LEAVE ANY NOISE AT THE SIGNAL
PARTICIPATION ART ONLINE

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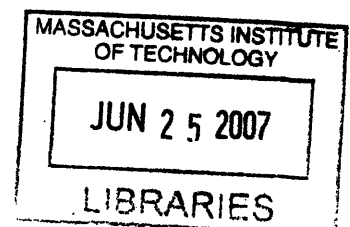in Media Arts and Sciences at the Massachusetts Institute of Technology
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ABSTRACT

Online participatory media holds the promise of activating otherwise
passive audiences by providing spaces that encourage creative
collaboration among diverse participants. The thesis traces the history of
participation in artistic movements and early networked communication
to contextualize a series of projects at the intersection of performance
and participation online. Projects include *WikiPhone*, in which multiple
participants collaborate on soundtracks in real-time, modifying existing
online videos; *OpenBrand*, a system that allows participants to rewrite ad-
vertisements; *Emma On Relationships*, a video blog inviting participants
to call in for love advice; and several other projects, exploring aspects
of creativity and collaboration. Commonalities within these systems are
examined in order to define design principles governing the creation of
participatory media, and to explore the potential of these systems to ef-
fect social and political change.

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Contents

Introduction

In the past decade, online social communities and peer-to-peer distribution models have changed the landscape of mass media. As Russell, Ito, Richmond, and Tuters explain, in their book *Networked Public Culture*:

> Amateur and remixed music distributed over the Internet, fans producing derivative works of fiction and art, marketers appropriating the idioms of viral amateur culture, and bloggers jawing about the latest news are all examples of, in the words of Hagel and Brown, 'the edge becoming the core,' where amateur content is threatening the core of commercial culture. (1)

The emergence of new methods for the digital exchange of media, coupled with the growth in popularity of online social platforms, represent a redistribution of power across society and geography. The systems and tools in *Participation Art Online* question how this new redistribution might affect creative collaboration online, and what new forms of participation the changing landscape might make possible.

The projects described are variations on the theme of online participatory media, defined as sites where participants contribute creative content. The projects can be divided into two groups: stand-alone networked applications that provide spaces for creative collaboration, and a number of smaller experiments that test specific aspects of the former. Networked applications include *WikiPhone*, in which multiple participants collaborate on real-time overdubbing of soundtracks from existing online videos, *OpenBrand*, a system that allows participants to rewrite advertisements, and *Emma On Relationships*, a video blog, which participants call for love advice. In general, the smaller experiments focus on encouraging participation, one of the main conditions governing participatory systems.

Collectively, the projects investigate the intersection of participatory culture and performance. This new online terrain, which I call *performative participation*, holds dual promises:

1. **ACTIVATION** To motivate participants to take an active role in the production of creative content
2. **COLLECTIVE ELABORATION OF MEANING** To incite critical dialogue about existing social and political arrangements (Bishop 12).

The broad goal of the projects is to open spaces of creativity through which members can critique and rewrite culture as a collaborative affair. Rethinking the present relationship of content creator to cultural consumer transforms otherwise passive consumers into active participants in the creation of culture, both individually and collectively.

Online participatory systems are unlike other forms of interaction on the web and are governed by three major axes.

1. **INTROVERTED VS EXTROVERTED** Introverted systems that become microcosms of the outside world, in contrast to extroverted systems, which draw material from elsewhere on the web.
2. **GOAL-ORIENTED VS AIMLESS** Systems that aim to achieve a specific goal, in contrast to aimless systems whose primary objective is to encourage the maximum amount of expression from the greatest number of people.
3. **EVENT-BASED VS SUSTAINED** Event-based systems that take place in synchronous online encounters, in contrast to sustained systems that unfold over longer periods of asynchronous interactions.

These axes represent extreme cases; in practice individual projects fall somewhere between them.

Long before the technological advances that made participatory sites possible online, artists sought to harness participation for social and political ends. The thesis turns to the participatory art movement in the 1950s and 1960s to ask how their idealistic strategies might be updated to effect social and political change through online participatory culture.

MOTIVATION

The benefits of the shift toward participatory culture are partly due to the democratic nature of participation, which depends on polyglot contributions from many sources. The passive models of media consumption of the past protected the authorship of media companies who wanted people, "to look at but not touch, buy but not use, media content" (Jenkins 138). As Lawrence Lessig argues, the new forms of media creation challenge the sanctity of content, bringing with them legal questions about the right to use copyrighted material (Lessig 18). The rise of peer-to-peer distribution and the growing popularity of online social platforms for sharing information has mobilized those people who would normally be passive consumers (Russell et al. 1). Moreover, the exchange of ideas and creativity between many participants sharing content amounts to valuable creative production.

Performance is one significant component of the rise of participatory media. Participants performing in front of their peers on sites such as YouTube often produce videos of little quality from the point of view of a film critic, but it is undeniable that the grassroots, creative impulse represents a powerful new force in media production. In the words of online performance artist and comedian Ze Frank:

> A lot of people are focusing on the content that's being produced right now. And I think it's the wrong thing to look at. It's actually the pursuit and the perception change [that we should] focus on and the thing to celebrate. (St. John 1)

As Frank points out, despite the wildly varying quality of the content on participatory sites, these sites manifest a perceptual shift from the idea of creative content as material to be consumed (e.g. in the form of television shows or Hollywood movies) to an opportunity to engage in amateur creation in front of an online audience.

These new forms of collaborative participation are capable of bringing about social and political change. In political terms, the perceptual shift

toward viewing cultural content as something to be actively created rather than passively consumed suggests an engaged public actively participating in the determination of its collective future.

Politicians, more than most other members of the population, understand the importance of direct, personal communication in establishing a connection to constituents; all political speeches are, in essence, public performances. Performance media on the web that take advantage of peer-to-peer distribution and remix have great potential as a political tool. Wallace, paraphrasing Jenkins, writes:

> Politicians should not ignore the fun, frivolous side of the net because the web enthusiasms of the young: games, online video, machinima and mash-ups are the new online-tools that sooner or later will be used for political purposes ... [Henry Jenkins says] 'No sooner is a tool put out than it's taken up by citizens and turned to political uses'" (Wallace 1) .

YouChoose '08, in which politicians solicit video responses from viewers on YouTube to influence voters, suggests that politicians are well aware of the power of performance on these new participatory sites. The projects described in the thesis aim to create critical dialogue among participants around current issues, not for the purpose of winning votes, but to arrive collectively at shared values.

Social theorist Jürgen Habermas describes the potential of conversation through which a thoughtful public is enlightened:

> The modern public sphere comprises several arenas in which, through printed materials dealing with matters of culture, information, and entertainment, a conflict of opinions is fought out more or less discursively. (Habermas 430)

For Habermas, members reform their community through the free exchange of beliefs and intentions without the restriction of dominance. By providing a space for conversation, recent online participatory communities hold the promise of forming groups who collaborate to create political and social change.

The recent upsurge of online participatory communities represent new territories within the modern public sphere. However, technical innova-

tions alone are not sufficient to change social and political structures unless they are accompanied by commonly determined objectives. Identifying common goals presents a major challenge to participatory culture, due to the many discordant voices speaking at once. As we will see in the Analysis section, a flat organizational structure offering an equal voice to all participants accounts for the appeal of these sites. The difficulty of organizing content created by a multitude of otherwise disconnected contributors is comparable to the arduous challenge of building consensus in a direct democracy.

Many contemporary participatory sites sidestep the difficult question of consensus by eschewing any sort of objective all together, focusing instead on generating high levels of activity ('hits'), seeking popularity for its own sake. While the projects in this thesis also attempt to generate traffic as a necessary precondition of participatory media, the larger objective is to ask how this traffic might be mobilized to accomplish social and political reform.

CONTRIBUTIONS

The contributions *Participation Art Online* fit into two categories – artistic and technical. The artistic contributions of this project are as follows:

>> provide infrastructures for networked creative production, in which artistic methods and performance techniques can be shared in real-time and asynchronous collaborative environments
>> inspire critical dialogue between independent content creators, consumers, and companies

The technical innovations aim to:

>> create collaborative online spaces for simultaneous performance
>> enable participants to hear and respond to other participants in real-time
>> develop a networked application that allows participants to modify streaming, video, audio and text from anywhere on the web

The projects described are intended to facilitate a shift that is already taking place online. By designing and deploying software and network architecture that instigates online participation, we will begin to realize the social potential of collaboration in online participatory media.

THESIS STRUCTURE

Participation Art Online is divided into five parts: the introduction, background, experiments, analysis, and conclusion. The introduction provides the overall motivation, the goals of the investigation, and outlines the major contributions of the projects presented. The background section defines key terms, outlines a brief history of participation as it occurs in early networked communication, as well as participation within the performance art movements of the 1950s and 60s, and gives an appraisal of contemporary participatory culture. The experiments section provides detailed descriptions of nine projects divided into three categories: installations, online participation systems and online performance. The design and implementation of each system is discussed, along with key concepts discovered through the deployment of the systems online. In the Analysis section, the thesis locates common themes linking the diverse projects, as well as defines a set of design principles governing online participation. The conclusion reviews the motivation behind the investigation in brief, and touches on key issues raised by the projects, making a statement regarding the future of online participatory media.

Background

During the summer of 2006, a *New York Times* article about the
online persona Ze Frank described a scene typical of Frank's *Fabuloso
Fridays*, in which he invited viewers of his daily video log to script a
weekly performance.

> Mr. Frank thought that farming out his script would provide some answers.
> Which explains why at 11 a.m. on Friday, June 9, he was sitting before a
> video camera with freshly dyed red hair, wearing a fake mustache, puffing
> a fake pipe and stroking a stuffed cat, sitting in an armchair next to a globe,
> a rubber duck, two pieces of white bread and a framed portrait of Clarence
> Thomas, the Supreme Court justice – an absurd array of props mandated
> by the script. 'The meta joke here is, see how hard you can shake the
> marionette,' Mr. Frank said between takes. 'There's a violence to it.'
> (Wallace 2)

Like Frank's work, which is based on the interactions between his
online persona and the contributions of visitors to his website, the
projects described in *Participation Art Online* are participatory in nature.
In *The Long Tail*, Chris Anderson identifies the potential of the Internet to
create niche markets for cultural products by tapping audiences that were
previously unreachable (53). Similarly, participatory sites enable people
that might not otherwise be aware of each other to coalesce around shared

interests or problems. Moreover, such sites allow them to discuss these issues with others in a way that can feel intimate and private despite being a public forum.

DEFINITIONS

The Background chapter will look at the intersection of three terms: *participation*, *performance*, and *critical collaboration* in art, computation, and online social media to provide a brief historical context of the projects.

Participation

This thesis defines *participation* as the activation of consumers in the production of mainstream culture. I define consumer broadly, as a consumer of cultural content. In the past hundred years, large companies and conglomerates have dominated the production of mass media. Historically, consumers have been given little power over the production of massively distributed content. For example, television is traditionally produced by large studios and watched by a complacent public with little influence over its content. In contrast, video sharing sites, such as YouTube and Revver, invite users to post their own videos. I refer to this shift, in which consumers change from complacent observers to take an active role in the determination of content, as the activation of the consumer. This activation extends beyond video production to include other forms of cultural production, such as music, software, and journalism.

The term used by industry professionals to describe the material produced by activated consumers is *user generated content* (UGC). I take issue with this term for several reasons. 'User' implies a power dynamic between the user and whoever is supplying the product, e.g. the relationship of drug user to pusher. Furthermore, the term 'generated' reduces creativity to a mechanistic ends-based practice that belittles the value of the creative process as well as the content itself. Alternatively, Professor Henry Jenkins refers to forces creating these new forms of content as *convergence culture*. Specifically, convergence culture refers to the integration of online participatory media with new distribution models. Because this thesis focuses on participatory media rather than distribution models, I will use the term *participatory culture* to describe content created by an active public.

Performance

Performance is defined here as the real-time or recorded actions of an individual (the performer) intended to be shown to another group (the

audience). Actions refer to utterances, speech acts and gestures that use the body as the primary means of expression, as opposed to other forms of creativity such as writing and drawing. Often the lines between performers and audience are blurred, especially in participatory art practices discussed in this thesis.

Critical Collaboration

Critical collaboration is a term that describes the exchange of ideas that comes about through the interaction of people through the creation of the work of art. Whereas interactive art consists of a relationship between a human and a machine in an isolated encounter, participatory art functions at the level of social experience, bringing individuals into dialogue with each other through the creation of the work itself, in its most successful manifestations. The work of art in participatory art is this relationship between participants. This kind of art opens a space for critical collaboration, in which the public mediates political and cultural disputes through the creation of the work of art.

HISTORICAL CONTEXT OF PARTICIPATION

Prior to its recent expression in online mass media, participation characterized movements in the disciplines of art and computation. During the late 1950s, the culture of participation led artists to consciously redefine the relationship of performer to audience. In computation, participatory system architecture was used to bring about the possibility of large-scale collaboration. In both cases, these shifts produced social groups with common interests that had a powerful effect on the larger community of which they were a part. It is instructive to trace the history of participation as it appears in early manifestations in electronic media and in artistic movements in order to understand its present day expressions online.

Two overlapping timelines describe the history of participation in art and media:

1. Early expressions of networked communication
2. Artistic movements focused on participation and performance

After discussing the historical context of participation, we will turn to contemporary examples in games and online performance to provide the context for the experiments in the next chapter.

Early Networked Communication

One of the earliest examples of participatory systems online was the bulletin board system, or BBS, which consisted of a terminal program that connected people through a telephone line and provided practical functions like downloading software, reading news and exchanging messages. In addition to these practical uses, people used BBSs for explicitly creative projects, such as writing extended stories by posting one line at a time on a thread on a bulletin board devoted to that purpose. These stories often developed over several months, and call to mind the earlier projects of the Surrealists, who would gather in physical space to create collaborative drawings that they called "exquisite corpse" (Phillbrick 10). The members of BBS would also gather at irregular intervals at physical spaces. These gatherings were the early expression of an electronic network facilitating the alignment of social groups around shared interests.

Artists used BBS networks to distribute ANSI art during the 80s and 90s, which was one of the most exciting uses of the network. Like the better-known ASCII art, which creates pictures from 128 letters, numbers and symbols, ANSI art was constructed using a set of 256 characters, known more commonly as extended ASCII (American Standard Code for Information Interchange). Unlike ASCII art, which used characters themselves to create images, ANSI artists used MS-DOS to assign sixteen foreground and eight background colors to each character in extended ASCII. These colors dithered the foreground and the background, creating the illusion of depth. Looking at the pixelated images now with the profusion of high resolution graphics, it is hard to realize the impact that they had on their creators and their fans.

The ANSI artscene became widespread as result of distribution on the BBS networks. ANSI artists formed groups, whose names and aesthetics were similar to graffiti crews operating in physical space. The first of these was called Aces of ANSI Art or (AAA), which was soon followed by others with street-ready names such as ACiD (ANSI Creators in Demand) and iCE (Insane Creators Enterprises). The groups released their drawings as artpacks (or icepacks in the case of iCE) on a monthly basis, sometimes including over one hundred ANSI drawings along with news and member lists. The pieces were only digital, which created

An early example of ANSI art by Shaggy [of iCE, Insane Creators Enterprises]. ANSI art was distributed over BBS networks in artpacks of over a hundred hand-coded drawings. The members of the ANSI artscene dowloaded the artpacks in monthy installments. Each drawing could take several minutes to download scrolling down the screen line by line.
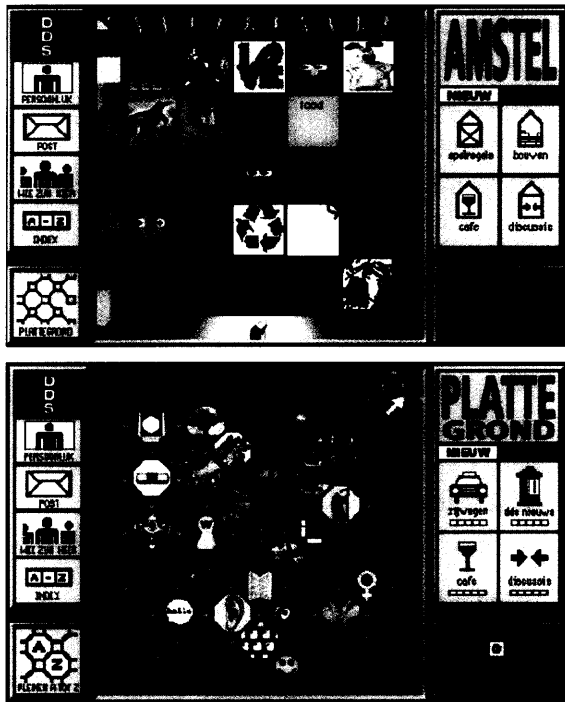
almost unbearable anticipation as the monthly installments of a hundred or more drawings painstakingly scrolled across the screen line by line. ANSI artpacks fostered a different kind of exchange than physical works of art; group members appropriated each other's code, creating new collaborative drawings based on originals. Often this was done amicably, but sometimes images were appropriated by other groups, which caused long term and deep-seated feuds among different groups, reflecting similar disputes often found among rival graffiti crews of the same era.

The formation of creative subcultures within BBS networks testifies to the potential of early networks to aid in the formation of new communities around common interests. As an anonymous AAA artist stated, "competition creates activity, activity creates a scene" (Scott 2006). This statement echoes Bishop's claim that collective art projects create a social bond through "collective elaboration of meaning" (Bishop 12). Although their subject matter was not overtly political in nature, these content producers found ways through limited computational networks to promote their ideas and artistic beliefs. It is difficult to say if this little-known art movement had any effect on mainstream culture. In the long run, their aesthetic of low-resolution color graphics was overwhelmed by the trend toward high definition graphics supported by electronics and media industries. Nevertheless, their attempt to collect bodies of work and distribute them virally through an early electronic network foreshadows the recent popularity of online repositories and distribution methods of creative content.

