and designers. The ability to use movies, still images, models, text, digital walk-throughs, motion graphics, and interactivity in design communication increases the community awareness of good design and understanding of the design process. Interactive multimedia was also proven to be a valuable supplemental tool to the participatory process and increased the level of understanding and involvement. Participants were given the option of giving feedback and opinion on the program, conceptual development, selecting of concept, and the final design by means of questionnaires, blog conversations, and e-mail.
Community Participatory Design

1. How does a landscape architect receive input from community members?
Community participatory design, according to Sanoff (Sanoff, I 1988) is simply the user is involved with all design decisions and major design processes. This concept is deeply integrated with democratic ideals and utilizes people of every social level and treats their opinions and views as equal (Sanoff, 1988). There is a plethora of participatory tools at a designer’s reach and many have been utilized over the years in a diversity of design projects. Sanoff includes eight different techniques used by designers to incorporate community members’ input and specific methods used to implement these techniques. Sanoff also includes several case studies that employed different forms of participation. Sanoff then analyzes the success of the design and how the participatory design process helped in the success of the design. His findings support that involving the community within the process increases the success rate of the project.

W.L. Riddick II addresses the charrette, one form of community participation in his book, “Charrette Processes: A Tool in Urban Planning.” Riddick’s approach to community participation is implementing a charrette that follows a structured schedule and leadership to gather community input. This process is not necessarily the best fit for every design process, project, or community, but Riddick’s overall theory on the potential of utilizing community to a design process cannot be ignored. Wulz is very insightful into the process of community participation. Wulz takes an in-depth look at how participation evolved and gives a detail breakdown of participation techniques into seven categories. These seven categories are an excellent supplement to Sanoff’s eight techniques for community participation.

A landscape architect has multiple tools and techniques that have been tested and implemented in a diversity of projects. These techniques streamline the community input process and make the community participation process beneficial to designers and community members.

2. Can community participation be successfully integrated into a design process?
According to German Cruz, a professor of landscape architect at Ball State University, community design is an essential part of designing for the community and it creates more successful projects. Cruz worked for one year with East Meadow Housing Authority in a community participation program that changed his perceptions of community design and his expectations of community member’s insightful comments and input.

Crewe investigated the community participation process to see if the design produced through community input was considered successful by community members and the design
professionals. This landmark study concluded that a overall results of community participatory design were successful by community member and design professional criteria. The study polled area residents, participatory design participants, and design professionals on the categories of marketability, aesthetics, and the quality of design. Community interviews and all polls found that community participatory design was successful. This study also included a poll to see where community participation was the most successful which included playgrounds, theme gardens, station art, and historic themes. The least suitable for community input was the overall image of corridor, appearance of station buildings, and signs (Crewe, 2001).

David Schirmer also address community participation in his article, “Interactive Multimedia, Public Participation and Environmental Assessment.” He concludes that community participation is a highly effective means to get cultural and geographical feedback within a design process. The implementation of community participatory design has been successful from the designers’ and the community members’ point of views and supports the claim that community participatory design is an highly effective method of design. This design process can create vital spaces within community neighborhoods that are more effective and successful in their design.

3. What is valuable about the community participation? “Participation reduces the feeling of anonymity and communicates to the users a greater degree of concern on the part of the management of administration. With it, residents are actively involved in the development process, there will be a better maintained physical environment, great public spirit, more user satisfaction and significant financial changes” (Sanoff 1988). Community participation also gives the community as sense of ownership when included into the design process. It is not necessarily that every desire and wish was granted for the community members but that they were listened to and they influenced the process (Sanoff 2000). Community participatory design forces designers to participate in the community. The process also helps community members understand the complicated problems and maximize learning (Sanoff 1990).

The community design process is beneficial for both community members and design professionals. Community member take ownership and pride in their community and the project they influence. Design professional become submerged within the community and can see the problems that face their clients (Cruz). Design professionals are also able to draw from their community participation experiences to create contextually sensitive designs.
Interactive Multimedia Communication

