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TOWARDS THE DESIGN OF SYNCHRONOUS PLACES

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TOWARDS THE DESIGN OF SYNCHRONOUS PLACES

by

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Report

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Dedication

This report is dedicated to my husband Rahul, my best friend Jyotika and to Robert Frost who spoke about the miles he had to go before he slept.

Acknowledgements

I would like to thank my faculty here at the University - Peter Hall, Dan Olsen, Riley Triggs, Kate Catterall, Gloria Lee and David Shields, for their guidance and immense support during my times here. In addition I would like to acknowledge the contributions of my classmates – Amrita Adhikary, Courtney Inge, Dale Wallain and Cathryn Rowe in making graduate school a truly enriching and enjoyable experience.

TOWARDS THE DESIGN OF SYNCHRONOUS PLACES

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The University of Texas at Austin, 2011

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My work attempts to enrich physical place through the creation of virtual layers that enable users to understand their contexts more meaningfully. The intention is to address the practices of spatial and information design as the same design problem, thus acknowledging the simultaneity of contemporary lifestyles. This report summarizes my explorations in graduate school to develop a methodology, which combines the use of physical and virtual components to enable the design of meaningful places.

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Introduction

The title of this report suggests the manner in which we occupy our environments and lead our lives today. Our occupation of physical place is often appended, enhanced and enabled by the function of a virtual / digital component. Increasingly, physical places we occupy can be also be traversed in the virtual realm. Often we tend to occupy physical and virtual locations at the same time. This leads one to surmise, that these “synchronous” occupations may alter the manner in which we relate to either place. The term synchronous acquires greater significance, when we consider that with a change in the ways that we occupy place today; there has been a change in what we consider to be place as well. Our notion of place is beginning to extend from physical environments to include the virtual.

THE MACRO

Advancements in technology, especially the advent of the Internet and mobile access to it, have changed the way we live and schedule our daily tasks. The integration of the Internet into our lives, marked the transition from the digital age to an information age, and transformed the very structure of how we live, communicate and form communities. The physical places we occupy today were often constructed to mirror the ordering of days. These places are now beginning to change and adapt to reflect the impact of our evolving networked society.

People are beginning to work from increasingly de-centralized locations, moving away from a centralized office space. Traces of these changes are also evidenced in the

loose structuring of some workplaces as social centers.¹ Corporations are offering increasingly informal work places and promoting work cultures where employees interact more, often at cafeterias, sport / activity centers, meeting spots - all integrated into the work place. For instance, the offices of Internet giant Google, demonstrate a shift from the modernist open-plan office layout to one that is geared towards creating innovative meeting spaces for small groups of engineers. This comes from a change in the way employees work – with more choosing to work remotely upon individual projects and at the work place for collaborative work.² These changes are seen simultaneously in other aspects of societal life as well. Discreet location is no longer an impediment to fluid communication, thus allowing users to embrace more fluid structures of ordering their days and spaces.

While the impact of these shifts is presently fairly nascent, one can forecast that increased integration of networked services into our lives will begin to affect the very manner in which we segment our places. For instance, coffee shops which were once venues of social interaction for local communities have evolved into places where people work from as much as they are locations for social interaction.³

¹ Manuel Castells, *Rise of the Network Society* (London: Blackwell Publishers Ltd, 2001) 440-447

² Manuel Castells, *Rise of the Network Society* (London: Blackwell Publishers Ltd, 2001) 440-447

³ Mark Tuters and Kazys Varnelis, “Beyond Locative Media”, *Networked Publics*, last modified January 21, 2006, http://networkedpublics.org/locative_media/beyond_locative_media

Much as the automobile had a profound affect upon the physical structure of modern cities, the integration of the Internet portends a change in the physical structure of our cities. By this I do not mean to imply that people will progressively deny physical places, but physical places will, as Manuell Castells argues, in the book *Rise of the Network Society*, acquire a new significance as junctions of the network that are key to its functioning:

“The networked society is not some immaterial or anti geographical stampede online. Rather, it encompasses a complex and multifaceted range of re-structuring processes that become highly materialized in Real Places.”⁴

These Places perform like nodes of the network, and like the network they assume varied functions - be they related to economics, commerce, enabling the network or social and living.

THE MICRO

The flip side to this urban re-configuration is the struggle of routine traditional practices to catch up with technological and planning developments. Technology is often fast developing. Initial developments are rapidly improved upon and applied on a large infrastructural scale. This leaves the everyday instances where such interventions could be most effective struggling to catch up -- to updates and changed infrastructure. The

⁴ Manuel Castells, *Rise of the Network Society* (London: Blackwell Publishers Ltd, 2001) 440-447

economic ramifications of installing new technologies that are rapidly replaced by updates run counter to the user's needs.

Another fallout of this is the behavior of designers who seek to exploit the potential of the newest technologies to create “never before seen” aesthetic experiences, overlooking the potential of these technologies to alter and augment everyday lives and behaviors in more profound ways. In his keynote for the Devices that Alter Perception Conference, James Auger⁵ spoke of the danger of technologies implemented without consideration of consequences:

“If we remove the connection to everyday life, the experiences or the affects facilitated by the device risk being purely a showcase; a kind of fairground ride where the aesthetic experience, however striking, is simply a temporary alteration of reality. This can create intrigue, thrill and fascination but the effect is rarely enduring, existing like a one-line gag. Alternatively, potential dark or disruptive consequences of application pass unnoticed or unchallenged due to the removal of real-life sensibilities.”⁶

APPLICATION:

My research into the design of synchronous places initiates projects around points of intersection in the physical and virtual environment to create meaningful experiences. Each project studies the creation of an interactive cusp between two conventionally

⁵ “Auger Loizeau”, Auger Loizeau website, accessed February 2010,
<http://www.auger-loizeau.com/>

⁶ James Auger, “Designing Devices that Alter Perception”, Devices Alter Me, accessed March 2010,
<http://devices-alter.me/10/draft-dap2010.pdf>

separate experience formats that the user may encounter in daily life. The projects are aimed at augmentation of the “place” experience, through –

- 1) Developing a stronger sense of place,
- 2) Situating users in their contexts better,
- 3) Creating a repository for collective experiences, and
- 4) Allowing users to access the context, histories and relevance of places, objects and artifacts that they interact with.

My interest in augmenting the experience of place in these four ways is underlined by the prolific problems of ‘placelessness’ in the contemporary city - fashioned to serve the obvious needs of the automobile era, overlooking the slow development that had led to the traditional city form. This contrast is illustrated in the city planning ideologies of Le Corbusier⁷ and Frank Lloyd Wright⁸ with those of Gordon Cullen⁹ and Kevin Lynch.¹⁰ While Corbusier and Wright proposed a symmetrical city structure with stringent segregation of the city into work, recreational and industrial zones, Cullen and Lynch privileged the city as a place of diverse relationships of scale, functions and emotion. Extending an analogy from this, one aim of my projects is to make small changes that ideally impact larger systems. Thus a complex system of harmonies and flux may be maintained – like the traditional city – in place of one overarching and inflexible structure.