Usenet (USEr NETwork) is another early expression of an online participatory social network. The system, which was invented by Tom Truscott and Jim Ellis in 1979, is still in use today in slightly different forms, such as Google groups. By circumventing these traditional channels of distribution, Usenet can be thought of as an unrestricted forum for debate and informational exchange where many sides of an issue come into view (Lovink 14). Usenet is a global, distributed Internet discussion board where users post articles on a variety of subjects. The articles are organized into news groups that servers choose whether to publish. Usenet, like BBSs, are considered one of the first online systems for collaboration and interaction. One can make the argument that Usenet is an early expression of a more democratic mode of media distribution when compared to traditional distribution systems, which are often controlled by large corporate entities beholden to powerful interests.

A collaborative ANSI art piece by Lord Soth, Deeply Disturbed, and Shaggy of iCE. Often, ANSI artists borrowed each others code to create collaborative works. Like a scroll, this drawing was viewed in small sections, unfurling across the screen from top to bottom.

Using the metaphor of a physical city, DDS was one of the first graphical expressions of an online community. The screenshots above show a few places where community members could gather – a post office, a police station and a café. DDS garnered 15,000 members during its hayday in the late 90s.

De Digitale Stad (*DDS*) (1994-2001) was another early attempt to establish a social network on the World Wide Web. First presented at *Ars Electronica* in 1995, the site, whose name was translated as *The Digital City* was one of the first sites utilizing the web to create an online virtual community. *DDS* was created in Hyper-Card and written for Mosiac, the first graphical web browser. *DDS* was one of five communities at Ars that year, which invited members to navigate from place to place using the metaphor of the city. Based on the local activities and commerce of Amsterdam, the *DDS* community of 15,000 members chatted in virtual cafés, met in town squares, built homes, and buried the dead in a special cemetery. Strangely, the *Digitale Huis-kamer* or *Digital Living Room* project, a web page in which members gathered to watch television together (Lovink 21), was one of the most popular destination in *DDS*. *DDS* is an early example of a networked community utilizing a graphical interface to explore architecture and programmatic uses of virtual space. The designers of *DDS* hoped to foster conversation among members of the community, with the outcome of increased political expression.

Finally, the free and open source movements are a paragon of community feedback negotiating issues of ownership, authorship and version control on a grand scale. These movements are mentioned here as an example of a long-standing, successful example of participation to build complex technologies cooperatively. The Linux kernel, GCC compiler and the Apache web server all owe their existence to the efforts of thousands of programmers and authors who work within the open source community. These community arrangements produce software and archives of astonishing complexity and scope.

These early trans-locative communication systems were elegant and minimal (low-bandwidth) expressions of the potential of participation and networked creativity. In addition to meeting a practical need to exchange information, they were used for large-scale creative projects. These include non-technical, creative endeavors, such as BBS stories and the ANSI artscene, incorporating multiple people as well as complex technical proj-

ects such as the GNU operating system, a complete system built through open source collaboration. These early networks and the uses that they inspired are the roots of contemporary social software.

PARTICIPATION AND PERFORMANCE ART

Twenty years before the ANSI art movement and collaborative BBS stories and forty years before the current explosion of participatory media online, the participatory and performance art movement of the 1960s investigated the potential of collaborative creation. The idealistic nature of many of these projects, which sought to effect social and political change, offers a unique perspective on the potential of online participatory media.

Participation in Art: 1960 to 1975

In her book *Participation*, Elizabeth Bishop identifies participatory art as having the following three motivations: *activation*, in which an active subject is empowered by the experience of participation, *authorship*, in which collaborative creativity is understood to emerge from a non-hierarchical social model, and *community*, which "the art is the restoration of the social bond through a collective elaboration of meaning" (12). These categories are no less true of online participatory media.

The work of many artists associated with participatory art movement is idealistic, attempting to bridge a perceived divide between art and life, and seeking to initiate critical dialogue among participants about dominant social and political attitudes. Participatory art is characterized by a feedback loop between system and participants, which results in dialogue between participants. In contrast to other forms of art making, participatory art pieces are not fixed, and evolve according to the contributions of the participants. Traditionally, the creation of art is wholly separated from its consumption; the public views completed objects in a museum or gallery setting. Unlike these traditional modes of the creation and consumption of art, participatory art blurs the line between the artist and the participants, whose actions create the piece. These new modes of production and consumption change conventional notions of authorship as well as ownership.

The desire to make active participants out of passive consumers of culture is one of the hallmarks of the Situationists, an artistic movement started by Guy Debord and others in Paris in 1957 (Ford 9). As stated in one of their

In *La Dialectique Peut-Elle Casser Des Briques?* (1973), artist René Viénet superimposed subtitles and voice over on a popular kung-fu film to re-purpose it as a critique of French politics, an example of the Situationist practice of *détournement*.

founding manifestos, *Toward A Situationist International*, the Situationists sought to "awaken the audience from an attitude of consumption to the construction of situations" by disrupting everyday existence (Bishop 97). One of the Situationist's preferred techniques for bringing about this sort of activation was *détournement*. Translated as somewhere between diversion, rerouting, corruption and hijacking (Ford 36), *détournement* is the process of re-presenting everyday ephemera, such as advertisements and other cultural products, in new artistic contexts. These contexts can often subvert the original meaning of the media in favor of a new reading that calls the original message into question in "an extreme form of the redistribution of cultural value" (36). Debord outlines the objective of *détournement* in his manual *For a Revolutionary Judgement in Art*:

> Revolution is not showing life to people, but making them live. A revolutionary organization must always remember that its objective is not getting its adherents to listen to convincing talks by expert leaders, but getting them to speak for themselves, in order to achieve, or at least strive toward, an equal degree of participation." (11)

Raoul Vaneigem and René Viénet were two artists active in the Situationist International during the 1960s and 1970s whose pieces made strategic use of *détournement*. René Viénet, in *La Dialectique Peut-Elle Casser Des Briques?* (1973) superimposes subtitles and voice on a popular kung-fu

film, re-purposing it as a critique of French politics. In *La Survie Et Sa Fausse Contestation*, Raoul Vaneigem rewrites a comic so that it describes a dire situation in which survival is reduced to economic imperatives (Ford 111). These pieces demonstrate the broad Situationist desire to jolt people out of complacency by activating viewers.

The movement toward participatory art occurred in part as a response to the rarefied work of minimalist artists whose art objects were traded as commodities in an art market that was becoming increasingly commercial (Goldberg 75). The term *happening,* coined by New York artist Allan Kaprow in 1959, refers to a gathering of people who come together for the purpose of creating an unpredictable ephemeral 'piece.' The constructed situations explore the objectification of "mundane movements and play-related activities" (Spector 1). The interaction between participants constituted the piece; these interactions could not be easily bought or sold, which accounts for the appeal to artists who desired to challenge the increasing commercialization of art. Happenings often explored the notions of exchange through the construction of elaborate spaces intended to break the boundaries between art and life.
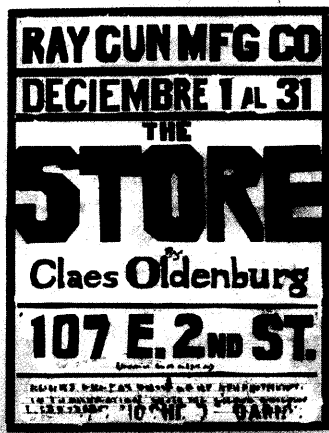
Nowhere is the shift from traditional modes of consumption and exchange of art more evident than in *The Store,* staged by Claes Oldenburg in an abandoned store rented by the artist in Lower Manhattan in New York in 1961. In a month-long series of happenings entitled *Ray Gun Theater,* Oldenburg filled the store with art objects whose composition mocked the preoccupation of the art world with the value of art.

> *The Store* was based on seemingly banal, but ultimately telling exchanges: people who made a purchase from Oldenburg received in return an inedible potato chip made of glue-caked muslin, or any number of candy samples. (Spector 1)

The Store conflates creativity with commerce, in a way that presages the emergence of Pop art, to which Oldenburg became a major contributor. Ironically, Pop art's embrace and incorporation of consumer culture contradicted one of the principle motivation behind participatory art, which sought to challenge predominant notions of this commodification.

Raoul Vaneigem's *La Survie Et Sa Fausse Contestation* is another example of *détournement,* in which content of advertising or popular media is rewritten according to new criteria calling the original into question. In this case, Vaneigem rewrites a comic to describe a dire situation in which survival is reduced to economic imperatives.

Artist Joseph Beuys' 1972 piece, *Bureau for Direct Democracy,* investigates the potential of art to initiate dialogue about political structure. The piece forms a part of Beuys' conception of the 'social organism as a work of art,' in which dialogue among participants is the piece itself (Bishop 120). In his manifesto entitled *I am Searching for Field Character,* Beuys discusses another participation piece:

> Social sculpture will only reach fruition when every living person becomes a creator, a sculptor or architect of the social organism. Only then would the insistence on participation of the action art of Fluxus and happenings be fulfilled; only then would democracy be fully realized. (125)

The Bureau for Direct Democracy took place at *Documenta 5* as a one-hundred day live installation in which the artist discussed with visitors how a democracy conducted through direct referendum might be brought about in contemporary politics. Participants in the piece, who were drawn more or less at random, joined the conversation, debating the effectiveness of the piece as well as the political changes that it intended to instigate. Eight-hundred visitors participated in the piece over the course of one day. One could argue that the piece was ineffective at bringing about real political change; the numbers of participants, while high for a participatory art piece, do not represent a large number in

political terms, and it is impossible to point to any major political change that came about as a direct result of the piece. Nevertheless, the piece is an example of the sort of idealistic political belief in the power of participatory art that is a precondition of the work of Beuys and others. The work was characterized by an optimism about the capacity of participatory art to effect social and political change that is rarely seen in online participatory communities.

Claes Oldenburg created merchandise, advertising materials and store-front displays for *The Store,* the site of a month-long series of happenings called the *Ray Gun Theater. The Store* conflates creativity with commerce, foretelling the emergence of Pop art and its embrace of material culture. Top: *The Store, Study for a Poster* (1961). Below: Window display of *The Store.*

Performance art

Performance art is related to, but distinct from participatory art, which explores many of the same issues. Like participatory art, much performance art during the 1960s was informed by the desire to disrupt prevailing notions of how art is bought and sold, i.e. how culture is consumed; and both often function "as an irritant, a provocative weapon used to unseat a

complacent public and its view of the value of art" (Goldberg 73). In the desire to disrupt the complacency of the art world, performance artists often moved away from the creation of discrete art works in favor of something less easily reducible to familiar terms. The nature of performance is temporal – when the performance is over the piece is complete – further creating an impediment to buying and selling.

If maintaining their material survival through the sale of art work was not in the interest of many of the radical performers of the 1960s, what was their central concern? While it is impossible to identify a single preoc-cupation among a disparate group of artists, many performance artists looked to this new form to address the social and political issues of the day in a direct and powerful way. These issues included the war in Vietnam, violence in society, and feminism. Performance was a highly personal, raw and direct new medium through which these concerns could be explored with an eye toward effecting change inside and outside the confines of art. Like participatory art, performance art reimagines the relationship

Yoko Ono's *Cut Piece* (1964-5)

Instructions:

First version for a single Performer:
Performer sits on stage with pair of scissors placed in front of him. It is announced that members of the audience may come on stage – one at a time – to cut a small piece of the performer's clothing to take with them. Performer remains motionless throughout the piece.
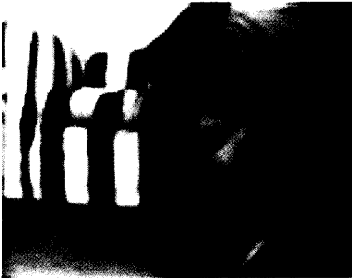*Piece ends at the performer's option.*
Second version for audience:
It is announced that members of the audience may cut each others clothing. The audience may cut as long as they want.

29

between artist and audience by destabilizing the separation of the two, creating memorable experiences through the direct presentation of edgy subject matter.

Yoko Ono, a member of Fluxus, a loose artist collective based in NY, was an important figure in performance as well as participatory art. Her pieces often range fluidly between the two forms. In *Cut Piece* (1964-5), the artist wrote an explicit set of instructions that instructed members of the audience to use a pair of scissors to cut from her body the expensive suit that she was wearing. The piece was considered complete when the suit had been completely cut away. The piece, which examined issues of sexual aggression, voyeurism, and gender subordination in a direct way, bridges between performance and participation because the participation of the audience was a necessary precondition of the piece, making the audience complicit in the act of undressing her (Haskell 91). The art existed at the intersection of the performer (Ono), the tool (scissors) and people (audience). The piece was performed in two locations: Kyoto, Japan and New York, and its completion consisted of nothing but the set of instructions and the subsequent interactions with the audience.

Performance artist Vito Acconci explores issues about personal space in a different way. In *Theme Song* (1973), the artist attempts to seduce the viewer in an intimate and perverse thirty-three minute performance. The piece offers commentary on the loneliness of the one-way transmission of broadcast television, where viewers' responses never leave their living room.

Vito Acconci's *Theme Song* is a thirty minute monologue highlighting the one-way transmission of the television era, in which the artist tries to seduce the viewer.

Appropriation

Appropriation is the method by which pieces of culture are clipped out, modified and manipulated by artists within a different context. The aims of this practice vary widely from artist to artist but the form is widely practiced in contemporary art making, music, web mashups, and current remix culture. The use of appropriation and *détournement* by the Situationist artists is expressed in the work of Martha Rosler, who deals with the intersection of quotidian life and media. In her series, *Bringing the War Home*, the artist collages images from the popular magazine *Better Homes and Gardens* with pictures of soldiers in Vietnam, creating idyllic, domestic scenes interrupted with soldiers, and drawing attention to the distance between these two subjects in American culture. Rosler provokes the viewer to consider the violence of war within the context and comfort

of privileged consumer status. This powerful juxtaposition brings faraway political situations closer to our everyday experience.
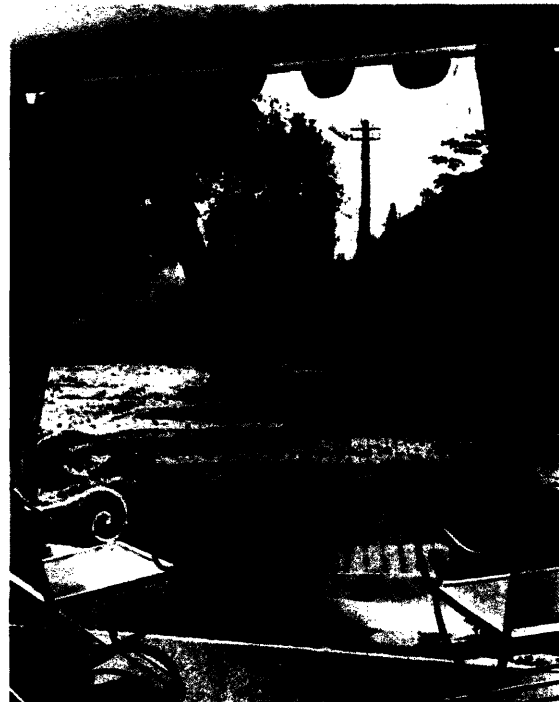
CONTEMPORARY PARTICIPATORY CULTURE

We have looked thus far at the early origins of participatory networks online (Usenet and BBSs) as well as the changes that participation and performance wrought on artistic practices in the 1960s. We will now turn to *participation culture*, a term that I use to describe the current widespread popularization of participation forms, as exemplified by sites such as MySpace, YouTube and Revver. These sites are centered around music and video sharing, both of which would have been beyond the technical scope of earlier participatory systems. These new constellations of interests lead to new forms of creative collaboration and social groups, which are created as a result of these activities. The text-based exquisite corpse stories of BBSs give way to remix culture, in which small bits of information become grist for the remix mill.

Participation art shifted the creation of the artwork from the artist to an interaction between the artist and participants. Similarly, in online participatory systems, art exists as the interaction of the participants with each other through the tool that makes the collaboration possible. The term *we-dia,* coined by MIT Media Lab Director Frank Moss to describe the tools used in the creation of online participatory culture, is reinterpreted by John Maeda to mean broadly that *Tool + People = Art* in the online context. Professor John Maeda envisions the change this will bring about in art in this way:

> Imagine a future 15 years from now. An artist opens her show. It's completely online. But it's powered by its visitors. It's interactive art – where the interaction itself is the art.
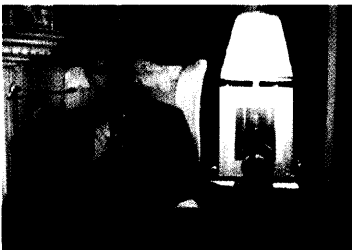
As a result of this change, consumers of culture are engaged in the act of producing more desirable products, interactions and exchanges through their participation in online social communities. In its best case, this

Martha Rosler juxtaposes images appropriated from the popular woman's magazine *Better Homes and Gardens* with photographs of war. The two pieces above are part of *Bringing the War Home: House Beautiful,* a series spanning nearly forty years. Top: *Bringing the War Home,* 1967-72. Above: *Photo Op,* new series, in 2004.

engagement can lead to the same sort of re-affirmation of community among participants that Bishop mentions in the effects of participatory art movements.
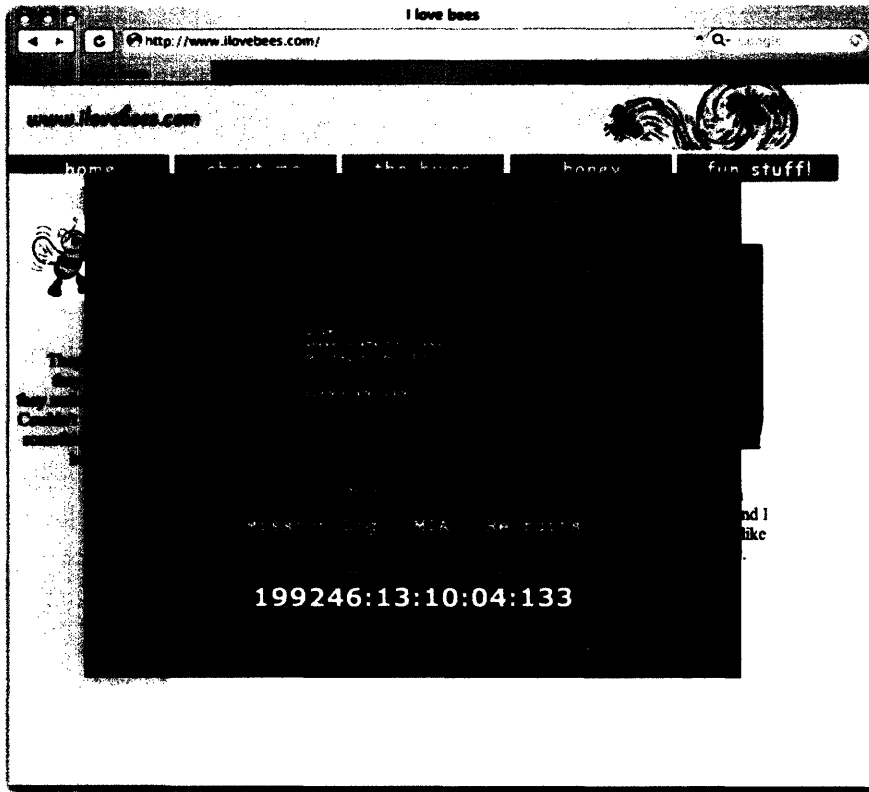
Two contemporary performers, Ze Frank and Jane McGonigal, make use of the rise in popularity of participatory websites to make participatory performance art pieces, which demonstrate the power and peril of these new groupings. Ze Frank is a contemporary performance artist, humorist, and composer whose online performance was mentioned in the beginning of this chapter. *The Show*, in which Frank performed scripts written by visitors to his web site, was a one-year piece consisting of a daily video broadcast. As part of the piece, he acted out three to five minute improvised monologues recorded in his apartment. His witty performances combined world events with songs, observations, and games.