1. What is the difference between non-linear and linear communication? Hock-Hai Teo found in his study, “An Empirical Study of the Effects of Interactivity on the Web User Attitude,” that when interactive communication was compared to traditional models, there were significant differences. This study showed users proved that interactive communication is more effective because it was more satisfying, credible, and built trust between the user and the computer (Teo, 2003). Mayer also concluded in his research that these results, like Teo’s, found that static text fell short compared to interactive communication. Students had better knowledge absorption, retention, and attention (Mayer 2004). Non-linear or interactive communication was by far more successful at communicating the content, holding the users attention, and creating a pleasant experience for the users (Teo, 2003, Burgoon 2000, Maki 2002, Mayer 2004). Interactive web sites proved to be more influential when compared to person to person interaction and person to computer interaction (Burgoon, 2000). These comparison found that human to computer interaction resulted in feelings of more credibility, richness, competence, and trust (Burgoon, 2000). Interestingly, the same study found that within text only web sites, users felt they were more dominated by the computer and scored the least in emotions of trust (Burgoon, 2000). Glynda Hull’s study, “Locating the Semiotic Power of Multimodality,” concludes that written text is over powered by the effectiveness of multimedia applications and can produce striking different meanings than static text. This is due to the ability to associate with the information (Hull, 2005). Information transfer is also increased within a non-linear format when compared to linear communication (Mayer, 2004).

The difference is undeniable. Linear communication is limited when it comes to effectively communicate, capture user’s attention, and establish creditability (Burgoon, 2000, Teo 2003, Mayer 2004). These finding suggest that interactive communication is far superior to linear communication because of these increased communication effectiveness and emotional responses.

2. What is the potential of digital communication? There is an endless potential of digital communication. The technology is growing so fast that the application of the technology is slowly implemented. Center for Media Design’s Middle Town Media Study 2006 shows the ever increasing use of media and how it overrides all other aspect of our lives. Within this study, there is significant potential to use interactive multimedia communication to interact with the community and gather input, views, and opinions. Schirmer’s article found that a multimedia communication model was very effective in communicating and simplifying complicated environmental data and receiving community input for designing environment protection guidelines (Schirmer, 1994). Digital models can also supplement the community participatory design process by adding visualization tools for community members and design professionals (Al-Kodmany, 2001). Interactive multimedia can also appeal to the community members that would not normally speak up or show at regular community meetings. The interactive
multimedia format gives the user an autonomous and non-confrontational atmosphere in which they can share their opinions (Sanoff, 1990, 2000, Riddick, 1971, Sipes 2002) Town hall meetings are also beginning to be held online and gather community participation and input (Sipes, 2002).

Again there is endless potential to utilize digital communication and apply it to community participation. It can be used to gather community input, communicate complicated subject matter, and hold city hall meetings. These finding support the potential usage of interactive multimedia within the participatory design process because of its communication abilities and accessibility.
There is a continuous struggle between architects, planners, and landscape architects against the client or community that their designs will impact (Walz, 1986). The struggle seems to always boil down to the same problem: the designer feels that they ultimately know what is best for the community and feel that any interference from the community will jeopardize the integrity of design (Sanoff, 1988, 1990, 2000, Habraken 1986). The community members repel the designer's egotistical views and fight for input to have their needs and views accommodated within the design (Habraken, 1986). This struggle has resulted in many grand and personally cherished designs from architects, planners, and landscape architects getting as far as public meetings before community petitions and uproar that have halted the implementation (Sanoff 2000). What can be done to implement good design that will effectively meet the community's expectations?

All of these conditions can be satisfied within a community participatory design process. However, even as magnificent as this participatory design can seem, it still has its limitations. Two limitations of the process are:
1. Only community members that come to scheduled times are able to give input and all other members are excluded and their concerns, ideas, and views are unheard (Sanoff 2000, Riddick II, 1971, Wulz 1986).
2. Community members and even design professionals are limited by not being able to communicate clearly and effectively (Al-Kodmany 2001, Sanoff 2000).

Digital communication alleviates these participation problems by allowing continual community design input twenty-four hours a day, seven days a week and incorporate written text, 3-D models, video, images, diagrams, and sketches (Al-Kodmany 2001, Sipes 2002). A need for an interactive multimedia model that allows community participation design is welcomed because of the powerful addition of tools for communication and gathering input from the community.

This project molds community participation into an interactive multimedia web site that can be easily accessed by community members and other professionals not only to give their input but learn more about the design process through the eyes of a landscape architect. In doing so, this product creates community pride and support for the project, as educate the community of what good design can do for their community.