⁷ Le Corbusier, *The city of Tomorrow and its Planning*; translated from the 8th French edition of ‘*Urbansime*’ by Frederick Etchells. (London: Architectural Press, 1971)

⁸ Frank Lloyd Wright, *The Dissapearing City* (New York: William Farquhar Payson, 1932)

⁹ Gordon Cullen, *The concise Townscape* (London: Architectural Press, 1971)

¹⁰ Kevin Lynch, *What time is this Place?* (London: MIT Press Media Department, 1972)

PROCESS

My background in Design is situated in the practice of Interior Architecture, specifically the design of branded retail spaces. In the course of my work, I realized that there was often a disjuncture between the brand identity and the construction of a supposedly integrated retail space. The interior designer is often asked to implement a brand that has already been deployed in other media formats, so the design of a spatial identity, and the expression of a brand's core concepts and stories into a retail space become a retro fitting of established structures into constructed spaces.

While this worked in some instances, in others the disjuncture impacted the outcome. For instance, a consumer's experience of a product line and its messages on the brand website and in its television commercials would be disconnected from the retail experience. Designers would attempt to bridge this gap by allowing passive exploration of the websites and commercials from the physical space. However, the piece meal application leads to a less cohesive identity and customer experience.

This same dissonance is found in the design of contemporary place experience. Places are designed to be either physical or virtual locations – and even when related to each other, their connections are often secondary afterthoughts. My studies in graduate school examine ways in which to enable a cohesive experience of a place.

The process of developing interactive interventions to enable better “place” experience has led me to explore methods that suggest equivalency between physical and digital environments. Over the course of my studies, these methods evolved from the creation of maps to graphically annotate physical places, to practices that used mapping as a technique to cull key considerations of the project. Eventually, I began to understand the virtual and physical formats as information environments that my design interventions sought to connect.

GENERAL INFLUENCES

This section introduces the conceptual frameworks and practice reviews that have significant influences upon my explorations. It introduces the notion of synchronous places and works relevant to my inquiries at a meta level. Here, I cite the works, explain their significance and draw the key relationship to my own enquiries.

DIGITAL NATION, TOWARD AN INCLUSIVE INFORMATION SOCIETY

Digital Nation is a public policy manifesto of sorts that makes a case for an inclusive information society by offering plans that would permit society to reap the benefits offered by new technologies while avoiding social and economic exclusion for those without access. Anthony Wilhelm proposes that universal digital access can revolutionize education, healthcare, public affairs etc. while reducing cost, increasing productivity and expanding choice and opportunities.

“Without a more robust, forward-looking national approach to weaving information and communications tools intentionally and democratically into the economic and social agenda, the nation’s future is jeopardized.”¹¹

Lauding efforts to enable universal digital access, Wilhelm stresses the importance of training as key to activating engaged digital networks and enabling employment, cutting costs, developing community relevant content, and enabling social justice.

¹¹ Anthony G. Wilhelm, *Digital Nation* (London: The MIT Press, 2006)

My thesis assumes a scenario in which people live physically and virtually at the same time. While this is increasingly relevant in developed and urban economies, it is not the case for the larger demographic. Digital Nation emphasizes the need for access to digital tools to afford social and public scale connectivity towards a truly democratic society. It establishes the base premise of my argument and has been influential in helping me propose projects that attempt to examine the experiential scope of such a lifestyle.

LIVE SINGAPORE!¹²

LIVE Singapore! developed by MIT's SENSEable City Lab, is focused on developing an open platform for the collection, elaboration and distribution of real-time data that reflect urban activity. It seeks to give people visual and tangible access to real-time information about their city, allowing them to make their decisions more in sync with their environment, with what is actually happening around them.

Through attempts to actuate a Digital nation, this research group seeks to virtually augment physical places through a systematic, spontaneous and accessible data loop that includes people in the city as generators.

The project intends to create,

¹² "LIVE! Singapore", Senseable City Lab website, accessed July 2010, <http://senseable.mit.edu/livesingapore/index.html>

- An urban real-time data platform
- Flexible & Accessible API (Application Programming Interface)
- Interface and interaction models for a real-time data platform
- Query and search
- Visualization tools for urban data

Digital Nation and LIVE Singapore! are works that explain and illustrate the potential of comprehensive inclusive access to digital networks as key elements of contemporary urban development. They analyze the potential of digital access to help ameliorate a wide range of social, political and economic ills. Furthermore, they explore how a networked and information centric outlook on social and public policy issues can enable a democratic interaction between diverse levels of a nation state. They have served as key influences in indentifying and understanding the scale and scope of my subject matter, its potential impact upon the larger social framework.

NETWORKED PUBLICS

Networked Publics¹³ (a term that references us in the networked information age) examines the ways that the social and cultural shifts created by technologies have transformed our relationships to (and definitions) of place, culture, politics and infrastructure. It describes how digital networks enable us to be present in physical and networked places simultaneously – often at the expense of non-digital commitments.

¹³ Kazys Varnelis and Anne Friedberg, Networked Publics (London: The MIT Press, 2008) 15-42

It makes a case for the network as a dominant cultural logic, where connections are more important than distinction. The book asserts that there are no dominant sites anymore and that the onus of place presence is shifting from physicality.

“a node’s relationship to other networks is more important than its own uniqueness”¹³.

The nodes being referenced here correspond with what Ray Oldenberg¹⁴ and William Whyte¹⁵ in their books refer to as the “third place”¹⁶ – a place for community interaction which is neither home or work.

If the free and fast flow of information is the dynamism that activates our public culture, and access to contexts makes a place meaningful – then the ability to dynamically access information and context together may allow physical places today to remain relevant to their users.

¹⁴ Ray Oldenberg, *The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community* (New York: Marlowe & Company, 1999)

¹⁵ William Whyte, *The Social Life of Small Urban Spaces* (Washington D.C.: The Conservation Foundation, 1980)

¹⁶ “Third Place”, Wikipedia, accessed December 2010
http://en.wikipedia.org/wiki/Third_place

Chapter 1 - My World Maps

MY WORLD MAPS

In this section, I shall discuss the design and development of one of my first projects in graduate school, which set out to map the emotional experience of places in a digital format. The reasons a place acquires significance to a user are multifarious, from being sites of significant life events to being sites of beauty, joyous interaction, melancholy, reverie – the list is endless.

My World Maps digitally maps the locations of meaningful “place” encounters. As the user blogs from a particular location, his or her post would register on a map accessible to one or more users. Over time, successive blogs from different locations would reveal a unique layering of information and histories. The user would then be able to overlay his or her ‘location trace’ with those of friends to reveal a complex and idiosyncratic map of places in his or her social network. Thus a unique mapping of the world might be created over time.

The primary intention of the project was to enable users to situate themselves better with reference to the contexts they live within. In an age of increased globalization – virtual media often becomes the enabler of emotional contact with physical places and people. Its key difference from other similar location tagging applications is that My World Maps focuses on stories. It does not seek to function as a path finding application; rather it is an emotional tool that allows contemporary individuals and communities to share physical place affinities and the emotions and stories related to them.

The initial mapping exercise layered blog posts from three users over the span of a week. Each user recorded thoughts as though writing in a personal journal. No prescriptive criteria were defined for the content, other than to record locations and that the content in some manner relate to the locations. The accumulated thoughts from each user were then located upon individual mappings to reveal the trace of their place related stories upon a map. These were successively overlaid upon each other, to reveal a comprehensive trace of their individual maps.

Each location that was blogged about/from was mapped. Upon clicking these locations, the writing about it was revealed. In instances where more than one user annotated a particular location, all writings were revealed in chronological sequence.