A few months into the piece, his popularity growing, Frank began to engage audience participation. During *Fabuloso Fridays* he acted out different scripts written by viewers. Frank's performance, in which the audience controls the performer are an inversion of the typical relationship of performer to audience. Frank extracts the potential of the feedback loops possible in online participatory pieces. Becoming a marionette controlled by his viewers, Frank illustrates the shift written about by Jenkins, who describes the center (in this case, the audience) folding in on itself. Frank's work expresses the potential as well as the perils at the intersection of mass media and participation.

One of Frank's contemporaries, Jane McGonigal, is a unique blend of performance artist and game designer. Her work merges art with life in a physical and virtual sense. McGonigal's most ambitious project, *i love bees*, is an alternative reality game (ARG) that takes players, which she publicly calls agents, on a cross-media journey. Agents search for clues on cryptic websites in an event-driven game that consists of massive numbers of players distributed throughout the world. As part of the game, agents surf the web, leave voice messages from pay phones in dispersed locations, and meet in groups in physical locations, partaking in impromptu and unscripted performances as part of the game. *i love bees* intentionally blurs the lines between fiction and life, bringing art closer to life in a manner akin to earlier projects of participation and performance art. McGonigal claims that this disruptive game play is motivated by the desire to open up

Online performance artist Ze Frank on *The Show*, his daily video log. On June 9, 2007, the artist performed *Fabuloso Fridays*, a show based on a script that his viewers created collaboratively.

I love bees

http://www.ilovebees.com/

199246:13:10:04:133

territory for new perspectives. Suspension of disbelief and the willingness on the part of players to spend their own time and resources are requirements to engage in the game with other players.

McGonigal defines her pervasive games as "performance-based interventions that use game imagery to disrupt the normative conventions of public spaces and private technologies" (McGonigal 1). The games re-contextualize cultural iconography, bringing about physical and virtual encounters between players in the game. Players are invited to perform in an improvisational way to advance game play. Jane McGonigal's work shows the power of performance and game play to engage massive amounts of players in virtual and physical urban settings.

McGonigal employs the Situationist techniques in her pervasive games, which tend to be disruptive in the spirit of *détournement*. Massive numbers of people gather in urban settings to participate in performances involving visually arresting objects. The hideous

Left: Screenshot of performance artist and game designer Jane McGonigal's seminal game *i love bees*. Below: Photograph of the artist participating in one of her alternative realtiy games. Her event-based games often combine online research with physical encounters.

design aesthetic of the games, which juxtaposes the homemade aspects of personal blogs with terminal style graphics intentionally contributes to the mysteriousness of the game, inspiring participants to follow the bread crumb trail. The games change and evolve during game play, creating a fluid feedback loop between the game and its participants that keeps the game dynamic from start to finish.

Participation culture, whose roots can be seen in the participatory and performance art movements of the 1960s, is now widespread on the web. However, unlike its artistic and technical precursors, which focused on specific responses to real issues, the most popular sites cast their net wide, creating a general framework with the aim of attracting as many people as possible. This approach has the effect of creating a democratic forum embracing the widest possible range of viewpoints, but can suffer from the lack of a clearly identified objective beyond getting hits to generate advertising revenue.

Participation and performance art of the 1960s demonstrates the possibility of using these forms to explore, challenge, and resolve socio-political issues in a directed way. This objective is lacking in much of contemporary online participatory culture. Contemporary artists such as Jane McGonigal and Ze Frank suggest ways in which new participatory forms can be harnessed to pursue specific objectives. This thesis will follow their lead, proposing frameworks that have predefined intention.

Experiments

In the Background chapter, we looked at various precursors of the participatory movement online. BBS, Usenet, and the participatory art movement of the 1950s and 60s all contextualize the functioning, as well as the potential, of these systems. The Experiments chapter contains work exploring online participatory spaces directly. Before we get to those projects, we will look at several physical art installations that investigate many of the same issues.
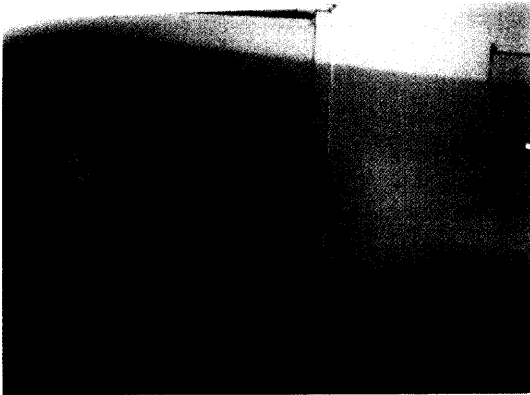
INSTALLATIONS

Installations can be interactive, but interaction differs from participation in at least one significant regard. Interactive art generally presupposes a machine with which the participant interacts – in most cases, this machine is the art. In contrast, in participatory art, the art *is* the interaction between people that occurs as a result of the system. The collection of relationships formed among participants is both the distinguishing characteristic and necessary prerequisite of participatory art. *Rain* is an example of an

interactive piece that is not participatory in this sense of the term. On the other hand, *Misty Dawn* is a physical installation that is both performative and participatory. Both of these installations are experienced in physical space, where design elements include the body and gesture. These different parameters suggest valuable new approaches to the design of online spaces.

Misty Dawn

Misty Dawn is a video installation developed with Philip DeCamp during the fall of 2005. *Misty Dawn* was installed in the Joan Jonas Performance Space at MIT in December 2005, at Art Interactive, a gallery in Cambridge, MA in February 2005, and at the MIT Media Lab, at a presentation for filmmaker Michel Gondry in April 2005.

A screen capture of an early prototype of *Misty Dawn*, a video installation that superimposes video recorded seven seconds in the past onto video captured in real-time.

Interaction

The custom software of *Misty Dawn* utilizes real-time image segmentation, superimposing video recorded seven seconds in the past onto video captured in real-time. The video software is an integral part of the installation; it consists of a projected image opposite a sofa and coffee table set, and is intended to evoke a domestic living room. A camera concealed in the coffee table points toward the sofa, recording the motions of gallery visitors who sit within the camera's field of vision. The physical setting of the piece invokes a place where socializing occurs within a private home, so that would-be performers would feel less self-conscious as they interacted publicly with the piece. Visitors see an image of themselves projected on the screen in front of them in which the time-delayed foreground is layered on the current video to produce a doubling effect. The piece creates an uneasy spatial relationship in which viewers interact with versions of themselves seven seconds in the past.

Technical specification

The program, written in C++, processes video input from a camera with an adaptive algorithm that can distinguish between the foreground and the background of the scene after approximately ten seconds of analysis with a steady camera shot. Following this analysis, the system continuously subtracts the background of the frames seven seconds in the past. The process produces a real-time video output in which the active foreground
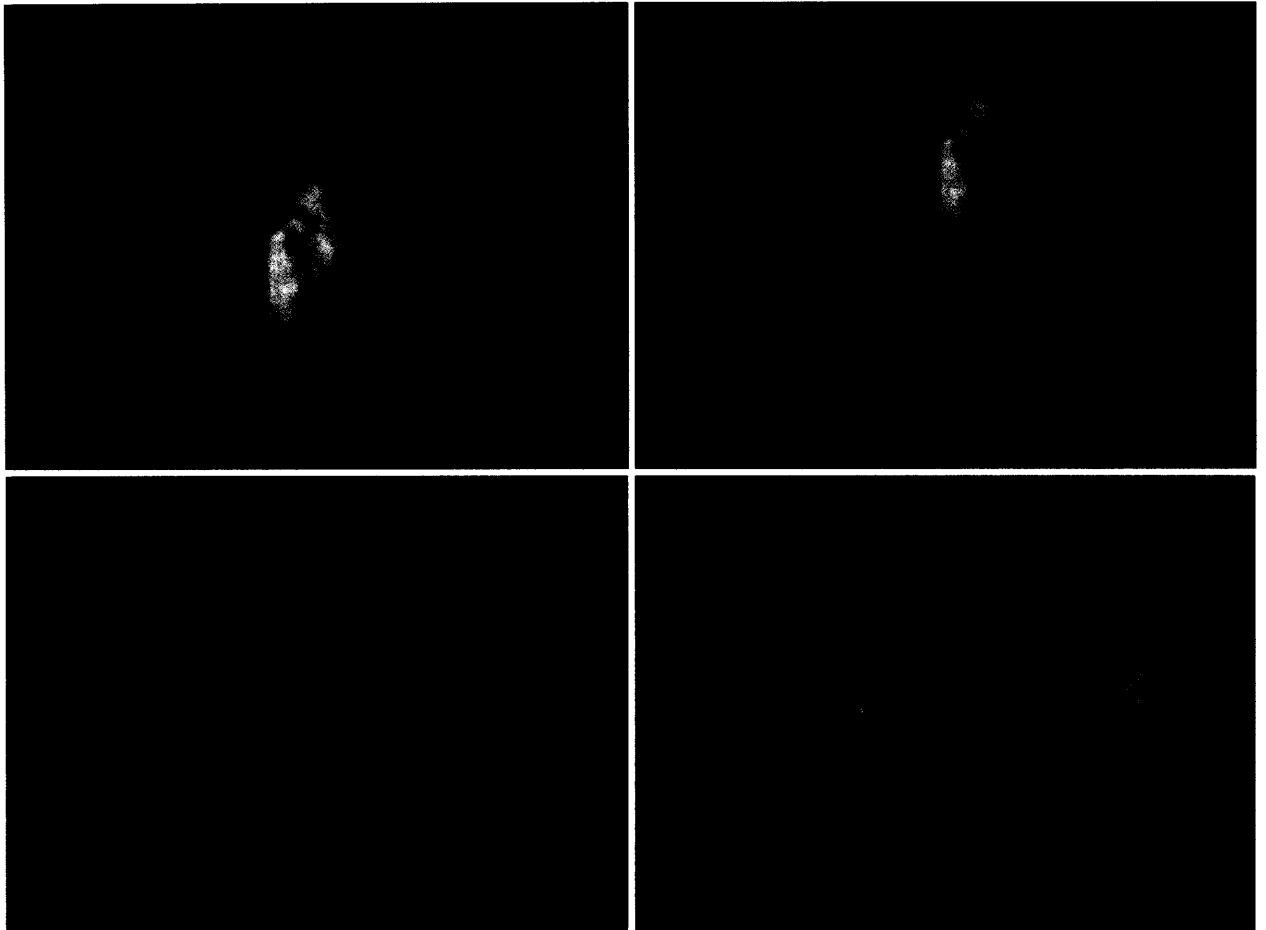
figure seven seconds from the past is superimposed on the present frame in its raw form. The real-time image segmentation generates fluid interaction between the actual person and her projected images.

Results

Misty Dawn explores privacy issues raised by surveillance in an artistic context. Moreover, the piece deals with issues of body, memory and gesture, as viewers are confronted with images of themselves in ways that disassociate them from their own body in a public setting, which has the trappings of private, domestic space.

Composing the piece suggested that interactive art can also be performative, requiring people to perform as a precondition of the piece. *Misty*

Stills from a live video performance of *Misty Dawn* at the Joan Jonas Performance Space in December 2005, investigating issues of privacy, surveillance and femininity.
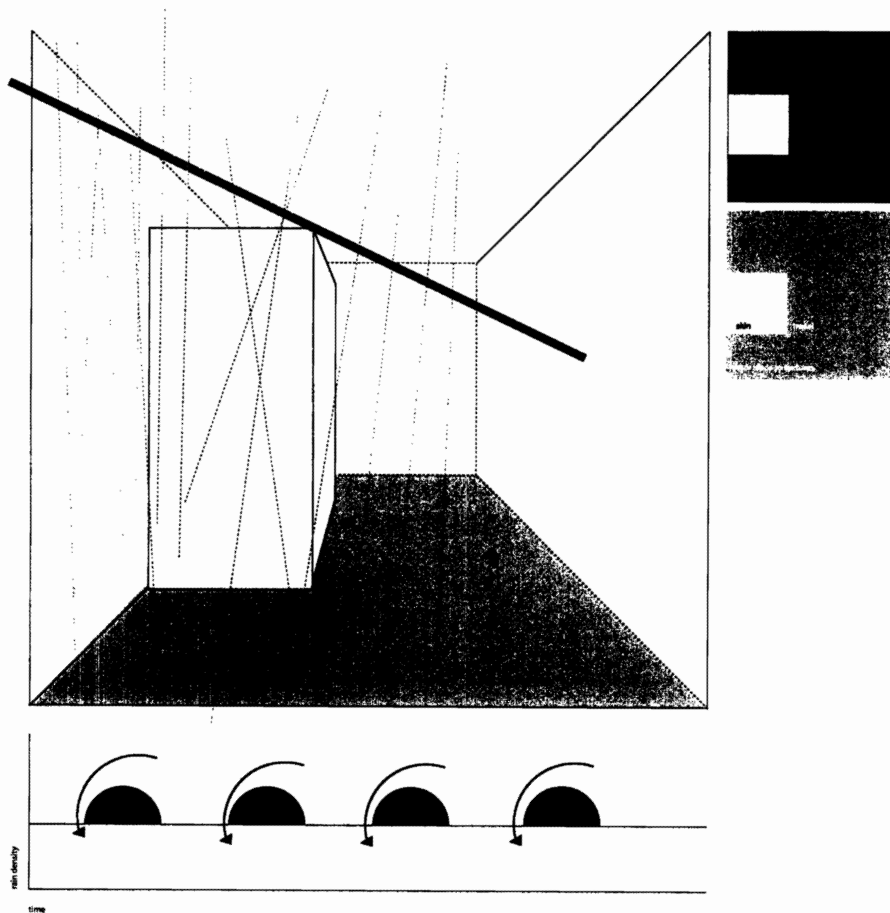
Sketches of *Misty Dawn* testing the segmentation algorithm and experimenting with texture and spatial arrangements. Misty Dawn is based in part on video artist Dan Graham's installations, *Past Future Split Attention* (1972) and *Performer/Audience/Mirror* (1975).

Dawn confronts people with their own image in a public setting inspiring a number of different reactions. The piece inspired performances on the part of some and caused others to shy away completely. Because the installation allowed the rest of the viewers in the gallery to see the current reaction to the system without the superimposed image, we were able to observe people's behavior with the system. One person sat for a long time in front of the piece without talking and moving while others used the system as an opportunity to perform in front of the group that gathered around the piece. One woman occupied the audience's attention for a ten-minute unrehearsed performance with the system. Others interacted with each other, attempting to synchronize their movements so that their real and delayed images on the screen would dance together, or hide behind each other.

Misty Dawn makes use of a Brechtian interruption of chronology to pose questions about identity and memory. The method of the piece calls to mind aspects of the work of filmmaker Michel Gondry, who visited the Media Lab for several days shortly after the piece was completed. After spending an hour interacting with the work and discussing its meaning, he maintained that the piece successfully investigates questions of identity by using a visual doubling effect and went on to suggest that the piece might be even more effective were it to incorporate an audio component, which would allow participants to converse with themselves seven seconds in the past. We wondered together how the incorporation of audio in *Misty Dawn* might change speech, and whether the incorporation of audio in the piece would simply result in chaos or meaningful self reflection.