The following graphs are from the Ball State University Center for Media Design's Middle Town Media Study 2005. This study shows and compares the use of media to everyday activities. These graphs show that our society is focused on media and further supports the need for using a multimedia format within landscape architecture.
[Figure 0000 caption: life activities and media use duration chart]

[Figure 0000 caption: daily reach and duration of media chart]
This project utilized an interactive multimedia interface within an Internet web site to collect and encourage community participation within the design process. This web site also educated the user of the design process and multiple variables that designers take into account when designing.

**Goals and Objectives**

To accomplish the project the following goals and objectives were defined for the focus of this project:

**Goal 1:** To create an interactive multimedia Internet web site

- **Objective 1:** Create an interactive interface that will respond to the input by the user’s stimuli, such as mouse movement.
- **Objective 2:** Integrate two to three different media forms into one seamless interface.
- **Objective 3:** Create a web site accessible to anyone with a computer and Internet access

**Goal 2:** To promote community participatory design

- **Objective 1:** Utilizing multiple community participatory design techniques defined by Sanoff (2000) and Wulz (1986).
- **Objective 2:** Market and promote this project to the multiple educational departments housed within the adjacent buildings by fliers, word of mouth, and e-mails to students, faculty, and staff.
- **Objective 3:** Create a non-confrontational anonymous atmosphere to promote and encourage the free expression of opinions, beliefs, views, ideas, and criticism.

**Goal 3:** To utilize community participation within a design process

- **Objective 1:** Use the data gathered from the Internet to analyze the needs, desires, and opinions to program the site.
- **Objective 2:** Develop two different design concepts based on community input.
- **Objective 3:** Use feedback on proposed concepts to develop a final concept.
**Goal 4:** To educate the community of the design process  
Objective 1: Use the process of community participation to be an informative site analysis to showcase the factors that will impact the designs.  
Objective 2: Use the site programming process as a educational experience to what this site can become and break out of the box of traditional thinking.  
Objective 3: Use the conceptual design process to educate of design reasoning and theory used to develop the design.
Due to the nature of this project a reliance on digital media technology was needed. To complete this project the use of animation, web design, and operating languages was needed to seamlessly construct the web site. The amount of content and community participation was broken down into web site phases to replicate the progression of a project through a landscape architectural office. Phases also helped to present the content in digestible portions in order to avoid the overloading the user with new information.

Software
The majority of this project was constructed within Macromedia Flash MX 2004. This software is an industry standard for the creation of web animation and interactivity. Flash has a high learning curve but provides amazing tools to display content on the web never seen before. A full list of software used within this project is located within the appendix.

![Macromedia Flash MX 2004 interface](image)
Operating languages
This refers to the languages used to communicate within a computer. There was a vast use of Macromedia Flash MX 2004’s operating language ActionScript throughout the project. Other languages used were PHP and HTML. PHP was in order for the poll to work and gave the website the ability to send an e-mail within the website. HTML was used to position the website within the page. Here are examples of code used:

**ActionScript**
```javascript
stop();
var LV_out:LoadVars = new LoadVars();
var LV_in:LoadVars = new LoadVars();
LV_in.onLoad = function(success) {
  if (success) {
    gotoAndPlay("quest5");
  } else {
    trace("Error loading data into flash");
    gotoAndPlay("Error");
  }
};
submit_mc1.onRelease = function() {
  LV_out.box1 = 1;
}
```

**PHP**
```
<?php
$user="joemayes_admin";
$password="nimda";
$database="joemayes_sitedb";
$table = "poll";
//----------connect to database
mysql_connect(localhost,$user,$password) or die("Could not connect");
mysql_select_db($database) or die("Could not select the database");
//--------------------Query Database
$data = array();
foreach (range(1,20) as $qst) {
  $data[$qst] = array(1=>0,2=>0,3=>0,4=>0);
  $myquery = mysql_query("SELECT * FROM poll WHERE question=$qst") or die(mysql_error());
  //-------------Put results into an array
  while ($myRecord = mysql_fetch_array($myquery)) {
    //Put code to update results
  }
```

```javascript
```
```html
```
Use of Phases
The use of phases was vital to the communication of the design process and gave the project the ability to communicate without overburdening the user. There were three phases to this project.

**Phase 1:** focused on the importance of inventory, analysis, and then gave the community members the ability to help program the site.

**Phase 2:** took the community input from the first phase and created two concepts. The concepts were displayed in an interactive format and then the users were able to give feedback on the design and help choose the final design.