Illustration 1: Trace map of one user's locations. The tagging of a location upon the map reveals proximal locations as well. The map thus grows to create defined territories of occupation instead of isolated locations.



Illustration 2: Trace map of User 2 overlaid with map of User 1. Common territories are revealed. The potential for following a 'friend's' traces allows the possibility of enabling new place discoveries. The ability to share experiences and meaningful locations allows for a better understanding of personal and social stories and connections.

The potential of the overlaid mappings to activate community led me to consider the nature of the virtual locations we occupy. If the concept of place as a location of significance to the user is extended from the physical to include virtual locations as well, then the nature of representing these locations upon a singular mapping changes as well.

INFLUENCE

A strategy for developing this idea was provided by The Urban Tapestries¹⁷ project, conducted by Proboscis in partnership in collaboration with the London School of Economics, Birkbeck College, Orange, HP Research labs, France Telecom R&D, and the UK Ordnance Survey.

Urban Tapestries and its follow up program Social Tapestries investigate the public authoring of environment-related communication through the combination of mobile, internet and geographic information system technologies. The projects sought to build up organic, collective memories that traced and embellished different kinds of relationships across place, time and communities. The research initiated was documented diversely – from essays, project reports and academic videos to installations and software interface scenarios.

Urban Tapestries is amongst the first projects to investigate the importance of sharing place-related information, collected by users and enabled by digital technology as a way of creating a new sort of social anthropology for the information age. It also investigated the potential of creating community based feedback loops, reminiscent of

ideas proposed in Digital Nation for remote and disenfranchised communities. Its documentations are a key resource in establishing the potential of digital technology for creating and sharing place meaning.

My investigations, in My World Maps, reflect some of the same concerns. A significant point of departure however, is the junction at which Urban Tapestries ends and My World Maps evolved. Urban Tapestries concluded with the assertion that,

“merely marking points on a map or capturing a longitude and latitude location does not convey the extent of what a person might mean by ‘place’. ... content is associated with, a street, or block rather than a single point ... control over the granularity of our spatial annotations allows for the broadest range of interpretations of what constitutes a ‘place’ to its users.”¹⁷

A sense of ownership, belonging, association of meaning, security, permanence, history and empathy are some key attributes of physical places. But in today’s digital society, these attributes extend to virtual locations as well. Since a topographic representation seemed a potentially misleading way to represent virtual space, my mapping exercise evolved into the design of an interface that sought to represent the user’s personal social world.

¹⁷ “Complex relationships to Space and Place”, Urban Tapestries website, accessed August 2010,
http://research.urbantapestries.net/future_prototypes.html

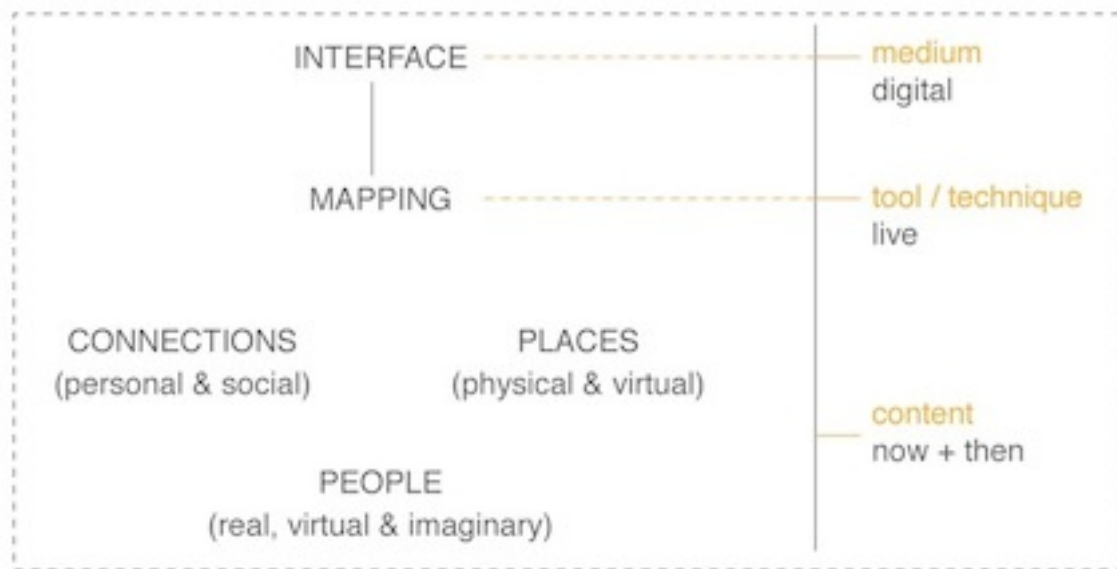


Illustration 4: This diagram shows the evolved project scope.

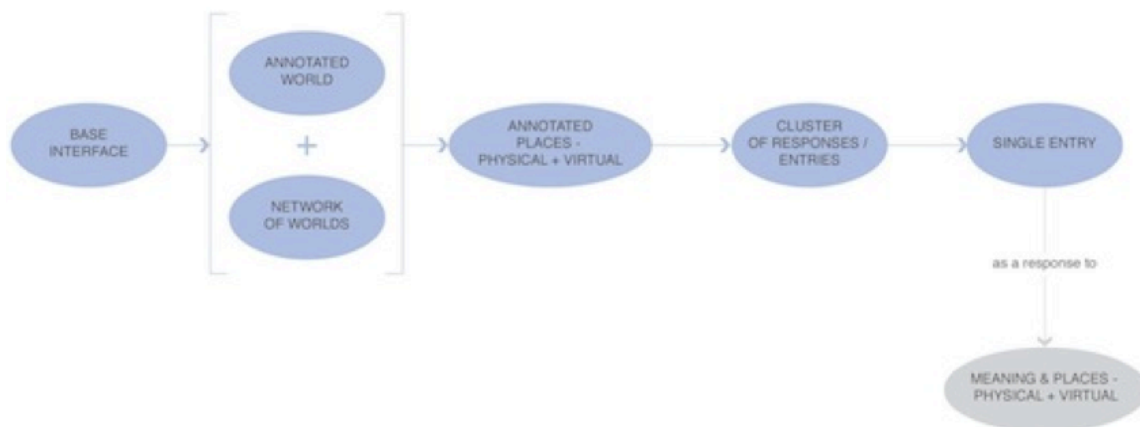


Illustration 5: This diagram represents a basic sequence flow of the interface's intended use.

I focused upon the development of a navigable representation system that allowed users to view their places in a set of priorities. The scales and attributes of these priorities were to be set by the user and changed as he or she updated them. Blog posts made by the user were modeled to accept varied media - text, imagery, video, audio and collages. Each post in the navigable system could then become a multi-media expression of meaning.