Regardless of the possible future addition of audio, *Misty Dawn* was considered a success in inspiring impromptu collaborative performances. Negotiating the conditions that would help people who were not otherwise performers become comfortable enough to act out in front of other people foreshadowed the preoccupation with barriers of entry that also govern the lasting relationships enabled by online social communities.
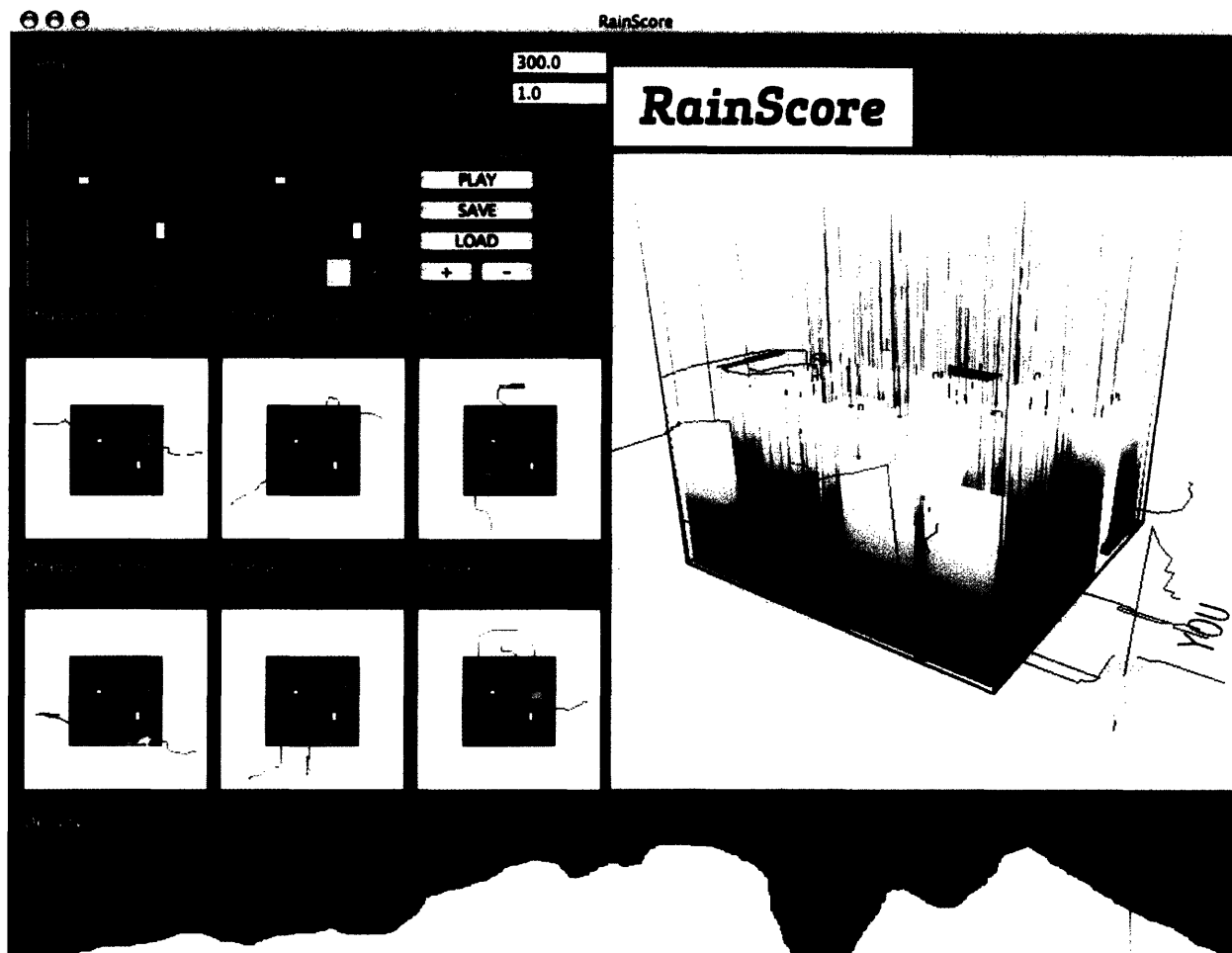
rain density

time

Rain

Rain is a sound installation developed in the Spring of 2006 with Philip DeCamp. The piece was part of *Sound Around,* a series of immersive sound installations and performances, performed in June 2006 at the Media Lab. A second iteration of the piece was also installed in the Lewis Music Library at MIT in January 2007 as part of *Silence Into Sound,* a series of audio installations curated by Tod Machover. Collaborator DeCamp and I were interested in the spatially orienting potential of synthesized sound. *Rain* was made as a response to two questions:

1. How can we compose a synthesized space suggestive of a physical space that we cannot see and that never existed?
2. How does sonic experience relate to memory, aesthetics and visual communication?

An early sketch of *Rain*. The software creates a 3D model and then maps the sound of synthetic rainfall onto objects in that space. The software accurately adjusts the sound of each falling raindrop.

The interface for *Rain* consists of a floor plan, a materials map, a series of drawing interfaces to specify the path of sprites as they pass through the composition, and a density map. Each of these interfaces are used to control the composition of synthesized rainfall on a constructed 3D space, visualized on the right hand side of the interface.

In addition, *Rain* can be thought of partly as a response to *Misty Dawn*, whose soundless video led to questions about the potential of audio to capture memories. Looking into the relationship between the spatial characteristics of sound and participatory culture was a challenge as I am primarily a visual artist and had never done any work with sound.
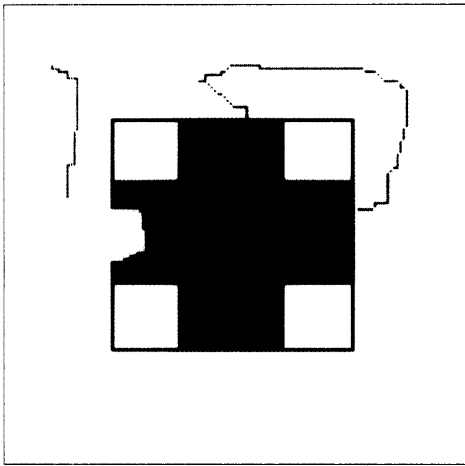
Interaction

Rain synthesizes the sound of rainfall on a virtual 3D environment. On a rainy day, raindrops produce millions of tiny sounds from every direction. Together, these sounds create a sonic map of the environment that allows us to sense the objects around us – the location of nearby buildings, the edges of overhangs where streams of collecting water fall to the ground, and pedestrians walking by holding umbrellas. *Rain* explores the

spatial and contextual aspects of sound by synthesizing the sound of rain in a virtual environment. The piece required the design and development of a compositional tool for the purpose of a physical and aural installation. The tool, which enabled others to participate in the creation of the synthetic rainfall, was an integral part of the installation.

Technical specifications

The software behind *Rain* is custom Java-based program. The rain simulation software models the geometry, material composition, and moving objects within a space in order to adjust accurately the sound of each falling raindrop. The resulting sound piece is composed of more than a thousand clips of individual drops of water on skin, metal, wood and an umbrella. The system uses a floor plan to establish where each drop of water is placed in the imagined space, and on what type of material each drop of water falls. The red lines drawn through the plan above represents the path of a sprite, an object that passes through the synthesized space. Physically, the installation consists of an array of four speakers set up in a 12 x 12 x 12 foot installation space. The sound of rain fall is localized, separated into four channels and sent to a Firepod which in turn delivers the audio to the corresponding speaker.

Left: A close-up of input for a single sprite passing through the composition. The yellow blob designates the size of the sprite and the red line indicates the path that the sprite takes through the space. Above: *Rain* installed in *Silence Into Sound* in January 2007.

Rain was a successful interactive art piece. It was not, however, participatory. I include *Rain* because it demonstrates an important difference between interactive and participatory art. In *Rain,* people interact with the system, composing their own synthesized rain. The installation requires very little on the part of participants; they merely use the software to create a specific sonic experience. The piece requires no performance on the part of participants and has an easy-to-use graphical interface; these lowered barriers of entry ensure high rates of participation. The ease of use comes at some price, however. Even as *Rain* participants engage an a direct way with the piece, there is little in the way of social interaction between

participants. Unlike *Misty Dawn*, in which transgressive performance inspired conversation and laughter among those gathered around the piece, *Rain* was a more solitary experience. Generally, participants came in, used the piece quietly for ten or fifteen minutes, and left. The lack of social relationships created by the piece highlights the difference between participatory and interactive art.

ONLINE PARTICIPATORY MEDIA

In contrast to the physical installations of the preceding section, which use technology to foster interaction between people and machines in physical spaces, online systems facilitate people interacting in virtual space.

Several definitions will clarify the work discussed below. Online social systems coordinate interaction and communication among multiple people. These include software that facilitates specific relationships and exchanges between people, in a myriad of areas, such as in commerce, education, creativity, friend networks, and dating. Sites that are participatory by nature encourage people engage in specific ways. As is the case with participatory artwork, we talk about online participatory art pieces existing at the intersection of the system, in that they are created by the artist, and require the engagement of the audience (in this case, online) with it. That is to say, if there is no participation there is no 'piece.'

The online communities created around successful participatory sites can lead to meaningful dialogue, affecting more than just online spaces. That said, the space of online participatory media is uneven terrain that can be difficult to navigate. Garnering attention on the web is unpredictable and can be frustrating; predicting how people will behave when testing new modes of communication in an online environment can lead to immediate failure. When visitors do not show up, it is often difficult to say exactly why a site does not generate the hits that were expected. Moreover, when the medium is the communication between people, the designer's job is even more difficult. In a sense, the artist attempting to generate online participation is akin to an advertiser who is constantly trying to comprehend how or why people will not pay attention to their new product. Often finding the right approach is a matter of trial and error.

Despite the unsavory advertising comparisons, the online mechanisms within which people congregate to communicate in a free way online is
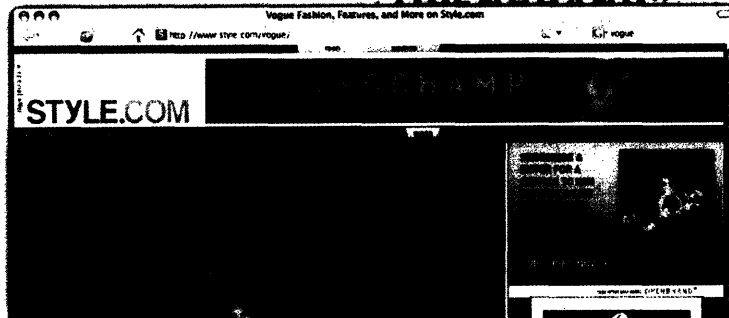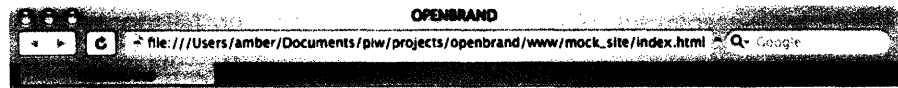
an important step toward mobilizing these new constellations toward social or political ends. When an online participatory site is successful, the feeling of having helped individuals gather to express themselves around common creative interests makes the enterprise satisfying in its own right.

OpenBrand

I developed OpenBrand with Kelly Norton, my colleague in the Physical Language Workshop (PLW), along with Media Lab Director Frank Moss, and Time Warner liaison Peter Meirs during the annual Simplicity prototype-athon in January 2006. Six months later, we showed a working prototype of the system to a room full of Time Warner executives at the Time Warner Building in NY. OpenBrand is an ongoing collaboration with Time Warner and Johnson & Johnson to develop a new open marketing strategy in which consumers have a voice in advertising content and product development.

OpenBrand is intended to enable public contribution to online advertising by allowing consumers to re-configure banner advertisements and share those modification with a community. Banner advertisements are the typical form of visual advertising on the web in which a portion of a given web page is devoted to a paid advertisement. *OpenBrand* utilizes a custom script to enable consumers to post text comments on banner advertisements, using Greasemonkey, an open source scripting layer written for the Firefox browser. The text comments posted by visitors are displayed just below the ad and are saved to a central database on the PLW server at MIT, becoming publicly viewable for all those who have installed the script. In addition, the comments are linked to a forum where participating companies can respond to them. This forum acts as a new costumer service model where the companies have the opportunity to converse with their consumers.

The project grew out of the *Organic Marketing* discussion, in which students, sponsors and faculty discussed how marketing can be more 'humane.' This approach was a response to growing resistance among Media Lab students to sponsors mining their work for ways to broadcast marketing messages to consumers. Characterizing humane marketing precisely is difficult, but through conversation we identified trust as the key issue. With the complex profusion of identities and relationships online, trust has become a scarce commodity – something that advertisers are just

file:///Users/amber/Documents/plw/projects/openbrand/www/mock_site/index.html

Vogue Fashion, Features, and More on Style.com

STYLE.COM

say what you want. OPENBRAND*

Do I have to be anorexic to buy your bag?

400   3 0

❌ hide

What do you think of our products?

oddy workmanship, but ships on time."

I have to be anorexic to buy your bag?"

"We concern ourselves less with customer eating habits than the materials we use in our products. We use no animal products in our bags."

OpenBrand is a Greasemonkey script that acts on specific banner advertisements. Participants enter comments that are displayed on the ad for other people with the script to see.

beginning to realize. Traditionally, a one-way transmission was the only way for an advertiser to get their message to a consumer. This strategy does not work as effectively online as it did in older media forms, because it is invasive and inspires little trust where the value of trust is a premium. In contemporary participatory culture, the advertiser competes for attention in a landscape of bloggers and amateur content creators. Instead of focusing on how to transmit messages about products to consumers, the question that companies should be attempting to answer is: *what do consumers think of my product? OpenBrand* creates a structure for consumers to voice their concerns in an unfiltered way, and for the companies to listen to them.

The dialogue between advertising companies and consumers is a feedback loop that makes it possible for consumers to transform products, or at least, the way they are marketed. The desire to activate participants that might otherwise be passive consumers is inspired in part by the Situationist projects discussed in the preceding chapter. The reappraisal of the Situationist project to develop a system that, in the last analysis, will be used to sell products, is no small irony given the Situationist's general disdain for consumer culture. After all, the advent of culture defined increasingly by consumption was just what the Situationist were fighting against. However, the Situationist International oversimplified a complex issue in service of their polemical argument. Instead of viewing all consumption as meaningless operation of market-driven culture, *OpenBrand, which is* one part provocation and one part marketing strategy, asks how we might change the way consumption occurs to make it a meaningful activity for all involved.

The barriers for consumer participation in *OpenBrand* are very low. The system requires no performance on the part of participants, and entering text is easy. Posts are entered in an asynchronous text format that has been familiar to people since the advent of the BBS, and posts can be anonymous, which further lowers the barrier of entry to participate. Various incentives exist to use the system. In addition to the possibility of improving products to better suit one's own needs, the system allows participants to talk back to advertisers, or engage in the catharsis of simply vandalizing the advertisements that assault us daily. The wealth of sites devoted to consumer reflections on the quality of products (CNet, Epinions, and others) offers ample evidence that consumers tend to engage in this activity even when the only likely incentive is to warn or encourage other consumers about products. Needless to say, giving up valuable ad space while also making themselves vulnerable to critique could discourage many advertisers from implementing *OpenBrand*. However, in practice, the possibility of instilling trust in the consumer outweighed the initial suspicion with which advertisers approached the project. Having the courage to implement *OpenBrand* would make it clear that a company trusts the consumer and values her input enough to enter into an unfiltered, public conversation. Normally, when we think about trust in advertising, we ask how the marketer can gain the trust of the consumer. *OpenBrand* turns the problem on its head, asking instead if the marketer trusts the consumer enough to put the marketing message in their hands.

THE URBAN ART MUSEUM HEREBY DECLARES:
TO UPHOLD THE RESPONSIBILITY OF A FORMAL ART INSTITUTION
TO PURCHASE HIGH QUALITY ART WITHOUT DISCRIMINATION
    TO ARTIST OR CONTENT
TO BE A PHILANTHROPIC ORGANIZATION
TO FURTHER THE GROWTH OF THE OPEN STUDIO COMMUNITY BY
    INJECTING FUNDS VIA ART PURCHASES AND BY EXTENDING
    INVITES TO OTHERS
TO CONTINUE TO PROVIDE USEFUL INPUT TO BETER THE
    SERVICES OF OPEN STUDIO
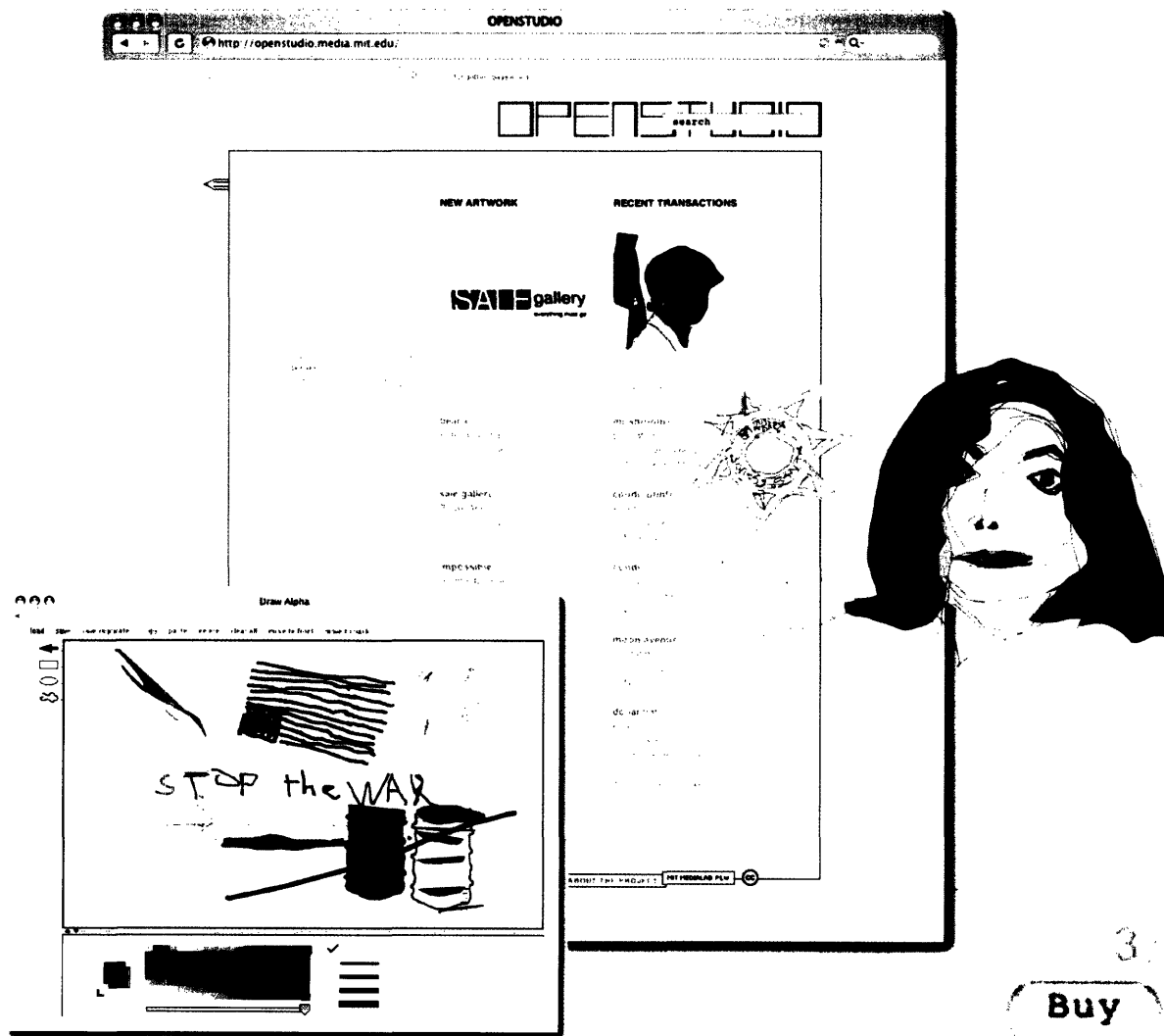
X _Daniel King_

OPENSTUDIO

OPENSTUDIO is an open-ended experiment in creativity, collaboration
and capitalism that explores new economic models for the creation and
exchange of digital media. The system couples a simple drawing tool with
an economy composed of artists, curators, dealers and viewers. Members
create drawings using a light-weight Java webstart application and save
the drawings in their individual repositories on the PLW server. Members
then buy and sell those drawings in
an online community.