**Phase 3:** was the display of the final design chosen by the community members in an interactive format.
This community participation design process focused efforts on the space between the Fine Arts Building and Cooper Science Building on the Ball State University Campus. This site was chosen due to three factors:

1. Due to the proposed use of the Internet to involve community participatory design, the site had to be within a community that has a high percentage of Internet users. The Ball State University community, which is comprised of students, faculty member, and staff, use the Internet daily for communication, educational, and entertainment purposes. Ball State University was also recently named the nation’s number one wireless campus by Intel Corporation and US News and World Report in October 2005.

2. Conversations with Deane Rundell, principal of Rundell Ernstberger Associates (REA) and project manager for the Ball State University Master Plan. REA is the official landscape architects for the campus and master plan endeavors. Rundell listed this space as one of three spaces on campus that needed renovation and redesign. Campus Architect Kevin Kenyon also confirmed Rundell’s recommendation.

3. The dynamics of the site and potential to connecting to science departments and the Ball State Museum of Art within an outside space. This site also serves at a gateway into the Quad, a large park space with many mature trees and large open lawns. The Quad is home to the Ball State University icon, Beneficence, and graduation commencement ceremonies are held in each May as the Fine Art Building becomes the main backdrop for the ceremony.

The current site can be classified primarily as a passage space for pedestrian use coming and going from the Cooper Science Building. The site is approximately 250’x170’ and is defined by Riverside Avenue to the north, Quad sidewalk to the south, Cooper Science Building to the west, and the Fine Arts Building to the east. The Fine Arts Building is a large four story Neo-Classical architectural style brick building with limestone coping. The Cooper Science Building is a large four story Modern Architectural brick building that has limestone bands running vertically along the sides. The current site has small patches of lawn in the center of the space that is fenced off to keep foot traffic from wearing the turf down. There is a small grass berm on the north side that is planted with a row of arborvitaeas under a large white oak. On the south side of the space is a slightly sloping landscaped bed with plantings. Since the both buildings are four stories high and set on the east and west borders of the site, shade could be a factor in the design of seating spaces. The space is primarily a clean slate with the exception of some established plantings along the north side of the Fine Arts Building around the maintenance access.
The goals and objects of this project required that majority of the design process be spent within the development and the design of the web site and the assets of design communication for the web site. This section will cover the steps of the process and how the end product was achieved.

The design process of the website began comparing traditional and interactive communication models. The literature review findings showed a difference of effectiveness and efficiency of communication that the interactive model had over the linear model. The major differences were that interactivity model showed that participants learned quicker, retained the knowledge, and had better recall of information at a later date. There were also notable psychological differences that showed that participants trusted and were persuaded by the information communicated within an interactive format. This was profound to this process due to the highly potential volatile situation that can occur within community participation design processes and town meetings. The two graphic diagrams on the side of the page diagram the different communication models.

The traditional model of communication is often like presenting to a crowd or giving a speech. This technique is used the majority of the time by landscape architects to communicate the design process and designs.
The interactive model of communication is often similar to a discussion or conversation. Once again this model is more effective and efficient in communicating. This means of communicating is more socially natural within the context of a social environment. Also this model is typically more socially comfortable for all parties involved compared to the presenter that might be nervous or intimidated or the audience that might be bored or nervous themselves in the traditional communication model.

Web site design applies the same theory of the communication models. However, the terms “traditional” and “interactive” are typically referred to as “linear” and “non-linear” organization within the web environment. The theory behind the linear and the non-linear organized web site is the same as traditional and interactive communication.

Linear web sites typically are a guided process or given steps. These sites are use to communicate in a methodically way and used for research, story telling, how to sites, and web sites with an abundance of information.

Non-linear web sites are often user oriented and user controlled. The user decides what they want to see, do, learn, or hear. A majority of the web sites today use non-linear organization on different levels. These sites are typically used for news, games, entertainment, and adventure.

For this project both non-linear and linear organization were used in the design. This made the site more adapt to the community member’s preface. A web site page concept is located on the next page.
**Figure 00.07** caption: web site concept showing the basic layout and placement

**Figure 00.08** caption: final web site design showing the placement of features
design process: web site design

[Figure 0009 caption: web site tree showing the complexity of the site]
The first phase of the web site set the precedence in design and layout of the other phases to follow. The overall theory within the design of the web site was to give multiple links and connections within each page of the web site. This allows the users to have a higher potential of visiting each site and follow the process. A tour was also offered for the users that want to take the step by step linear approach to the web site.