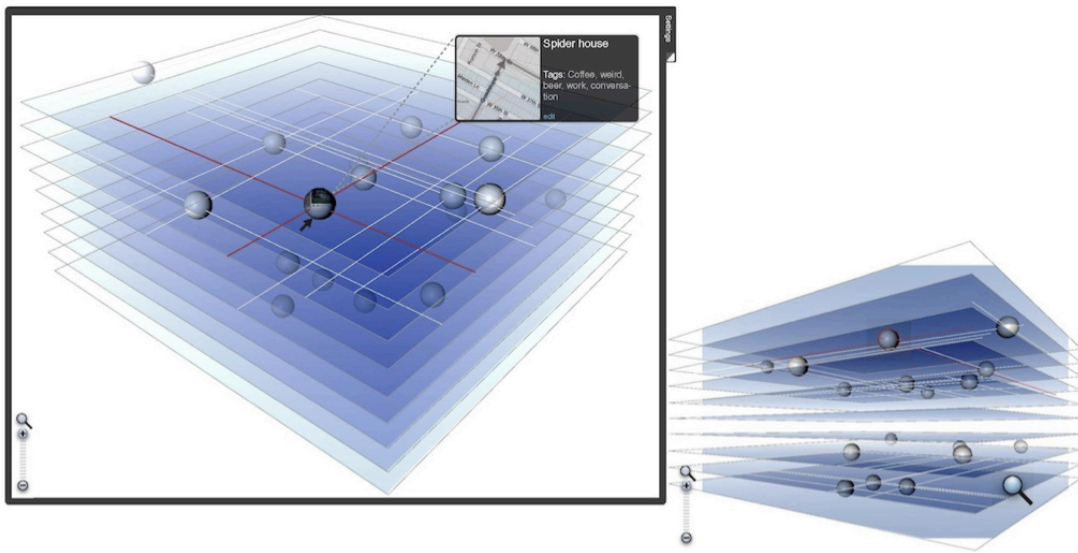


Illustration 6: Image above shows an articulation of the proposed navigable place representation system.

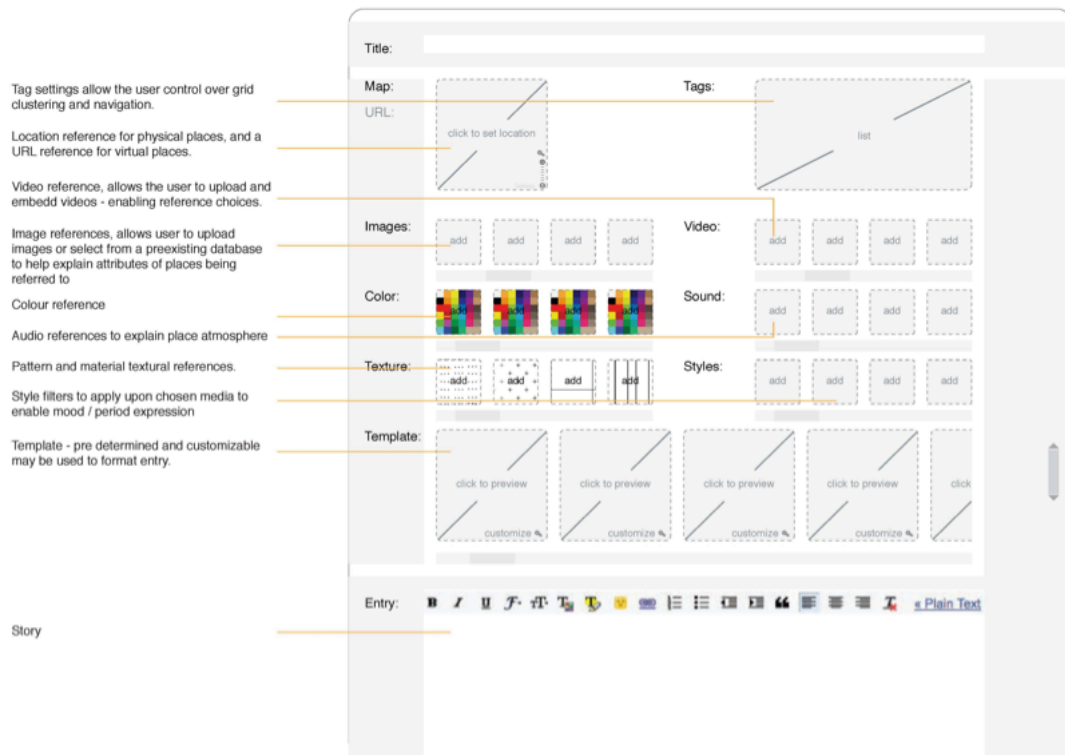


Illustration 7: Image shows a wireframe of the Graphic User Interface for making blog posts.

REVELATIONS:

A key concern was ensuring that the user-generated subject matter referred to the placeness it referenced as opposed to being casual status updates (much like Tweets, or Facebook status messages). In retrospect, a realignment of the application as a form of psycho-geographic mapping with the user also offering thoughts and opinions may have avoided these concerns.

As an initial foray into the design of user experiences for an interactive platform, this project also revealed the need for exploration and learning about diagramming methodologies and their impact. It introduced me to the practice of design synthesis in terms of organized affinity diagramming, semantic and temporal concept mapping, to wire-framing, developing projected use scenarios and explorations of user interface design. The notion of mapping evolved from location tracings to the communication of systems.

Chapter 2 – The Co-op Project

The exclusively virtual nature of the previous project, prompted me to seek out a physical environment that could utilize virtual components to become a synchronous place. The My World Maps project revealed the significance of information and context communication to establish personal meaning about places. This led me to assume that similarly, information and context communication would be the key aspect of allowing a physical place to extend virtually and vice versa.

INFLUENCE

Thomas A. Horan's Digital Places¹⁸ examines “digital place-making” in homes, workplaces, libraries, schools, communities and cities. It asserts the need for physicality and nearness and stresses the inability of virtual spaces to make third places redundant. At the same time, it suggests an exploitation of the theme of connectivity to build and sustain communities.

It suggests a recombinant design for Digital Places as –

- Fluid Locations
- Meaningful places (third places)
- The importance of creating threshold connections (as a cognizance of the relationship and junctures between physical and virtual place) and

¹⁸ Thomas A. Horan, Digital Places: Building our City of Bits (New York: Urban Land Institute, 2000)

- Democratic Designs

The concept of third places and their importance in sustaining communities is not a contemporary situation, or one necessitated by the changes to our lifestyles due to increased digital access. Ray Oldenberg, in his book, *The Great Good Place*¹⁹ asserts that third places are central to local democracy and community vitality. To quote,

“They promote social equality by leveling the status of guests, provide a setting for grassroots politics, create habits of public association, and offer psychological support to individuals and communities.”²⁰

“Life without community has produced, for many, a life style consisting mainly of a home-to-work-and-back-again shuttle. Social well-being and psychological health depend upon community. It is no coincidence that the ‘helping professions’ became a major industry in the United States as suburban planning helped destroy local public life and the community support it once lent.”²⁰

THE CO-OP PROJECT

The intention of the co-op student housing project was to develop a third place – a community place, that through its flexibility of use and purpose enabled social interaction and a stronger sense of community for a residential student co-operative. It also sought to identify avenues for the application of virtual interventions that would help to further the performance of the physical installation as a community place.

¹⁹ Ray Oldenberg, *The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community* (New York: Marlowe & Company, 1999)



The Courtyard Commons:

- natural light
- space
- potential for incorporating other activities
- spillover

Illustration 8: Site analysis for place intervention at Laurel House, which occupies the first two floors of the Co-op building shown above.

The site chosen for the community place installation was the northeast end of the central courtyard of the Laurel House student co-operative building in Austin. Site location was based upon observations of the available space was occupied during the day and its close proximity to the community dining halls.