The system was designed and built
by a team of researchers in the PLW
including Kelly Norton, Brent Fitzgerald, Burak Arikan, Annie Ding, Kate
Hollenbach and this author over the course of four months. Our work
was built on research conducted previously by Carlos Rocha, Noah Field,
Marc Schwartz and others as well as countless undergraduate researchers
who worked on the project from 2003 to the launch in 2007.

OPENSTUDIO was launched one month after it was announced at the
AIGA conference in November 2005. Initial entrance to the system was by
invitation only with new members given one hundred buraks, the *OPEN-
STUDIO* currency, at the time of joining. During its first few months, a
core group of PLW members and their friends were actively producing

OPENSTUDIO art pieces. Top: *Urban
Art Museum Public Contract with Open
Studio* by Urban Art Museum, May 2006.
OPENSTUDIO inspired community run
projects, one of which was an initiative
to solicit the founders for money to start
a museum within the system. Above:
Missile by Joe Dahmen, November 2005.
Right: Logo for the Draw application.

and trading drawings. In the Spring of 2006, we implemented a viral invitation system, where each new member could invite ten new members. The site was opened to the public one year later in the Fall of 2007. We received an immediate spike in membership, when the site went public.

Collaboration and authorship

The *OPENSTUDIO* community interacts primarily through the exchange of the drawings that members create in the system. When a participant buys a drawing, the buyer is encouraged to build on it, creating a new piece whose connection to the original is visible through a transparent au-

Clockwise from top: *OPENSTUDIO* home page. *Michael*, an *OPENSTUDIO* drawing by Joe Dahmen, 2006. The one-click buy interface. The Draw Application.

thorship system. The transparent authorship, called 'provenance,' allows for an open environment of collaboration where all contributing parties can see clearly the artistic transformation of the piece. By formalizing the act of appropriation inherent in digital works of art, *OPENSTUDIO* legitimizes derivation and appropriation, an essential component of creative production in networked online communities. Within a few weeks, members began to exchange drawings with the understanding that any buyer could open the drawing and alter it however they saw fit. This type of exchange confirms ties between members of the community.
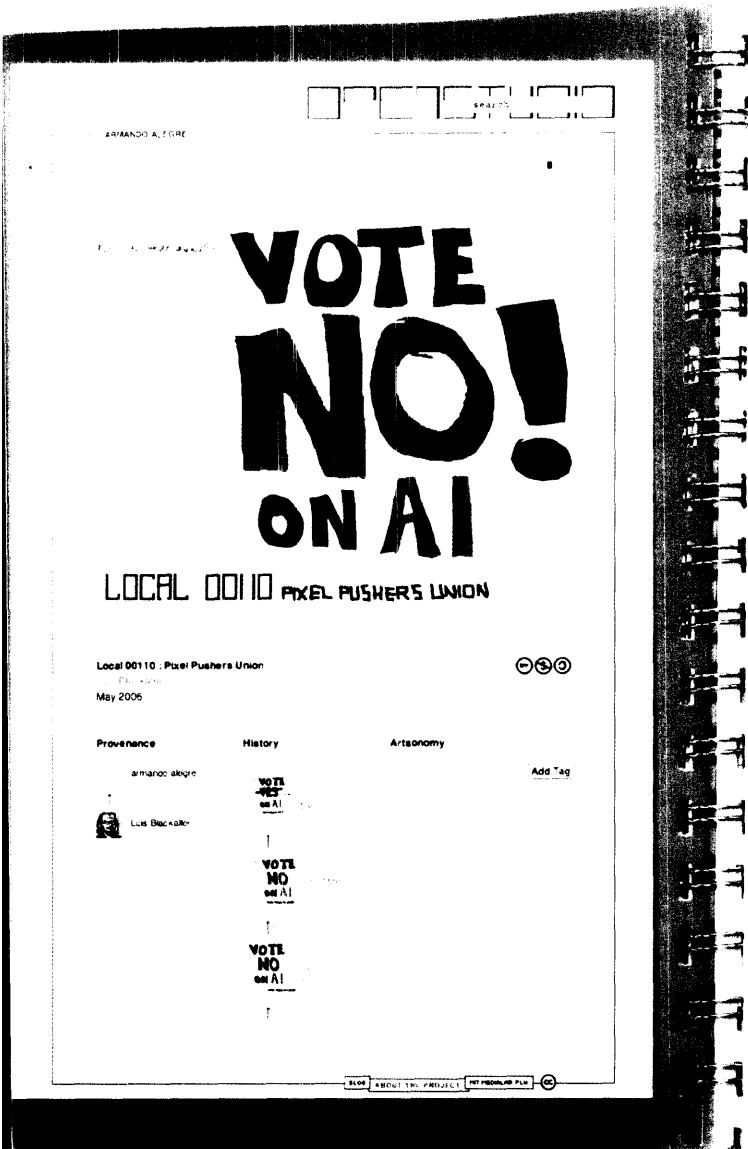
Tags and reputation

Online galleries bring individual recognition to members, who display their drawings and those of others before an audience of online community members. *OPENSTUDIO* members can tag drawings with a word or set of words, using a system called 'artsonomy.' The set of tags associated with an individual's original drawings forms a description of the kind of work the artist makes. Likewise, the set of tags associated with an individual's collection (the pieces she buys and displays in her gallery) forms a description of the kind of work she collects. In some instances, members have used an uncommon tag to create an informal meta gallery. For example, Ben Dalton uses a + symbol for his tag designating pieces that he likes. His mark travels with the piece even after he loses his association with it. Other members have also adopted the + tag, associating them with Ben and his collection of work. In addition to bypassing prescribed ownership models, these members bond through the creative use of the system. In this way, members find unique ways to form alliances that were not intended in the original design of the system.

Right: Artsonomy, the tagging system in *OPENSTUDIO*, provides a minimal text forum of communication. Members can make ad hoc groups through the use of common tags. Below: Book documenting *OPENSTUDIO* emphasizing the importance of commerce within the system.
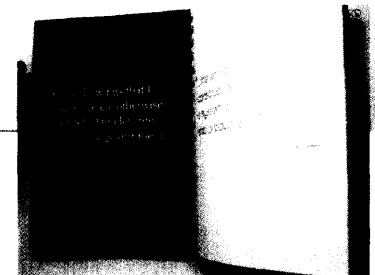
Open Economics Confirms Community Values

One of the main objectives of *OPENSTUDIO* is to investigate how creativity affects economic exchange through an online community. To satisfy this objective, we implemented a simple economic system resembling an art market. Each transaction in the system is saved in the member's profile and made publicly viewable. This open banking system allows other people to see their own buying habits as well as those of others. The open transaction system is coupled with an list of social connections between buyers, sellers, and exhibitors on the profile page, which lists social groups and tracks them as they evolve. These social groups reveal informal or formal collaborations between members. In the strictest sense, collaboration

VOTE NO! ON AI

LOCAL 00110 PIXEL PUSHERS UNION

> "...letting money ... speeds up exchange and tightens the bonds of interdependence in any community."

—Marshall McLuhan
Understanding Media

is mediated through the monetary exchange of bits of finished drawings. The attempt of some members to form larger institutions like museums reveals an interest on the part of members to form larger and more powerful subgroups within the system.

Using a currency that exists only in the system has several advantages. First, it lowers the barrier of entry to buying and selling. People may feel more inclined to be active in a system where they are not spending their own money. On the other hand, the value of the currency is proportional to the time invested in the system. The valuation of the burak aside, developing our own currency enables us to build systems in a way that would not be acceptable given real world implications. For example, we were able to experiment with transparent system revealing all transactions and monetary attributes of members. It is still a question how an open banking system would change the interactions of members in a system. We took

Two pages of a book documenting *OPENSTUDIO*. The Local 00110 Pixel Pushers Union was a short lived union protesting the "Angel Investor," a granting institution formed by the founding designers of the studio. The Union protestors gained enough political support to stop the Angel Investor from ever giving grants to specific organizations.

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                     evaluate th s expression  )
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)

As *OPENSTUDIO* drawings are traded,
meta-information about the piece is
passed from owner to owner,
including title, owner, time-stamp of
creation, all the tags associated with the
piece and its transaction history. Below
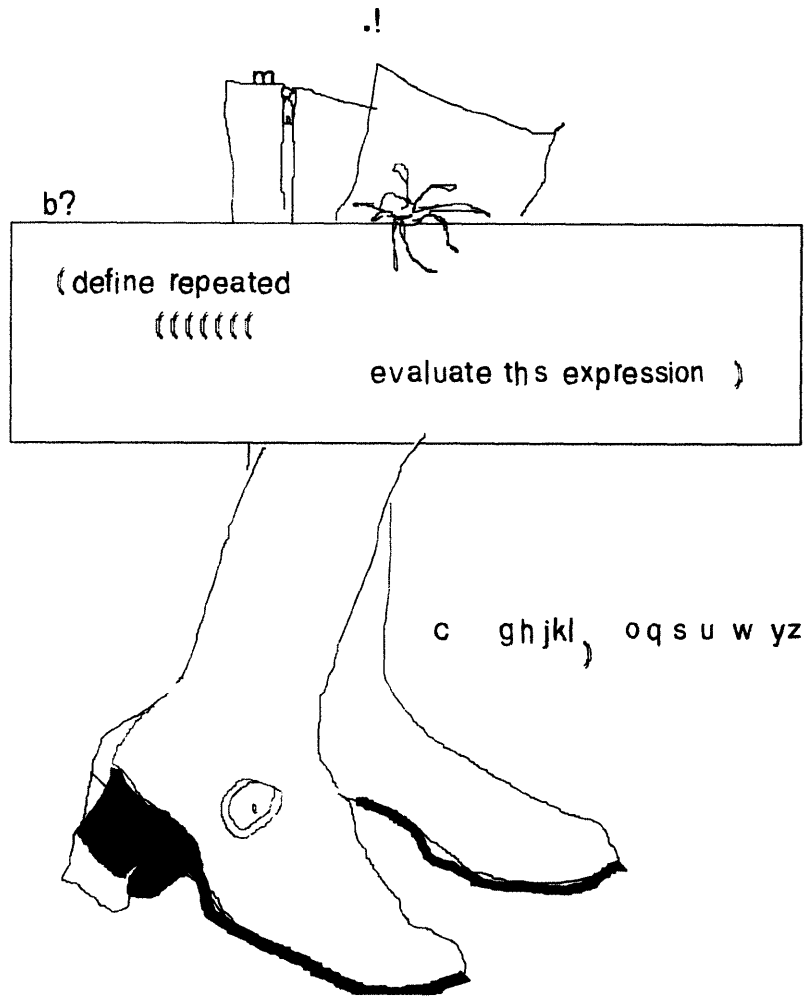is an example of the meta-information
associated with each piece.

Audio Culture
Amber Frid-Jimenez
March 2006
for sale: 555 buraks

Artsonomy

+, parenthetical, boots, kate spade,
shoes, kate nerd, joe got a deal,
unexpected, schemeoclock,
typographic, nostalgic, legs, girl,
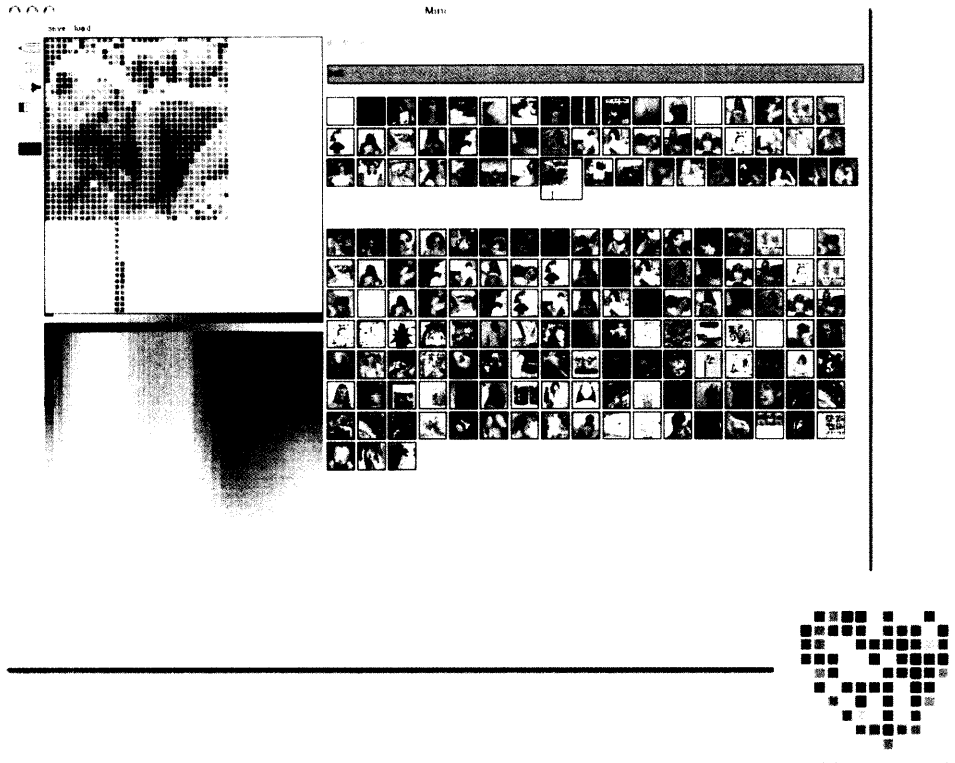*depression*

Provenance

Brent Fitzgerald sold
to Cati Vaucelle for 49 buraks
Joe Dahmen sold
to Brent Fitzgerald for 34 buraks
Amber Frid-Jimenez sold
to Joe Dahmen for 17 buraks

the view that the system should reveal as much as possible publicly about
each participant, including the value of each transaction as well as the ac-
count balance, total volume, revenue, and expenses and profit. The deci-
sion to make as much data as possible public knowledge was made to see
how members might behave differently under conditions of transparency.

Openness and Unexpected Collaboration

Creating a system that allows for creative collaboration among members
was the second objective of *OPENSTUDIO*. The openness of *OPENSTU-
DIO* encourages collaboration and play among its international member-
ship. The flexibility of the system allows members to act in ways that we
did not foresee. In addition to making the drawings using the Draw tool,
members used the system to create advertisements, write contracts, and
communicate intimate messages through publicly visible drawings. The
community has the spirit of participatory art where members are asked

to contribute to a collective expression. Designing a system to encourage derivative drawings and open economic exchange were the motivations for naming the system 'OPEN' STUDIO.

The *Mini* application automatically performs a Google image search based on a key word, creating a small icon based on an image from the web.