The home page is starting point for the whole web site, giving a brief representation of what the user will find within the site. This page also connects to all the pages within the site and provides a tutorial for users that feel overwhelmed.
Charlie Cardinal Helper

The web site used typical layout and navigational features that most Flash web sites incorporate in their design. The student population typically have experienced these design in browsing the Internet. This design was catered towards the college student with the skills, experience, and comfort level of browsing the Internet. However, for the user out of the college age population or browsing skills the Charlie Cardinal Helper can provide helpful hints on how to navigate through the web site.
design process: phase one design

**Figure 00:13** caption: more information page with relevant research and links to find more information

**Figure 00:14** caption: site images page
design process: phase one design

Figure 00: 15 caption: main inventory page giving a brief overview and help to access information

Figure 00: 16 caption: beginning the circulation inventory and the need for inventory
Site Inventory

The inventory part of the web site focuses on context, circulation, topography, vegetation, shadows and views. These were some of the most important features that would effect the design of the space and that community members could easily grasp. This page give explanation of what the inventory does for designers and show plan and 3D graphics displaying the inventory. These graphics are also interactive and increase the understanding of location and placement.
As the second stage of the design process, the site analysis asks why the inventory was important.

A thorough site analysis is the basis of good design because it considers every element of the site.

Select the topics on the right side to view the analysis.

The circulation analysis shows how paths can be corrected, subtracted, and/or created within the new design.

[Figure 00: 18 caption: main analysis page giving a brief overview and help to access information]

[Figure 00: 19 caption: beginning the circulation analysis and the reason for use]
Site Analysis

The analysis part of the web site focuses on taking the inventory and asking why that information is important to the design process. Conclusions are drawn from the inventory data and display graphically in an interactive 3D and plan view format. These graphics show how the analysis directly affects the design process and why it is important for designers to follow an analysis.
design process: phase one design

---

**Figure 002** | caption: poll to gather information about the desires of the community members

---

**Figure 0022** | caption: poll to gather information about the desires of the community members
Help design

Phase one Help Design page give a basic explanation why the community member’s voice is important and how it will be used to program the space according to their needs. The user was asked twenty questions ranging from background information, personal desires, and what they have learned. The user is then able to see real time poll results that put their desires and taste in the comparison to the entire community. The phase one poll showed the designer that the community wanted the space to be art inspired, art themed, have public art, have a water feature, and various other ideas on materials and colors.
design process: phase one design

Figure 00:24 caption: the links page and the list of relevant links

Figure 00:25 caption: contact page that an e-mail can be sent, join the mailing list, or connect to the online discussion of this design and process
Contact Page and Blog

The last two pages of the site consisted of links for the user to learn more about multimedia, landscape architecture, interactivity, community participation among other topics. Contact page also offered the user to send a e-mail directly from the web site if they had questions and comments. There was also opportunity to join a mailing list to be notified of new phases. A discussion board was also offered for community members to say their praise, frustrations, and contribute ideas.
Phase Two

Phase two of the web site include all pages of the phase one and added a new area showcasing the two concepts developed from the community response. The phase two home page included a slideshow of images of the concepts and short cut link to the concepts page. The phase one poll was altered to incorporated visual preference surveys to help the design take the next step in the design process.
design process: phase two design

Figure 00:28 caption: explanation of concepts and design intent

Figure 00:30 caption: slideshow of images that inspired the concepts
design process: phase two design

Figure 00:31 caption: conceptual design process

Figure 00:32 caption: interactive virtual tour; the red circles are information hot spots
design process: phase two design

Figure 00:33 caption: interactive virtual tour; the red circles are information hot spots

Figure 00:34 caption: interactive virtual tour; the red circles are information hot spots
design process: phase two design

[Figure 00:35 caption: interactive virtual tour; the red circles are information hot spots]

[Figure 00:36 caption: visual preference survey]
Design Concepts

The concepts page area shows how phase one poll results were directly applied to the development of two concepts. The first concept approached the space as art gallery and the second used the space as an art piece. The user was allowed to see the design reasoning and process from analysis to inspiration to the displayed concept. A virtual tour was also provided to allow the user to interact with the designs and learn more about the concepts.

The user was then asked to give their opinions on the concepts and which ones they liked the best and why. Again these results were displayed to them real time so they could compare their opinions to the community's popular vote.