Interviews with residents and a survey of the site facilities inquired into the prevalent locations for social interaction. It was revealed, that the community tended to congregate in the dining. Due to spatial constraints, this hindered meal times and rendered the generous courtyard space isolated.

INFLUENCE

In *The Social Life of Small Public Spaces*²⁰, William Whyte focuses upon the behavior of people in urban plazas, how they form into clusters, trace paths and gravitate to edges and corners. Whyte suggests those crowds self-regulate and are extremely responsive to indicators of access. His observations helped me consider the site more carefully – in terms of existing circulation patterns, the locations of existing utilities such as the kitchen and dining areas.

Whyte's book is a seminal text that establishes the relevance and need for effective social and public place. It outlines patterns of occupation that serve as reference when attempting to design an evolved manner of public space that is relevant to changed lifestyle and social patterns. The patterns of communication elucidated in this book gave me insight into communication models that a social commons may need to accommodate – in spite of changed lifestyles.

²⁰ William Whyte, *The Social Life of Small Urban Spaces* (Washington D.C.: The Conservation Foundation, 1980)

Study of the community requirements started to shape the design. It became modular and reconfigurable, designed to be constructed by community members so as to save of labor costs and fit community budget.

With the requirements of the community and a site for the project defined, I started an exploration of the manners in which social interaction may be engineered around a physical construct so as to create a place that remained relevant to the lifestyles of its users. The student community was observed to have a significant virtual presence using existing social networks. They communicated frequently through the Internet and their mobile devices. This interaction however seemed to occur between discreet groups. The proposal for physical meeting place offered the community a focal point for communications and social engagement.

Early explorations investigated the manners in which communication for such a community may be facilitated at physical locations through low tech and low cost interventions along with the design of a modular furniture system to allow for easy re-configuration.

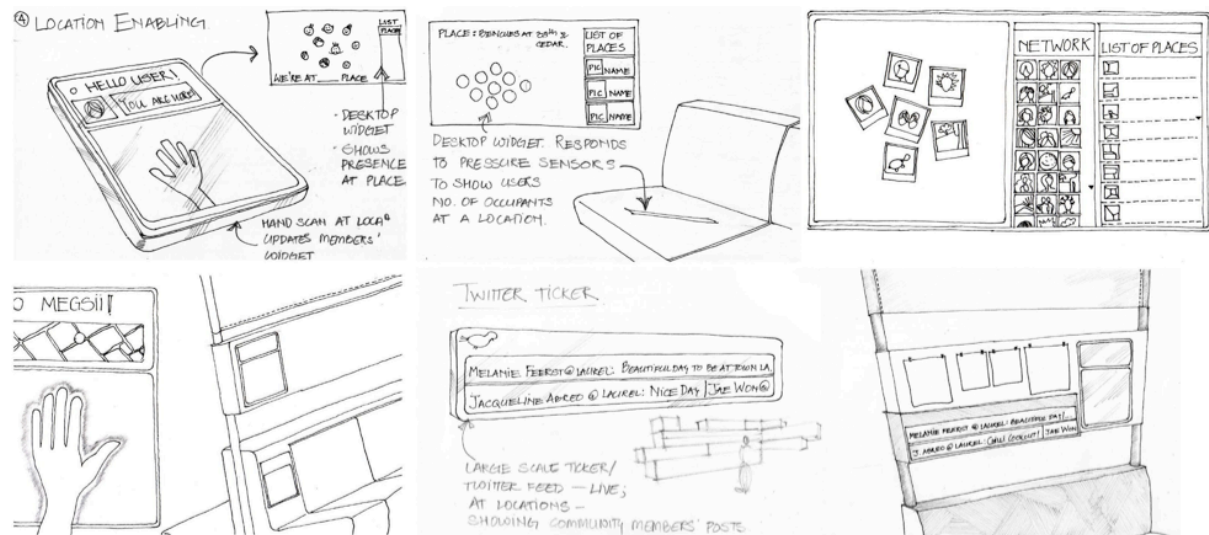


Illustration 9: Initial concept sketches for low cost technological components to enable a focus of community interaction at the physical location.

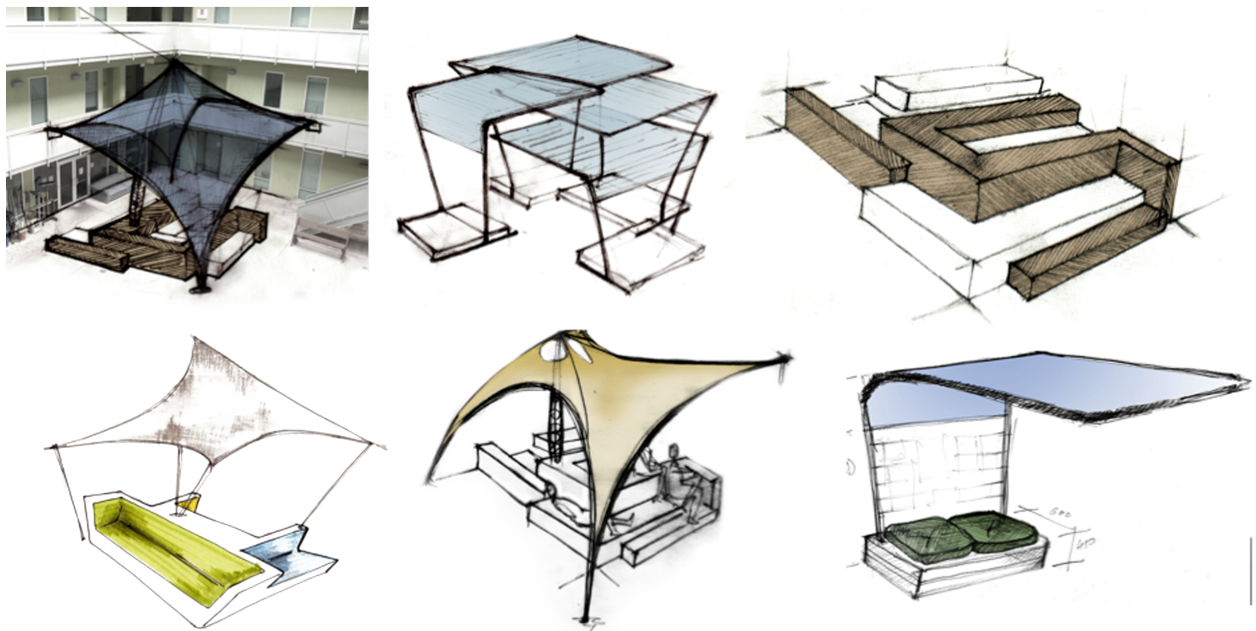


Illustration 10: The sketches above show early explorations for the modular physical place structure.