Technical Specifications

OPENSTUDIO is a complex system with many interdependent parts drawing on the research of many people involved in the project. I will touch only briefly on the components to give an overview of the complexity of the system. The community activities are centered around a web application built with Ruby On Rails, a popular framework for developing online community-based projects. The web application is seamlessly integrated with SMPL, PLW's flexible communication protocol written in Java, to manage saving and retrieving documents from the document server. The system also uses a high-speed renderer, written by Kelly Norton, to deliver images at a wide variety of display sizes. In addition, the system has an API that we use to mash up the site with other sites. This will be discuss this later when I talk about the *Burak Hotline* system. The Draw application is a simple vector based drawing application developed using the Treehouse client framework. Treehouse, the predecessor of *OPENSTUDIO*, is the client side code base for *OPENSTUDIO*.
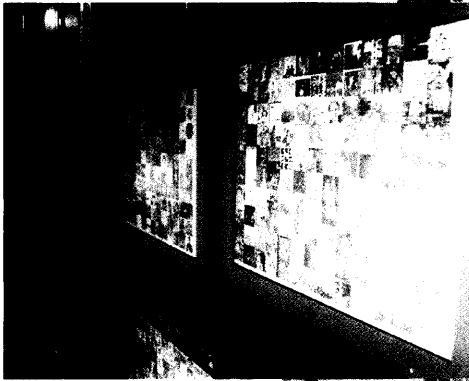
Mini

Mini, an application originally intended for deployment within the *OPENSTUDIO* environment, enables people to create 8-, 16-, 32-, and 64-pixel icons from images automatically downloaded from the Internet. I built *Mini* in 2005 during my first summer in PLW with the help of Philip DeCamp, whose expertise in hacking Google was critical to the deployment of the system. We based the program on work done by previous members of the PLW. *Mini* was my first experiment in designing tools for visual expression. The project inspired *Tiny*, a participatory project developed by fellow researcher Brent Fitzgerald and Luis Blackaller for release on the web, which is described in greater detail below.
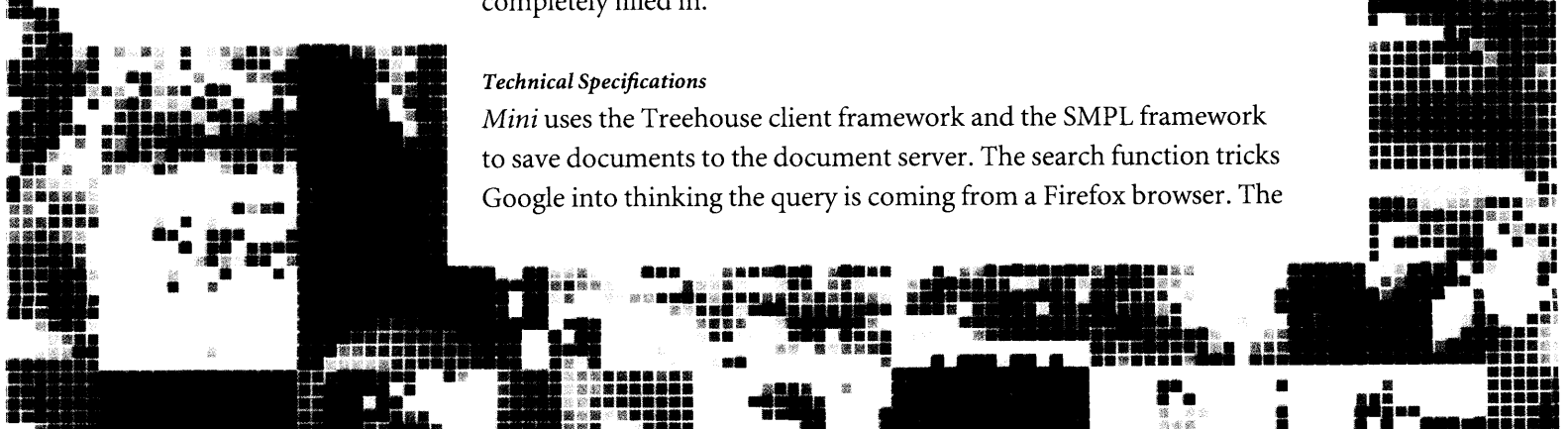
Interface

The idea behind *Mini* is simple. The tool works by querying Google images in search of a term entered by the user. The system automatically generates icons of the first 800 images as a result of the query. The tool gives rise to several extensions. *Old Standard* is an extension of *Mini* that functions as a local art installation using the iMac array in the PLW. *Old Standard* uses 200 words from the Fleshbot website as query terms to perform a Google image search. The resulting images are then automatically iconized and displayed in a grid on the iMAC array. *Old Standard* acknowledges that a large percentage of the content on the Internet is posted by the porn industry. It was important to me to draw attention to this part of the Internet because the PLW uses online culture as the starting point for research. A second, sanitized version of *Old Standard* allows users to draw a pattern, like an American flag, and then fill in each section with iconized images from the search. For example, to fill in the stripes of the flag, you might use the query term 'blood', 'apple' or simply 'red' and *Old Standard* would automatically queries Google and fills in the strips with icons of the resulting images. To fill in the white stripes you might query 'clouds', and so forth, until the final image was completely filled in.

Technical Specifications

Mini uses the Treehouse client framework and the SMPL framework to save documents to the document server. The search function tricks Google into thinking the query is coming from a Firefox browser. The

Mini is used to construct an installation of small icons displayed on a grid of nine iMacs in the PLW. The interface automatically downloads images from a Google image search using the top 50 most popular words from fleshbot.com.

Old Standard implementation does an automatic query using 100 terms from fleshbot.com, a popular online magazine devoted to pornography and online sex culture, in order to automatically generate icon that are displayed on the 9 x 9 array of iMacs in the PLW.

Results

In *Mini*, participants generate icons merely by querying Google. A similar project called *Tiny*, launched by PLW members Brent Fitzgerald and Luis Blackaller, garnered 10,000 hits in a one-month period, attesting to the participation levels that low barriers of entry can create when coupled with intelligent design. *Tiny*'s entry barrier is even lower than that of *Mini*. Written as a Rails/AJAX application, *Tiny* makes drawing small pixel icons anonymous and easy. Using a web interface to make black and white icons, *Tiny* requires only a ten-second commitment on the part of the participant. The resulting icons are creative and sometimes indecent, offen-

Tiny is a web-based collaborative art project, created by Brent Fitzgerald and Luis Blackaller, that invites anonymous contributions to a pool of over 100,000 13 X 13 pixel icons.

sive or humorous. Even within the limits of a 13 x 13 pixel icon, people are able to conduct conversations through the system. In its own modest way, *Tiny* testifies to the potential of massive visual collaborative expression.

ONLINE PERFORMANCE

The following experiments explore performative media through the use of the telephone to contribute content to the web.
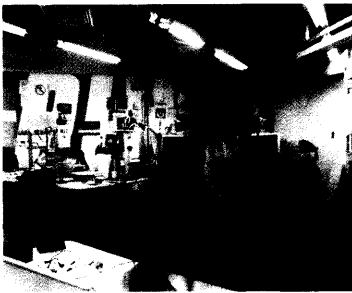
The telephone

The purpose of using the telephone as input device for content is two-fold. First, the telephone requires people to make public statements using their own voice and second, it lowers the technical barrier of entry. In the words of artist Kelly Dobson,

> The telephone offers an extension of our voice. It is an extension of our-
> selves and it overlaps, blurs, and allows us to mix together. (Dobson 36)

The telephone is a familiar technology for sharing intimate moments, stories, opinions and reactions. Using our voice instead of text can strengthen emotional connections, add entertainment value and lead to more intimate community ties.

These experiments use the telephone to explore barriers of entry. Using a familiar device makes contribution easy, but the low technical barrier to entry is offset by the raised emotional or performative barrier as a result of asking people to broadcast with their voice. It takes a confidence to speak before the indeterminate audience of the web – the call could be heard by thousands or no one at all. Either way, the prospect of calling sites on the Internet can be daunting.
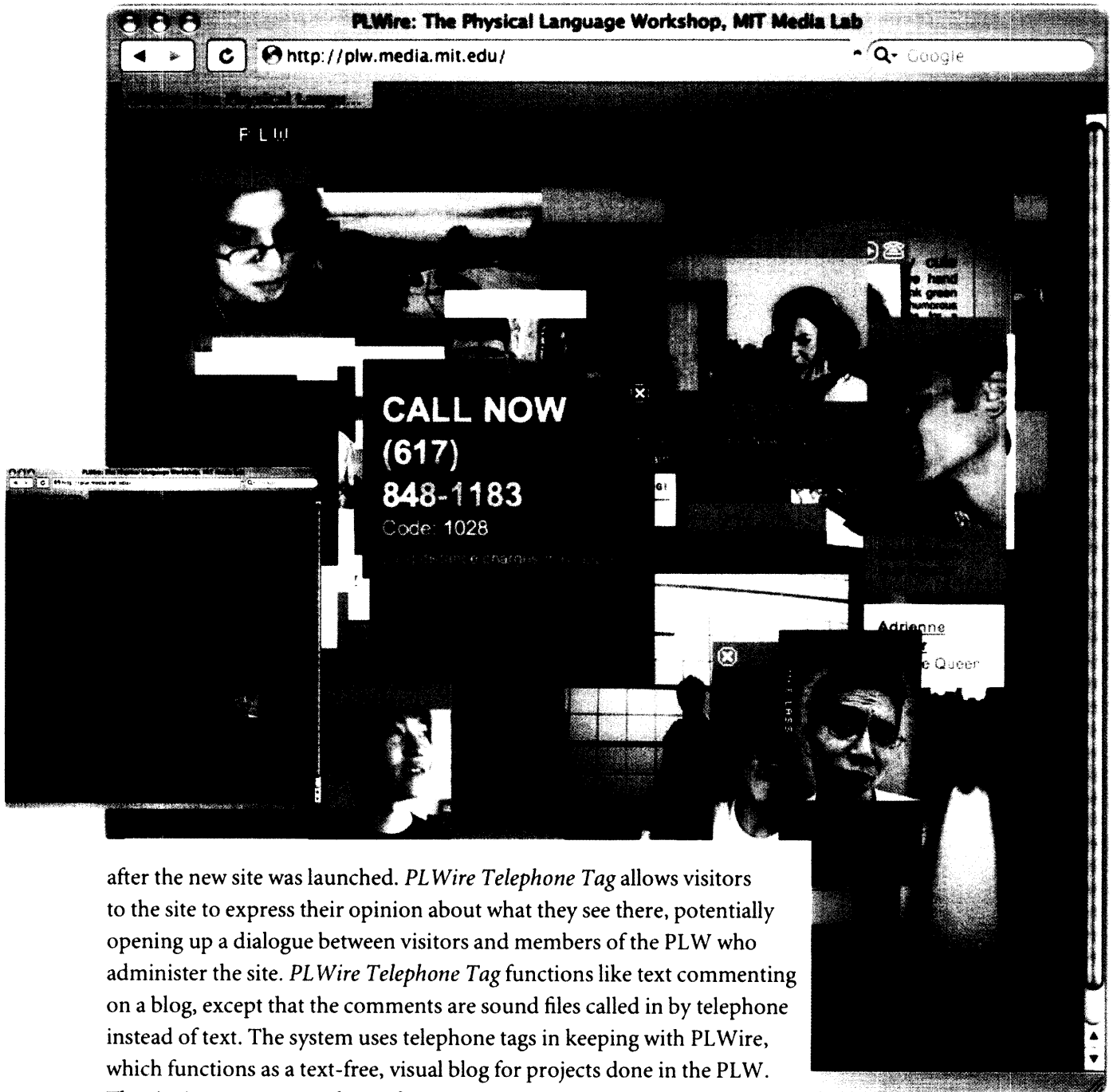
Because broadcasting your voice using the telephone turns the device into a performative medium, this raises the social barrier of entry. The experiments investigate whether lowering the technical barrier of entry works to entice people to engage in online performance. Except for nationwide conference calls, phones are normally used as a private or intimate mode of communication between two (or, at most, three or four) people, not as a tool for broadcast.

PLW graduate Burak Arikan tries out PLWire Telephone Tag on a USB enabled telephone.

PLWire Telephone Tag

PLWire Telephone Tag invites visitors to the PLW website to use their telephone to leave messages about objects they see there. The system was designed and built on the new PLWire site in the summer of 2006 shortly
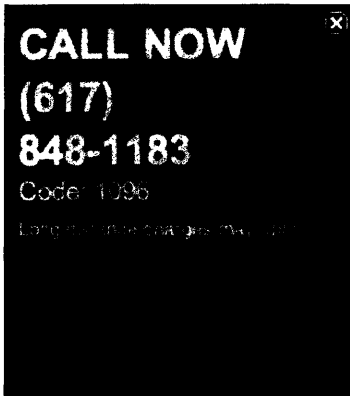
CALL NOW
(617)
848-1183
Code: 1028

after the new site was launched. *PLWire Telephone Tag* allows visitors to the site to express their opinion about what they see there, potentially opening up a dialogue between visitors and members of the PLW who administer the site. *PLWire Telephone Tag* functions like text commenting on a blog, except that the comments are sound files called in by telephone instead of text. The system uses telephone tags in keeping with PLWire, which functions as a text-free, visual blog for projects done in the PLW. The site is set up so members of PLW can post videos, graphics, and links as modules, or mini-windows on the site.

Interaction

Visitors call the PLWire telephone line, which is revealed to them by clicking on a telephone icon at the top of each video module on the site. A recorded voice prompts callers to enter in the unique four digit code for the

PLWire Telephone Tag was designed on top of PLWire, PLW's textless group blog. The original PLWire was designed by PLW member Takashi Okamoto.

object that they would like to tag. The first digit corresponds to the datatype, e.g. 0 for video, 1 for graphics, etc. The following three digits auto-increment to ensure a unique code for each module. After entering the appropriate code, callers are instructed to leave a seven second message, which is automatically associated with the corresponding object and posted on the site. Visitors can listen to all messages for each object by clicking on an audio icon at the top of each module, which plays the audio tags automatically in reverse order, with the last message received played first. The objective of the system is to open up a space for dialogue. Public visitors to the web site can leave messages offering advice, critique or opinion about what they experience on the site. The hope is that contributions by phone would inspire comments that were at once intimate and expressive.

Technical specifications

PLWire Telephone Tag system employs Asterisk, an open source PBX (Private Branch Exchange), and a telephony toolkit, which is free to download, working on top of PLWire, a Ruby On Rails application. An Asterisk server routes telephone calls from an outside VOIP carrier to the PLW server. The Asterisk server is configured to run on the PLW server. After registering with the external VOIP carrier, the Asterisk server waits and receive all incoming calls. For each call Asterisk launches a RAGI (Ruby Asterisk Gateway Interface) to communicate with the Rails application. The RAGI process runs as its own server and enables callers to interface with the PLWire web application framework, which means that RAGI allows people to access information through the data models defined in the Ruby on Rails application. *PLWire Telephone Tag* system requires the operation of seven servers: one Asterisk server talking to a remote VOIP server, one RAGI server to interface between the telephone call and the Ruby On Rails application, one Apache server, two Mongrel servers to split the load of incoming requests from the web application, and a Mysql database server. This was my first realization of the complexity behind networked systems especially when they integrate old (telephone) and new (online social) technology. Every server crashed at least once during the first week of deployment; keeping them all functional over the life of the system presents a major technical challenge.

Results

PLWire Telephone Tag investigates the possibility of creating dialogue between visitors of the site and PLW members. The goal of opening up the PLW website was to break down the exclusivity of the group and

**CALL NOW
(617)
848-1183**
Code 106

Each object on the *PLWire* has its own unique code that visitors use to access and leave a message.

engage critical discussion around projects, leading to collaboration with people outside the group. In practice, the system received fewer calls than I had hoped for. We will discuss the reason for this in the analysis section. *PLWire Telephone Tag* received 65 calls since its deployment in September 2006. It would have been nice if the site felt like a crowded room of strangers, but the call rate was too low for PLWire to feel rich with new voices.
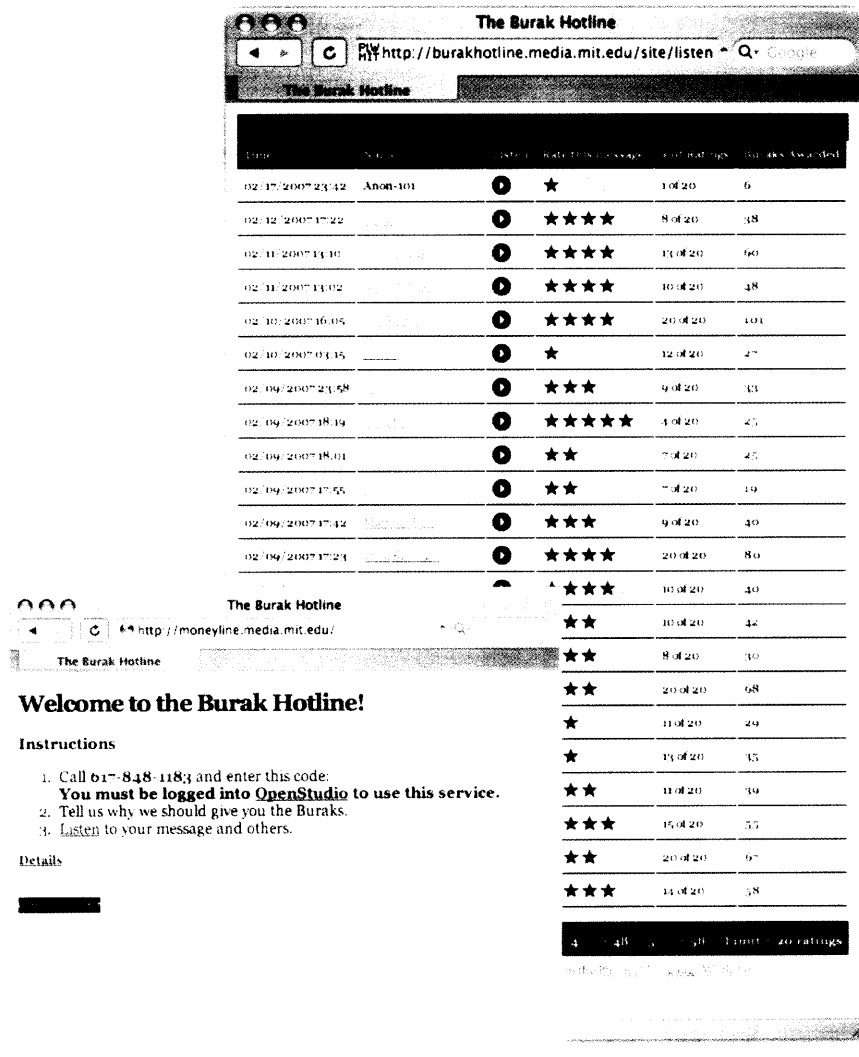
Burak Hotline

The second telephone-based project, entitled the *Burak Hotline,* is an online application added to *OPENSTUDIO. Burak Hotline* tests members' willingness to call and leave a message on the Internet. The application was launched in January of 2007, several months after the launch of *PLWire Telephone Tag.* The parameters of the system arose in response to the relatively low call volume generated by that system. In contrast to *PLWire Telephone Tag,* which provided no outward incentive for people to call the system, the *Burak Hotline* rewards calls by *OPENSTUDIO* members with buraks, the currency of *OPENSTUDIO.* The only other way to earn buraks is to make and sell drawings, which is a time-consuming process. In contrast, for a short time investment (under two minutes), callers could make up to 100 buraks, depending on the quality of their phone call.