[Figure 00:37 caption: Survey results]
Figure 00:38 caption: phase three home page

Figure 00:39 caption: final design page with slideshow, virtual tour and drawings
Phase three of the web site focused on the communication of the selected concept. The concept was chosen due to the overwhelming support it received from the poll and visual preference survey. The home page displayed a slideshow of the final design in the context on campus and different views.

The final design page had a virtual tour of the selected design as well as before and after images of the space showing what the community members wanted. On the right side of the page was an interactive portion for the community members to explore the design but also be educated of popular design communication terminology and reasons why designers used these drawings.
Design professionals are increasingly faced with the challenge to design spaces and places that will best address the community’s social, psychological, environmental, contextual, cultural, economic, and political needs and desires (Wulz, 1986). In the past 60 years of design development, community participation has been used as effective tools to include community members in the design process (Sanoff 2000, Riddick, 1971). These processes have proven to elevate the importance and success of design with the use of community participatory design techniques (Sanoff 1988, 1990, 2000). To eliminate division between designer and community member and to encourage greater participation, there is a need for visualization, design education, and flexible community participatory techniques that will not limit the input to community members that come to scheduled meetings (Al-Kodmany 2001, Sanoff, 1990, Sipes 2002, Schirmer, 2001).

Digital communication can help with these needs. Interactive multimedia can effectively communicate and education complicated design processes to the common layman (Schirmer, 2001, Al-Kodmany, 2001). Additionally, interactive multimedia communication can gather a broader audience of community members that can voice their opinions of the design within the comforts of their home or place of work 24 hours a day, 7 days a week (Sipes 2002). This is crucial because it is proven that involving community members within the design process results in the community taking more pride, appreciation, and ownership of the project (Sanoff 1988, 2000, Wulz, 1986). This also helps the design professional because the more the community feels they have taken part of the process, the more likely the project will be funded and implemented (Wulz, 1986). Digital communication can also begin to establish a trustworthy relationship between the community members and design professionals by providing a non-confrontational place where personal views can be expressed autonomously without fear of rejection or correction by other community members and the design professional (Sanoff 1988, Wulz 1986, Habraken, 1986). Digital communication is under-utilized within the design profession and digital community participation is one feasible tool to elevate the effectiveness of design.
Participatory Design

Cruz, German, Personal Interview: November 11, 2005


International Association for Public Participation. 2005 International Association for Public Participation. Oct 29, 2005 <http://www.iap2.org>


Walsh, M. Building Citizen Involvement: Strategies for local government., Washington


Interactive Multimedia Media


Johnson, Timothy P. “Myriad options in multimedia.” Landscape Architecture Vol. 85 No. 9 (Sept 1995): 26-31


Interactive Multimedia Participatory Design
Al-Kodmany, Kheir “Bridging the gap between technical and local knowledge: tools for promoting community based planning and design.” Journal of Architectural and Planning Research Vol. 18 No. 2 (Summer 2001): 110-130

Cohen, Jonathan “Participatory design with the Internet” Architectural Record Vol 191 No. 8 (Aug 2003): 157-158


Other References

Kenyon, Kevin, E-mail Interview; November 14, 2005

Rundell, Deane, E-mail Interview; September 18, 2005
Community Participation - empowering community members in the decision and design processes that will impact their lives and their community (Sanoff, 1990, King, 1989). Combination of creative, intense work sessions with public workshops and design meetings; the collaborative planning process that harnesses the talents and energies of all interested parties to create and support a feasible plan that represents community change (The National Charrette Institute, 2005).

Interactivity - relating to a program that responds to user activity; the extent to which something is interactive; the extent to which a computer program and human being may have a dialog and/or the multidirectional communication between senders and receivers, and participating individuals have control over the communication experience (Jones 2004).

Multimedia – The combination of media can be the integration of text, music, video, images, graphics, and spoken words incorporated into one means to communicate and/or relating to an application that can combine text, graphics, full-motion video, and sound into an integrated package (Jones 2004, Miller 2004).

Digital Divide - the gap between those who have computers with Internet access and those who do not, as well as the gap between those who are computer literate and those who are not (Cortada 2002).
List of software used for this project:

Adobe AfterEffects 6.5
Adobe Illustrator CS
Adobe Indesign CS
Adobe Photoshop CS
@Last Software Sketchup 3-D 1.0
AutoDesk AutoCad 2005
Macromedia Dreamweaver MX 2004
Macromedia Flash MX 2004
Microsoft Word
Microsoft Excell