The proposed concept for the Co-op Project was based upon modules in configurations of 600x450x300 mm, designed to plug into each other with a dowel system. (see rendering above)

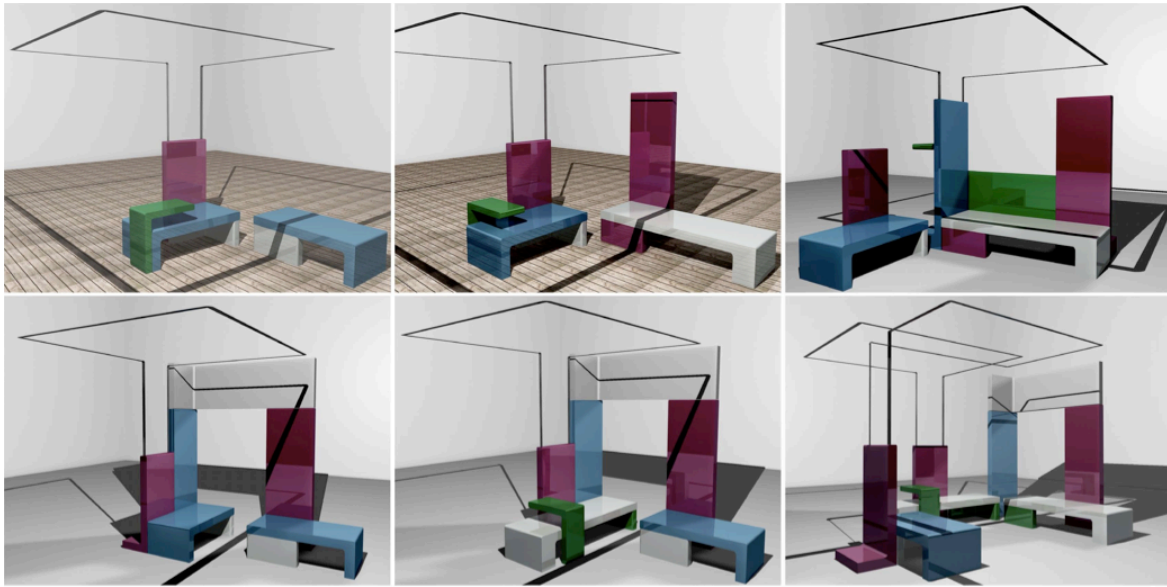


Illustration 11: The above image set shows the furniture system in varied configurations for use.

The furniture was to be embedded with pressure sensors, which activated when the furniture was occupied. Occupation was registered by a desktop widget in the personal computers of community members. The second row of furniture configurations shown in the image above would be equipped with a low cost ticker that would relay a live feed of the community Twitter page.

Thus, the physical location would become central to community interaction. The Twitter ticker would serve to localize communication of discreetly located members, while the widget would inform them about the activity density at the location. In this

manner the community would be democratically and continuously connected in a seamless manner through the combination of different types of physical and virtual communication tools.

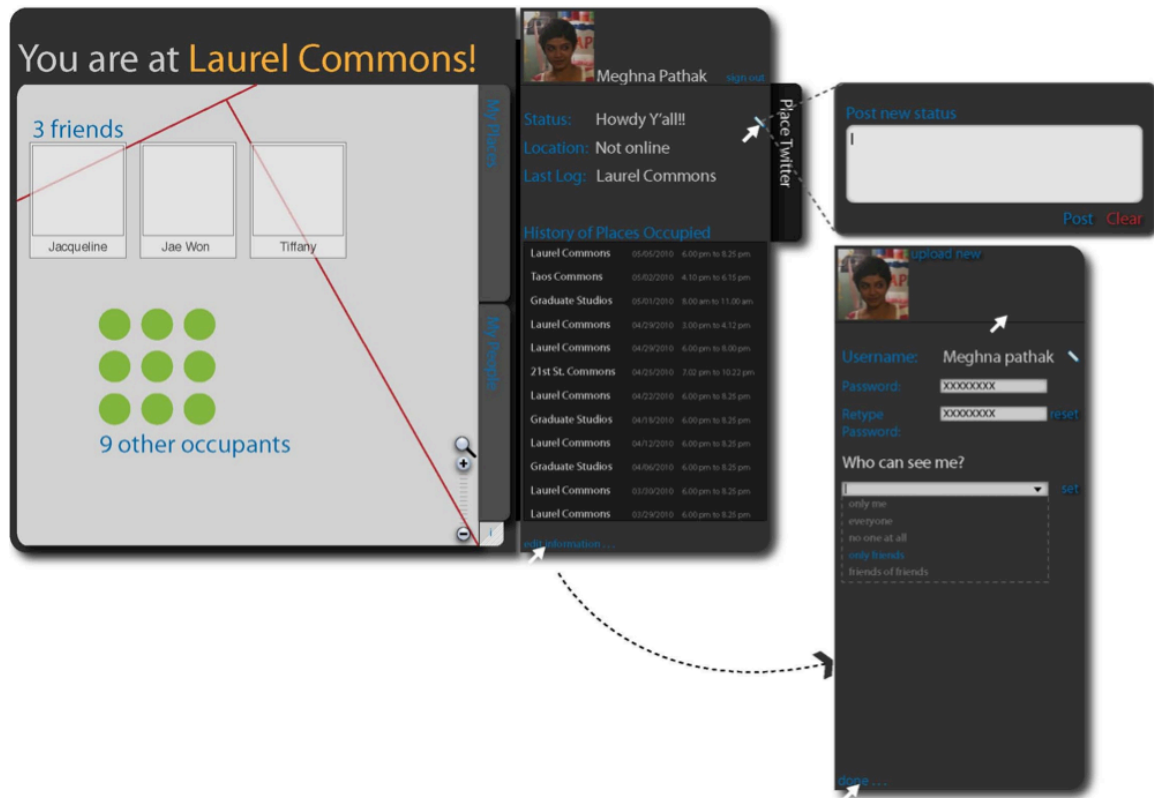


Illustration 12: The image above shows the desktop widget login page. While the number of occupants at the physical place is shown, logging in reveals the identities of community members who have also logged in.

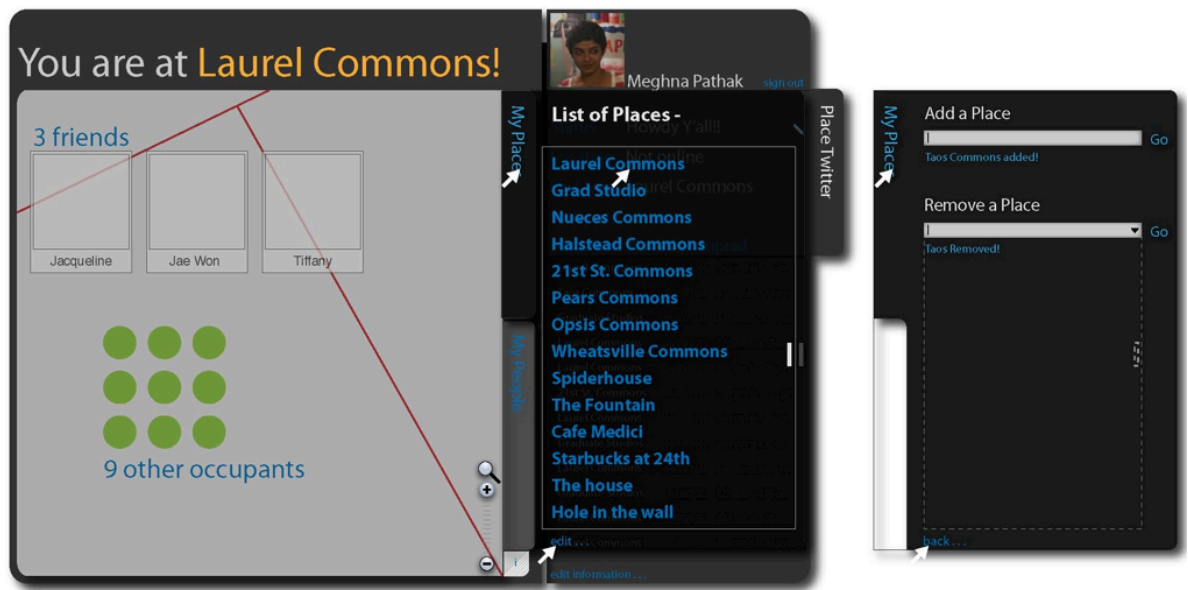


Illustration 13: The image above shows the desktop widget ‘add locations’ page. This community place holds the potential to be a prototype for more such place interventions, which may eventually fall into a connected system.