Interaction

A text advertisement on the front page of *OPENSTUDIO* announced to members that they could earn buraks in exchange for calling the *Burak Hotline.* Members who are already logged in click on a link in the announcements section of the front page, taking them to the front page of the *Burak Hotline* where they are given a phone number and a unique code that corresponds to their membership in *OPENSTUDIO.* The *Burak Hotline* offers a simple three-step text instructions explaining the system. The instructions read as follows

1. Call (**617) 606-4278** and enter your code: 039
2. Tell us why we should give you the Buraks.
3. Listen and rate your message and others.

The site consists of only one other page, which was a table of calls received and an interface to rate calls. After members call and leave messages explaining why they should receive buraks, the calls are logged on the site for others to rate. Callers can choose to be anonymous (the calling interface gave callers a chance to mask their names). All calls auto-

The Burak Hotline

http://burakhotline.media.mit.edu/site/listen

Welcome to the Burak Hotline!

Instructions

1. Call 617-848-1183 and enter this code:
   You must be logged into OpenStudio to use this service.
2. Tell us why we should give you the Buraks.
3. Listen to your message and others.

Details

The interface of for the *Burak Hotline* consists of a page with instructions and a link to a page listing all the calls. Members of *OPENSTUDIO* call and leave messages explaining why they should be awarded buraks. Other visitors listen and rate messages.

matically receive five buraks. Once the calls are logged, they are subject to peer review through a custom star rating system implemented on the site. The more stars a call received from listeners, the more buraks are awarded to the caller. Each star is worth one burak. Each call can be rated up to twenty times, and members can call as many times as they would like.

Technical Specifications

The *Burak Hotline* uses the *OPENSTUDIO* API to access and change data in the *OPENSTUDIO* database. To do this, I added a web service method to the API to allow developers to add buraks to OS members' accounts. The web service allows other members of the group to create applications and pay OS for their participation. Jun Sato, PLW member and Toshiba

researcher, used the web service payment method for his *OPENSTUDIO* license system. Like the two previous systems, the telephone system that runs the *Burak Hotline* uses RAGI and Asterisk to interface with the Ruby On Rails and AJAX application.

Results

Within hours of launching the *Burak Hotline*, *OPENSTUDIO* member Dara Kilicoglu emailed me, concerned about how the *Burak Hotline* might effect the OS economy. I was able to convince him in a few emails that the *Burak Hotline* was good for the *OPENSTUDIO* economy. The following is a transcript of the conversation

2/6/07

hello amber, i know hotline project from burak. he told me and i liked it very much. but i don't like the idea of giving people buraks generated outside of the studio. i believe burak for openstudio is different than burak for hotline and you can't add them together. because they belong to different economical systems processing buraks will cause inflation in the openstudio. previously burak was thinking to transfer STOCKMARKET buraks to openstudio and i was strongly against that idea for a similar reason. finally i was able to convince him that the idea was wrong and bad for OPENSTUDIO people. as an openstudio creator/developer final decision is yours. i just wanted to share my ideas with you. thank you for your time. +D,

2/6/07

Hi Dara,

Thanks for your response. I appreciate your thoughts and feedback on the project.

I thought about inflation quite a bit before launching and discussed it with an economist here who felt that small scale inflation while a project is getting off the ground spurs activity. I think anything that gets people to be active in the *OPENSTUDIO* community is a good thing. Performance, like drawing is an important creative activity. Adding a phone-based system to *OPENSTUDIO* (or as a os add-on) is a way to invite the members of the community to express their creativity in a different way. Is audio less creative than drawing?

Right now, the *Burak Hotline* is only open to OS members, so it is not like giving buraks to people outside of the system. I think of it as an extension of the studio. I hope you are convinced that the *Burak Hotline* is a good addition, but I would be happy to continue the discussion if you are not.

BTW, I am a big fan of your drawings.

Amber

2/6/07

hello amber,

1. i am totally convinced that 'burak hotline' is a good addition to openstudio. it is breathing. i loved it. will people be able to tag or better to audiotag the audio? for me audio is as creative as drawing. i love music. i love sound. it's very abstract when you form things with it. peer to peer audio trading would be so much fun. i would like to spend some of my buraks for buying some audio recordings. how do you plan to extend it?

2. thank you. i am a big fan of your drawings too. i also love your paintings too (i saw them on your site.) really nice series.

have a wonderful one,

dara

2/7/07

Glad you like my drawings. One more question though: Why haven't you called the *Burak Hotline*?

Amber

2/7/07

amber hi, my reason for not calling 'burak hotline' is very personal. actually i am really dying to call burak hotline BUT i didn't mention before that i am sick for a week now. my voice exactly sounds like a robot modulated with sawtooth waveform. but i will call tomorrow morning. inspiring the visual community to work with audio image shouldn't be hard. you mean inspiring to experiment? actually not just visual community anyone can be inspired to do audio stuff. if the tool is simple and fun and also served in a social environment... many of my friends from openstudio are not coming from visual backgrounds. i know them from istanbul and i know many of them havent done anything visual before OS in their life somehow they like to be there and draw. keep on advertising the project. i am %100 sure that it will rock! +D,

Dara called the system two days later. He received an overall rating of 4 stars to earn him 80 buraks for his call.

Morgan Sutherland, another *OPENSTUDIO* member, called 11 times on the March 5, 2007. He experimented with narrative, sound, film clips and outright begging. He made a total of 274 buraks for his calls. Overall, the *Burak Hotline* received 35 calls, 22 unique calls from a total of 171 members who visited the site. 12% percent of members who visited called the system since it was launched on February 3, 2007.
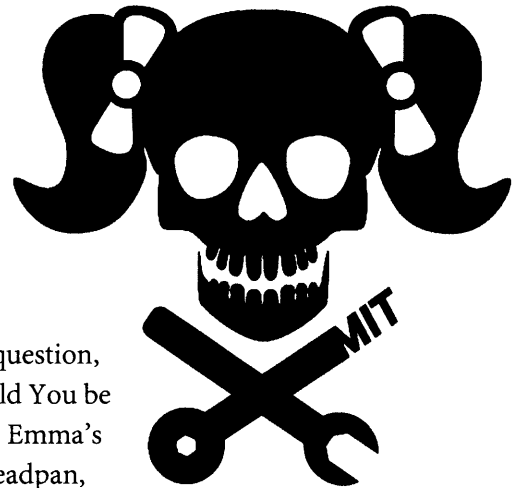
Emma On Relationships Call-In Show

Emma On Relationships (*EOR*) is an online call-in show featuring a series of short videos hosted by Emma Lindsay, a filmmaker, as well as a Computer Science (Course 6) major at MIT, who works as an undergraduate researcher in the PLW. The project was developed in the Fall of 2006, with ongoing series of episodes released every few weeks during the following Spring, and is currently gaining popularity due to links connecting it to the popular sites YouTube and MySpace. Japanese translation was done by Toshiba Researcher Jun Sato, and the cast of *EOR* includes Emma's collaborator and ex-boyfriend, Chris Bisignani, who now maintains the web site, her current boyfriend Eugene, her brother, and other MIT students, mostly undergraduates.

Interaction

EOR consists of a website that hosts short videos made by Emma. After watching two- to four-minute videos, viewers use their telephones to leave messages on the website for Emma or the rest of the cast. In typical episodes, Emma interviews her friends from her room at Senior House, a dormitory on the MIT campus, about issues such as sexuality, gender and fertility. Each episode is centered around a single question, such as "How do Average Guys Get with Hot Girls?" or "Should You be Gay?" and the calls are accessible to anyone who visits the site. Emma's attitude toward these intentionally inflammatory subjects is deadpan, and the conclusions that she draws from the comments of her friends often fly in the face of conventional logic. For example, the best way to get with a good-looking girl, Emma tells us, is for an average guy to pursue more than one at once and not tell any of them that they are attractive. Emma answers questions in short video responses that are also posted to the site.

Logo designed for the *Emma On Relationships Call In Show*. Branding is an important component of deploying participatory media online.

After each episode is posted, viewers call a dedicated telephone line to leave messages for Emma or other characters in the show. Callers typically ask questions that they have about the show. Their messages frequently flirt with the edges of decency. Visitors can listen to all messages, which are immediately publicly accessible on the web site. Emma responds to messages through a short one minute 'video response' episode addressing callers concerns directly. Often, her video responses to various individual

callers are more provocative and interesting than the original show itself. In response to a caller who asked about abstinence as a form of birth control, Emma clarifies her religious beliefs, uses sock puppets to demonstrate sexual positions, and offers her unorthodox opinion about the statistical ineffectiveness of abstinence as a viable method of birth control. Her candid remarks and the responses they inspire suggest the power of traditional modes of communication when used in concert with new form of conversation, by telephone, web and video.

Technical Specifications

Like *PLWire Telephone Tag*, *EOR* is a Ruby On Rails application that interfaces with an Asterisk VOIP telephony service through a RAGI server. The Ruby On Rails application supports multiple episodes, multiple casts of characters and their corresponding audio messages and video responses. When visitors call the site they hear the following prerecorded message as garage-band style music plays in the background:

> Hi, welcome to *Emma on Relationships*. This is Emma. Leave a message for me or one of my friends. To leave a message for me, press 1, for Chris press 2, and for Jamie press 3.

Callers choose which episode and which cast member for whom to leave a message. Telephone messages are immediately routed to the site through the RAGI interface, so callers receive instant feedback that their message has been recorded and can be heard publicly.

Results

The aim of *EOR* is to create a medium in which participants' comments build a feedback loop, something which was largely missing in *PLWire Telephone Tag*. Over the course of four months, *EOR* received 241 calls out of 2,408 visits, or roughly a 10% call to hit rate. Momentum is picking up for the site now, so it appears likely that the site will continue to receive calls as Emma makes new episodes and the show grows in popularity. The calls that she has received have varied from thoughtful questions to sexually explicit suggestions to a request from a Red Hat journalist interested in writing a story about the show. An anonymous source made the following comments about the call-in show after trying out the system, "Talking is much more intimate than typing, so there is a built-in inhibition to

The cast of *Emma On Relationships*. These modules display the number of calls each member of the cast received for a given episode.

Emma On Relationships

Directed by Emma Lindsay
6min 10sec

CALL EMMA AND HER
FRIENDS! (617) 544-3022

1/32

participation. And calling to comment on how average guys can hook-up with hot girls is a lot to ask."

EOR is a provocative forum that incites the audience to become a public part of the performance. The sexual content emphasizes the intimacy of the telephone and web interface. Qualitative results suggests that intimate subject matter raises the barrier of entry while the technical barrier remains low. Many of the callers so far have been from Emma or other cast

The website for *Emma On Relationships*. Visitors watch episodes and leave messages for each cast member in the show. Emma answers the caller's questions and concerns in short video responses.

Logo for *WikiPhone*, an experiment in online collaborative audio performance using the telephone.

members' groups of friends, so this is likely to have increased the call rate. It will be instructive to see how this affects the system as it grows beyond these established social networks.

WikiPhone

The last system that we will discuss is *WikiPhone*, an experiment in online collaborative audio performance. The aim of WikiPhone is two-fold: one, to develop an online environment for the fluid creation, composition and exchange of audio, and two, to formulate a new set of design principles for participatory media enabling creative collaboration.

WikiPhone was developed in the Spring of 2007 with Philip DeCamp. The networked system blends performance and composition, allowing participants to create soundtracks collaboratively online. *WikiPhone* is designed to stream popular videos and news clips from YouTube, which multiple participants remix with audio contributed via telephone calls to the system. The audio data from these calls is recorded and added to the existing pool of data from which participants can compose new remixes in a real-time networked performance. All contributed audio is available to all participants during the performance. The system encourages participants to borrow the techniques and content of others freely by allowing them to listen to and see how other people compose. The performances and remixes form a conversation among participants engaged in a single creative virtual event-space. In the best case, the creative dialogue resulting from this playful game-like environment can serve as cultural critique in which participants gather and rewrite the content of clips to reflect their own interests and desires.

Interface

The interface can be broken down into two components: the Editor, in which people compose pieces, and the Online Gallery, where participants show the completed pieces.

The Editor

The Editor is a Java application that is launched from the site. The interface consists of a video display and a series of audio tracks. From the Editor, participants can access an existing project or create a new project by giving it a name and a URL to an existing YouTube video. To compose pieces in the editor, participants perform the following five activities:

watch, annotate, record, compose, and remix. Although these often happen sequentially, they can be done in any order.

WATCH Participants navigate through the frames of the video while listening to the original audio track.

ANNOTATE Participants annotate portions of the video with text subtitles. The subtitles function as directions given by the initiator of the project to other participants. This is the only special privilege given to the project initiator.

RECORD A telephone number and extension is assigned to each individual session and displayed in the interface. Participants call the number to record audio of their own to fit into the track.

COMPOSE Participants arrange recorded clips on their audio track to correspond to the video.

REMIX Members of the WikiPhone community can remix the audio the audio contributed by any other participant in the project. Anyone can choose to see what anyone else is doing and can incorporate sounds from other participants' track in their own clip by dragging in clips from other members. Remixing can occur while audio is streaming into the interface. Each version of the remix attributes the main author and a list of contributors attached so that all authorship is accounted for.

The *WikiPhone* login screen showing the current live project.

65

Please listen- one more chance is all I am askinç

Top: A YouTube video streams into the *WikiPhone* editor. Above: An actor from Emerson College tests the system. Next page: *Politioke* is a version of WikiPhone geared towards rewriting political speeches.

WikiPhone utilizes a flat structure to make the project space feel like a crowded room in which the creation occurs fluidly among many participants. While two or more people are in the 'editing room,' everyone can see who is present and whether others are actively making contributions. No other video editor offers this model of networked, real-time collaboration with streaming content.

Web Interface

The system consists of a minimal web interface that acts as a gallery of completed pieces and gives access to the Java web start application. From the central website, participants initiate new projects, browse current projects and view completed collaborative projects. Individual participants have accounts and, in the full scale web application, will be assigned

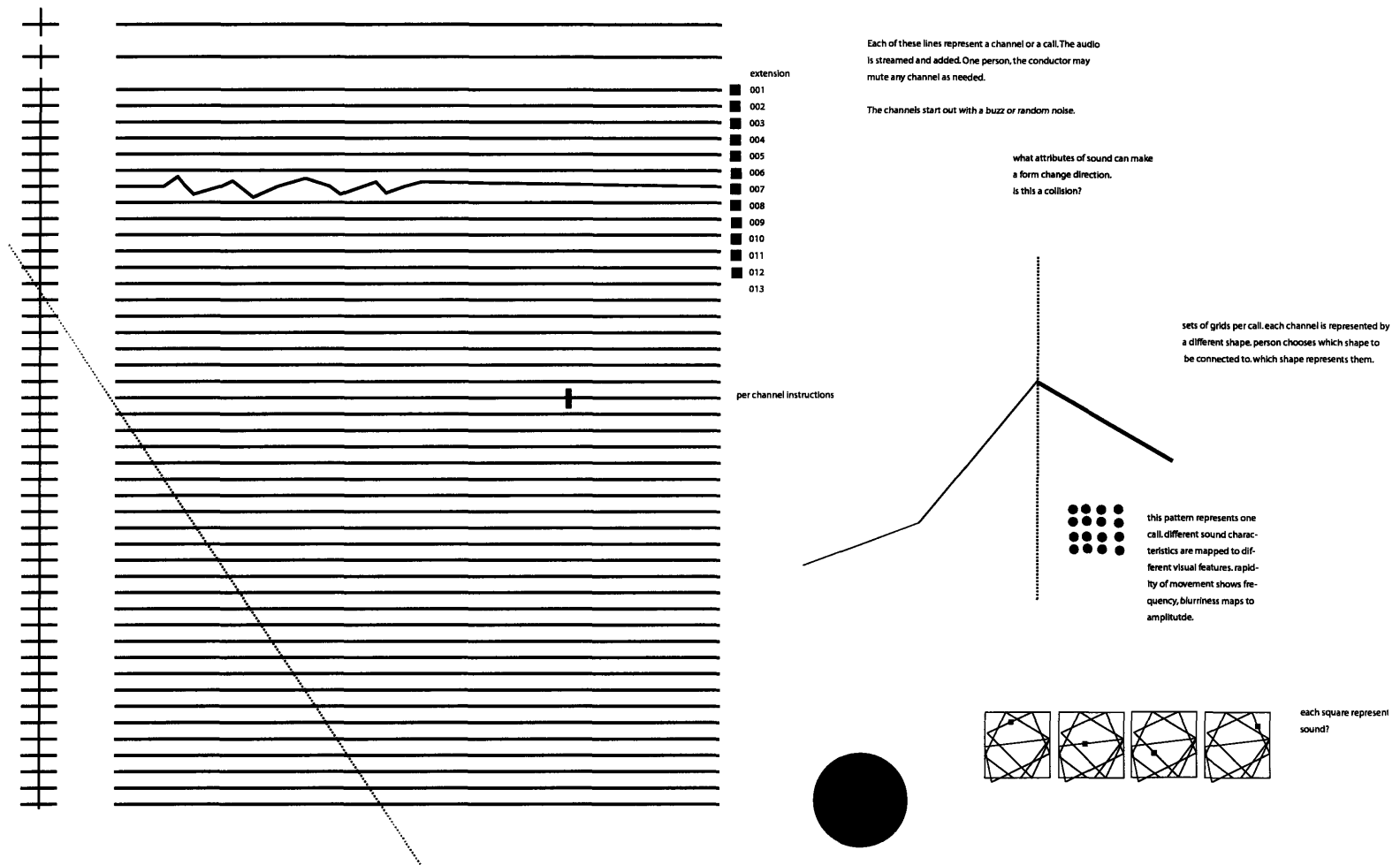# Welcome to Politioke

Create a new video or Watch the latest video

ACTORS
bob
greg

8 million people will go from private insurance t(

Original Soundtrack

sally

Each of these lines represent a channel or a call. The audio
is streamed and added. One person, the conductor may
mute any channel as needed.