Illustration 14: This image shows the layout of the proposed Twitter ticker module.

CONCLUSION:

This project explored the design of community places that are able to be relevant to the lifestyles of their users through the introduction of virtual components. Communication was a key element facilitating interaction. I define communication as information exchange and this flow of information is the key agent to enable the design of synchronous places.

INFLUENCE

The designed resolution for this project in its reconfigurable component structure, in many ways resembles the design proposal Civic Exchange²¹, by Antenna Design. The Civic Exchange is a proposal for a public space module for social interaction. The module functions as an easy access point to local information and as a place for social interactions. It is an open platform that allows for community participation.

“A modular / re-configurable physical structure in equipped with digitally interactive screens that inform about events occurring in the city, direction maps etc. It serves as an illustration of how enabling nodes of interaction may enable communities to come together.”²²

Both the Antenna and the Co-op projects, enable communities to interact using a combination of physical and virtual interventions. The precedent of this exploration by Antenna Design reiterates the need for small scale and adaptable solutions that allow communities to find common ground to come together. In their incorporation of virtual

²¹ “Civic Exchange”, Antenna Design Website, accessed February 2011, <http://www.antennadesign.com/Environment/42-civic-exchange?scrollbar=0>

communication, both projects allow the dynamic flow of conversation and information that we live within to be embraced in the physical environment. The physical location then becomes an identity point for the community – A new third place.

The Co-op project led naturally into another investigation into the activation of synchronous places. However, the elements under consideration now existed as physical constructs and their related information. I decided to inquire into how the intervention of virtual components may activate a physical construct (place or artifact) to become more relevant to its users.

Chapter 3 – The Rob Roy Kelly Augmented Reality Application and Curated Collections

THE ROB ROY KELLY AUGMENTED REALITY APPLICATION

The University of Texas at Austin Design Division holds a large collection of 19th Century wood typefaces²² donated by Prof. Rob Roy Kelly. The collection is used extensively by students, printers and researchers and is appended by a catalogue - “American Wood Type – 1828-1900”²³ authored by Prof. Kelly which details the history, manufacturers, processes, machines and above all the typefaces particular to American Wood Type Printing. The catalogue records the physical collection comprehensively in addition to other typefaces, and is referenced particularly by researchers and designers as a definitive tome on the subject.

The designed application intended to augment the experience of the physical collection and the wood type catalogue by overlaying a virtual information layer that informs users about the housed typefaces, and allows them to interact and understand them better. Additionally, it sought to establish a clear link between both aspects of the collection, allowing the user to better connect with the typefaces across systems.

The project sought to develop a virtual intervention that would –

²² “Rob Roy Kelly American Wood Type Collection” website, accessed February 2011, <http://www.utexas.edu/cofa/rrk/>

²³ Rob Roy Kelly, *American Wood Type: 1828-1900 - Notes on the Evolution of Decorated and Large Types* (Saratoga, California: Liber Apertus Press, 2010)

- Identify collection typefaces
- Cross reference location of type by location, with information about it in the catalogue and vice versa
- Overlay corrective information about the typeface upon the existing information.
- Give a basic introduction to and information about the typeface (essentially of similar depth as offered by the website)
- Allow the user to create editable and exportable typeface lists for print development/organization and research.

The Smartphone (iPhone) was the chosen format for the development of this new interface. This choice allowed the virtual component to be easily portable and unobtrusive.

This early commitment to the Smartphone, allowed me to study action sequence planning and the gestural interactions native to the format. A clear outlining of the intentions of the application at the outset and the identification of finite information sets allowed me to hone upon the methods of developing the application.



Illustration 15: This image sequence illustrates wireframe transitions in a sequence of interaction with the catalogue.



Illustration 16: The image sequence above illustrates the visual identity of the application in a sequence of use in the collection.

The Sixth Sense Technology²⁴ project, by Pranav Mistry & Patti Maes, at the Fluid Interfaces Group of the MIT Media Lab, served as a work of significant influence during my exploration of this project.

INFLUENCE

Sixth Sense Technology proposes a wearable gestural interface that augments the physical world around us with digital information and lets us use natural hand gestures to interact with that information. It extends Augmented Reality from fixed interfaces to a more gestural, responsive and intuitive dialogue between the user and the software.

²⁴ Pranav Mistry and Patti Maes, “Sixth Sense Technology”, Pranav Mistry website, accessed September 2010,

Information is called upon, and the user always remains in control of the choice to view. It is an easy and low cost assembly with great potential for refining and extending a potential library of gestures and interface possibilities. Sixth Sense also explores the nature of the thresholds at which the virtual and physical worlds co-mingle to create an environment rife with – information, expression and communication. The understanding that information was the commonality between the physical and virtual, informed a leap in my work. It changed from attempts to representing relationships between the physical and virtual elements, to enabling these relationships to occur.

The Rob Roy Kelly Augmented Reality Application, in contrast my earlier explorations with My World Maps and The Co-op Project, seeks to activate the latent information in a physical place and makes it accessible to the user. For instance, a simple walkthrough the collection space reveals rows upon rows of boxes. With the exception of the box labels, there is no evident clue that offers the history of letterpress printing, the physical form of the typefaces, the number of letters of each typeface available in each box, the history of the typeface itself etc. The application, in offering up these stories about the collection and offering the location of other information sources to the user allows them to access its significant and enables the experience of the physical environment to become meaningful.

What results is a proposal wherein the experience is rendered complete only through accessing both its physical and virtual components.

CURATED COLLECTIONS

The development of the Rob Roy Kelly application became a model for designing interactions with a range of collections. This led to the development of another application – broader in scope that sought to enhance the experience of a place or artifact by allowing the user better access to its context.

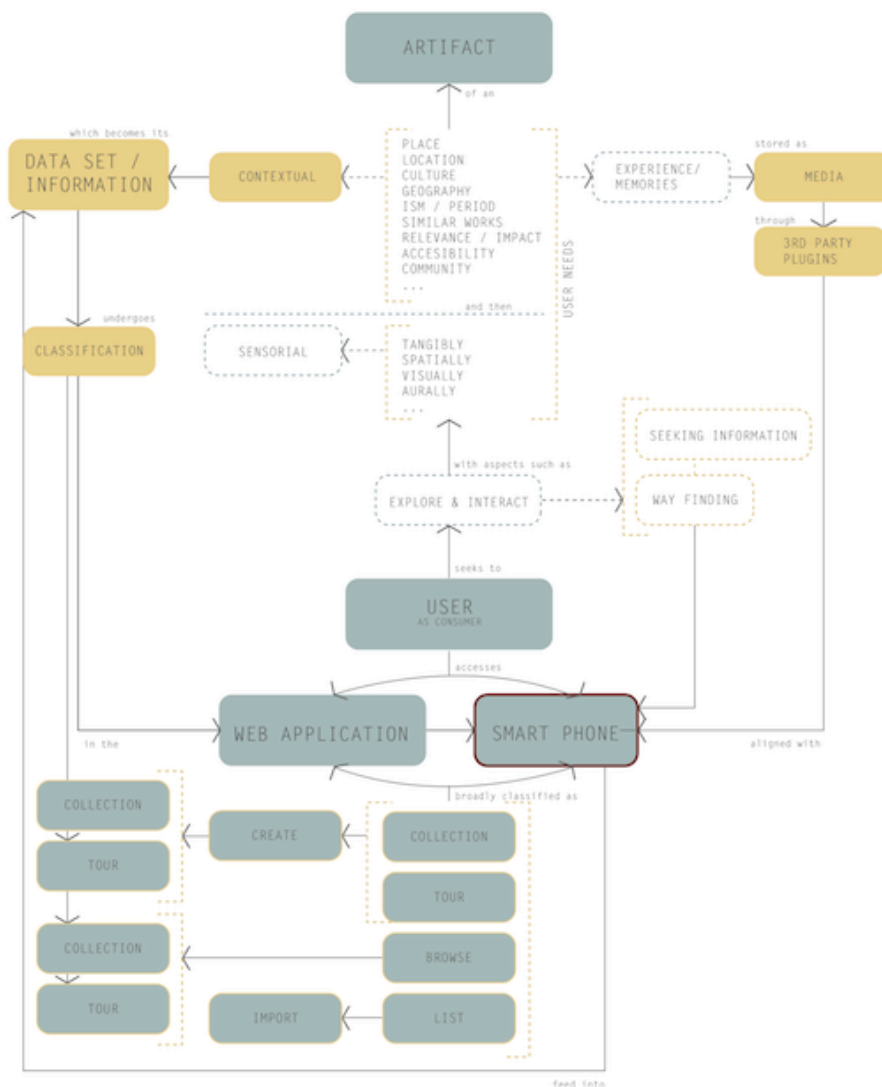


Illustration 17: Concept diagram illustrating scope of Curated Collections

The Curated Collections application was designed to help the visitor to an art exhibition or collection bridge a key shift of focus from the sensorial experience of an artifact to its context. Based upon the type of information deemed relevant by a collection's curator, the application may allow for cross-referencing and accessing stories and other information. In addition, it may also offer guided tours composed by curators. While these tours could be of existing collections, the open-source nature of the application would also allow users to compose tours across diverse collections to convey a particular theme or point of view.

Unlike my earlier attempts to orchestrate a synchronous place experience that favored either the physical or the virtual as the base format for the experience, Curated collections offers a place experience that is fairly accessed only when both aspects of the experience are explored equally. This is not to say that a user may not choose to explore either format individually.

Some influential works of note that impacted the development of this project were augmented reality applications such as Wikitude²⁵, Layar²⁶ and Junaio²⁷. While each of these differs in scales of user input allowed, they each essentially do the same thing. Each application allows the real time superimposition of virtual data upon the 'real world'

²⁵ Wikitude website, accessed March 2011,
<http://www.wikitude.org/en/>

²⁶ Layar website, accessed March 2011,
<http://www.layar.com/>

²⁷ Junaio website, accessed March 2011,
<http://www.junaio.com/>

when viewed through the Smartphone interface. Thus they attempt to activate virtual place information in real time.

Examination of these initiatives, as research for Curated Collections, led to a departure from their methods. Curated Collections depends upon user response to display information, rather than trying to convey it alongside to the experience. This leaves choice in the hands of the user and allows the physical experience to be addressed singularly instead of through the restrictive confines of a secondary interface. It thus allows a comprehensive place experience, structured to occur in stages – comfortably initiated by a user, instead of being dictated by the interface.

Curated Collections benefits from being the culmination of my graduate studies, as I was able to apply the methods/practices of interactive system development that I studied in an Information Architecture elective taught by Seay Alonzo Fleming.

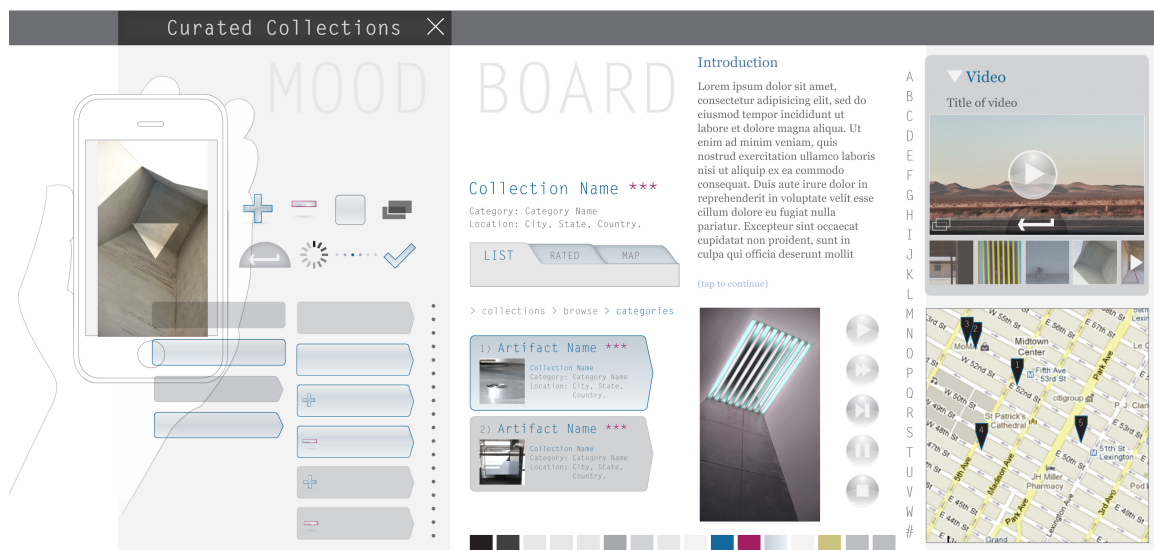


Illustration 18: Visual Identity mood-board



Illustration 19: Look and Feel images for the Curated Collections application.

The process of development of this application dealt with the outlining of an exhaustive work-flow / activity sequence diagram, user interviews, usability strategy development, concept mapping, projected scenario development, visual identity proposal and the creation of prototypes/mockups for user testing. Currently, Curated Collections is undergoing a third phase of user testing to reveal any possible inconsistencies in its sequence flow, the impact of its visual identity and the relevance of the browsing options it offers its users.

Conclusion

My initial investigations were concerned with enabling the user to access a place in a manner relevant to their lives. The course of my studies has allowed me to address this interaction from varied vantage points, from allowing a collective place identity to enabling a place experience. This journey has been challenging, questioning my preconceptions as a spatial designer, and expanding my understanding of user experience from the physical, to the virtual – and eventually to a meaningful composition of both.

The process of extending my design skill set from the manipulation of physical space to incorporate digital formats, allowed me the opportunity to examine design methodologies and practices traditionally employed by different design disciplines. In seeking to intertwine the design of environments in tandem with interactive interface design where both become integral components of the users experience, I learned to extend, learn and compare methods of problem synthesis employed by each discipline. This in turn, has immensely increased my understanding of complex problems, allowing me to see through obvious complexity to the patterns of connectivity underneath.

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Vita

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