The channels start out with a buzz or random noise.

extension
■ 001
■ 002
■ 003
■ 004
■ 005
■ 006
■ 007
■ 008
■ 009
■ 010
■ 011
■ 012
013

what attributes of sound can make
a form change direction.
is this a collision?

sets of grids per call. each channel is represented by
a different shape. person chooses which shape to
be connected to. which shape represents them.

per channel instructions

this pattern represents one
call. different sound charac-
teristics are mapped to dif-
ferent visual features. rapid-
ity of movement shows fre-
quency, blurriness maps to
amplitutde.

each square represent
sound?

Early concept sketch of *WikiPhone*,
showing various display options for
incoming audio.

profiles, which will allow them to receive credit for the pieces that they
have worked on in a manner akin to *OPENSTUDIO*. Members meet new
people, make connections and develop alliances within the community.

Technical specifications

An extensive networked architecture was required to accommodate
the fluid collaboration of the system. Philip DeCamp was the principal
researcher in this area and instrumental in accomplishing the onerous and
technically demanding task of system design and implementation. A full
discussion of the technical innovations in the project is beyond the scope
of this thesis, but the following description offers a basic overview of the
primary components of the system.

Networked Architecture

The server code consists of a command structure, a pipeline for stream-
ing data from the project server to multiple client canvases; an interface to
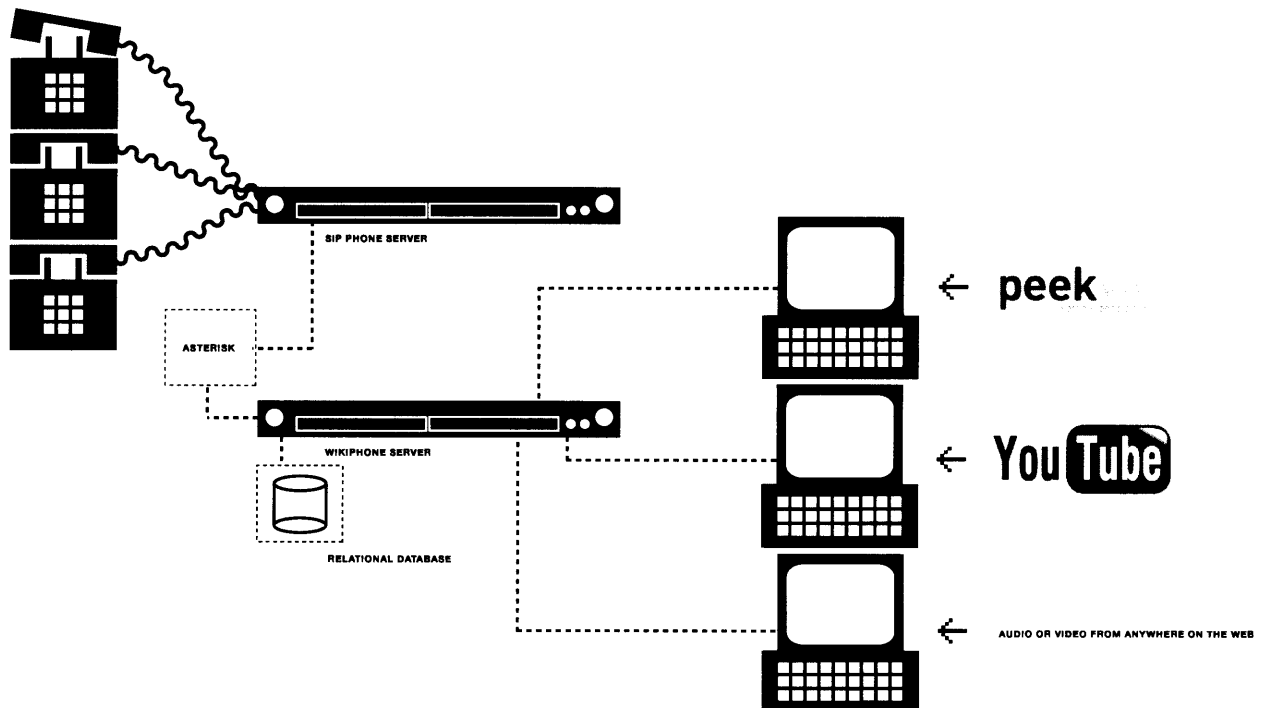
route calls from an Asterisk Telephony server; and a relational database that organizes member accounts, projects and audio and video meta data. A Java-based custom active record class handles database management. The client-side consists of a command structure, audio/visual decoders, and a mixing GUI that utilizes OpenGL for the audio tracks and other interface components.

Streaming

The original infrastructure for streaming content from the web is one of the most impressive accomplishments of the application. *WikiPhone* is a networked application built for audio and visual streaming over the Internet. It also uses a custom protocol for streaming audio content from the server to multiple client canvases. This allows participants to respond quickly to new content posted anywhere on the web, although for *WikiPhone*, we focus specifically on streaming content from YouTube servers.

A system diagram of *WikiPhone* showing the potential of the system to stream sound and video from anywhere on the web. The current implementation uses a parser to extract video URLs from YouTube.

Without the streaming architecture developed by Philip DeCamp, people would have to download the video, edit it in a stand alone application,

SIP PHONE SERVER

ASTERISK

WIKIPHONE SERVER

RELATIONAL DATABASE

← peek

← You Tube

← AUDIO OR VIDEO FROM ANYWHERE ON THE WEB

and upload the new edited video in order to share it online. Our system lowers the barrier of entry to edit video content from the web, allowing participants to work along side of the video, as it is streaming in from the YouTube server. The system was built to accommodate multiple servers with the addition of a parser to obtain the video URL from a given web page. By the same token, the streaming interface routes the incoming audio from multiple telephones into the interface real-time.

Decoder

A series of C libraries decodes FLV files and incoming audio from the telephones. Decoders strip the meta information, accessing the raw audio and video directly.

Results

An impromptu performance was staged with four actors from a local college who used *WikiPhone* to reconstruct the trailer of Tennessee Williams' *Night of the Iguana*, using *WikiPhone*. The actors spent several hours playing with the system before settling on a cut that incorporated all of their voices in a comical interpretation of the original film.

Overall, the comments were generally positive. However, some participants questioned the relevance of using the telephone as the primary input device:

> I'm still not sold on using a phone over a microphone. As you know, often-times nowadays mics are built right into the computer, and the computer itself is becoming more and more of an extension of someone's person. Why go through the trouble of erecting a new networked community with telephones when people are already connecting through the Internet?

A point well-taken, although this opinion was contradicted by another actor, who appreciated the easy access that the telephone interface provided, claiming that "the phone is my favorite part." After using the system, all agreed that its most promising application is for remixing political speeches.

The variety of systems described in this section look at participation in a variety of performative, participatory sites online. The next chapter will look at the factors governing participation online, which we can draw from these experiments.

Analysis

The projects that comprise *Participation Art Online* explore the space of participation online from various perspectives. The Background section looked at the roots of the participatory movement in art and computation; in the Experiments section that followed, we discussed experiments in participatory online spaces in order to better understand how these systems function in practice. In the Analysis section, we explore the commonalities among the projects. By outlining the principles that govern online participatory space, we hope to draw some general conclusions about the functioning of these spaces, the incentives that inspire participation, and the behavior of members of online communities. The objective of the analysis is to develop a set of design principles that can be used as a point of departure for further experimentation in the field of online participatory media.

Half of the experiments described in the previous chapter use the telephone as the primary tool of expression. In *PLWire Telephone Tag*, *Emma on Relationships Call In Show*, the *Burak Hotline*, and the *WikiPhone*, participants contribute content to websites by calling the site and leaving a voice message that is accessible online. Implementing these systems has given me an opportunity to reflect on the power of performance in online participatory media. An inherent part of entertainment and media, performance creates potentially meaningful interactions through the raw, intimate and playful engagement of participants. However, designing systems that require participatory performance is hazardous: performance requires a great deal of courage on the part of the performer, which can discourage participation. On the other hand, performing members and online audiences alike respond positively to this style of participation. Watching one person shrug off self-consciousness to perform can be an incentive for others to do the same.

The other half of the experiments described are participatory but do not require performance on the part of the people to engage with the system. These projects include *Rain*, *OpenBrand*, *OPENSTUDIO*, and *Tiny*. These non-performative participatory projects engage participants through other creative means – drawing, creating soundscapes and reacting to advertising in clever ways. Because performance is not a prerequisite of participation, they are at once a less threatening and a more familiar way for participants to express themselves without leaving comfortable territory.

PLAYFUL SYSTEMS

One commonality linking the performative and non-performative systems is play. Each project makes strategic use of play in its own way. Some projects engage participants in competition using tools that reduce expression to primitive forms. *OPENSTUDIO*, for example, features a Draw tool that requires members to draw with a mouse or stylus. The Draw tool registers human gestures in raw form, allowing no refinement of the lumpy, misshapen forms after they are made. Moreover, the lack of an undo function encourages members to accept accidents as a part of the process of drawing. Drawing made with the Draw tool evince none of the refinement of other popular drawing programs, whose control points and bézier curves smooth lines and leave no trace of the human hand that made them. In *OPENSTUDIO*, all members are subject to the same limitations provided by the Draw tool, which makes it easier to overcome self consciousness

and diminishes their concern about how their creations appear in the eyes of others. By relinquishing their ability to control their output in the ways to which they are accustomed, members must overcome their egos in order to operate within the parameters of the system.

Similarly, *Tiny* reduces creative expression to a 13 x 13 grid of pixels. Participants post the best icon that they are able to design within those parameters. Competition is not formalized in either *OPENSTUDIO* or Tiny, but outdoing other contributions on the site provides a strong incentive for using the site.

The *Burak Hotline* limits expression through the use of the telephone for a specific purpose. Asking members to call and tell the public why they should receive buraks encourages participants to outdo previous posts in order to be rewarded more buraks than other contestants. In practice, nearly all participants resorted to comedy in an attempt to beg for buraks.

The way play functions in the systems described above can be clarified by looking at popular summer camp games. In games such as the potato sack race or the dizzy race, children climb into sacks or spin in circles before running to the far end of a field. These handicaps remove natural ability, evening the playing field and diminishing competition in favor of the collective experience of participation. In short, play builds community, emphasizing empathy instead of personal gain.

Another way play is expressed in the projects is through an irreverent attitude toward serious subject matter. Bertolt Brecht noted that inspiring empathy and pleasure through humor can be an effective way to address serious concerns. In *Emma On Relationships*, Emma initiates a conversation about relationship issues among college students. While the tone is deadpan comedy, the issues discussed include birth control, body image, and straight and gay relationships. Other systems make it possible for people to rewrite serious content in humorous ways. In *WikiPhone*, the content is political speeches and news clips. In *OpenBrand*, participants rewrite banner advertisements, often using humor to highlight the shortcomings of products and the way they are marketed. Jane McGonigal, who describes play as "an embodied, social and highly consequential ritual, always already grounded in the practices of everyday life," uses alternative reality games to inspire discussion about

issues, such as societal violence and oil consumption (McGonigal 1). Engaging play can help us overcome our fear of self consciousness, opening up a space of critical dialogue without the fear of seeming ridiculous. Play can be used as a vehicle to discuss serious subject in a fruitful way.
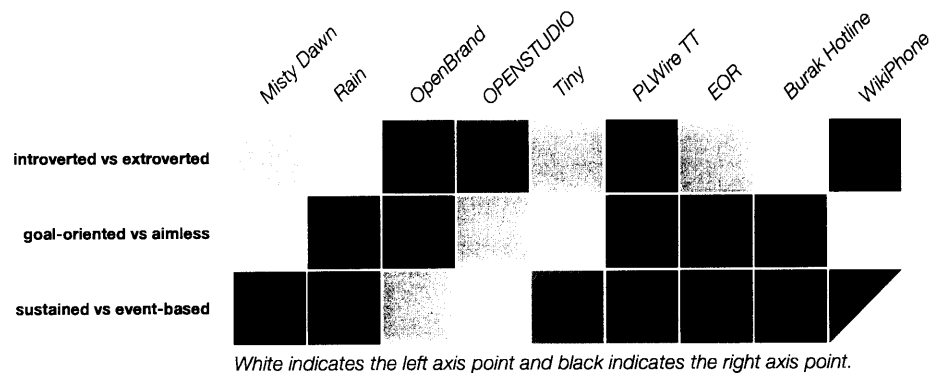
DESIGN AXES OF ONLINE PARTICIPATION

Looking at all of the participatory projects of the thesis together, it is possible to identify three major axes pertinent to the design of participatory systems. All participatory systems must negotiate these axes, falling somewhere between these two extreme positions on either end. The three axes can be described as follows:

> *introverted vs. extroverted*
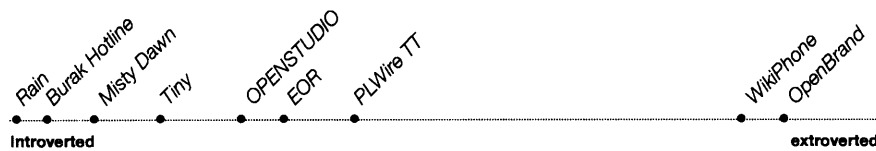> *goal-oriented vs. aimless*
> *event-based vs. sustained*

In practice, any participatory project will contain gradations of both extremes, but identifying the extreme ends of the axes is instructive as it tells us about the factors governing participatory systems. The axes are not mutually exclusive – projects are governed by all three simultaneously, and their intersections also provide valuable information about member interactions.

White indicates the left axis point and black indicates the right axis point.

AXIS 1 / Extroverted vs Introverted

Like a parasite to its host, extroverted systems depend on others, while introverted systems survive completely on their own, without direct affiliation to anything outside themselves. This section will locate the projects along a continuum between extroverted or introverted in order to discuss the strengths and weaknesses of each approach.

Rain Burak Hotline Misty Dawn Tiny OPENSTUDIO EOR PLWire TT WikiPhone OpenBrand

Introverted   **extroverted**

Extroverted

Participants in extroverted systems operate on content drawn from
sources outside the system. For example, the commentary of *Open-
Brand* is spread virally on existing banner advertisements across the web.
Likewise, *WikiPhone* streams content from YouTube and other sites,
encouraging participants to rewrite published content drawn from these
sources. Both systems give individuals power to rewrite content in a pub-
lic, unfiltered, creative forum, by creating a feedback loop with outside
entities. Often extroverted systems can establish a link between big entities
to small ones through this exchange. *OpenBrand*, for instance, inspires
dialogue between corporate advertisers and individuals who rewrite their
advertisements. *WikiPhone* disrupts current modes of production by
borrowing content from YouTube. Extroverted systems implemented by
others include Google Will Eat Itself (GWEI), a popular example that acts
like a parasite and takes advantage of vulnerabilities in Google's AdSense
program, disrupting modes of economic control. Mashups are also good
examples of extroverted systems, aiming to combine existing systems to
produce new entities.

From these examples it is clear that extroverted systems almost inevita-
bly raise copyright issues. Taking content from sites across the Internet
without permission makes trademark infringement a constant danger.
Opening up new spaces for creativity by exposing protected content, these
extroverted systems can redefine power roles in the creation of content,
activating consumers and raising important questions about the owner-
ship of information. Moreover, as participants pull content from various
sources on the web, they often confront the topical issues that comprise
the content. This engagement in the world is another positive attribute of
extroverted systems, bringing to mind Habermas' concept of communica-
tive action, in which members of a community join together in a debate
centered around published cultural material (Habermas 197). Extroverted
systems can be an effective way to create critical dialogue about topical
issues among participants.

Introverted

At the opposite pole of the axis are introverted systems, which build communities that do not refer directly to anything outside of system itself. Introverted systems are generally insular, as their name implies, and do not latch onto existing communities. Introverted systems are exclusionary by nature: even if they have an open invitation policy, once members have joined, they are in and everyone else is out. Although it would appear as if the isolation of these systems does not offer opportunities for cultural critique, the opposite is true. In many cases, the safe spaces of introverted systems are ideal locations in which to engage in cultural critique.
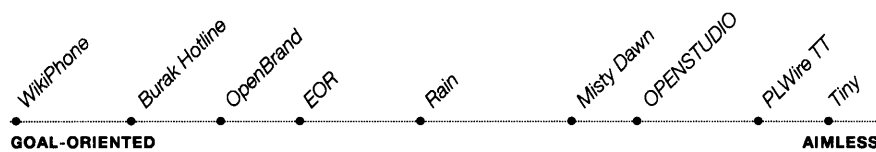
Examples of introverted systems include *OPENSTUDIO*, which establishes a closed community where members experiment with ideas about creativity and economics. Because of its isolation from the rest of the web, community members are free to experiment with many of the issues that extroverted systems face, such as copyright infringement and the value of art. Its relative isolation does not prevent serious political discussions from occurring in *OPENSTUDIO*. These discussions are carried out through the creation of content using the Draw tool and the tagging system. Another system utilizing an introspective approach is *EOR*, which uses a world of its own to take up issues of sexuality and femininity safely. Finally, *Tiny* and the *Burak Hotline* are introverted systems that provide a space for play without concerning participants with outside issues. Even *Tiny*, whose 13 X 13 pixel grid would seem to preclude political expression, inspired a heated visual debate when one participant began posting drawings of swastikas and other inflammatory material.

Introverted systems often act as microcosms of the outside world. Granting participants the ability to act in safe spaces according to experimental rules allows people to define and test their own identities, controlling their own reputations through their contributions. At best, introverted systems can allow participants to experiment with limited consequences in a safe community.

AXIS 2 / Goal-oriented vs Aimless

The goal-oriented vs. aimless axis describes whether the system takes on a specific issue to generate directed dialogue about it (goal-oriented), or simply tries to generate a broad range of content without dictating the subject area (aimless). Even the so called aimless systems are motivated by a higher order objective which is usually to generate as much content as possible. In service of this objective aimless systems often cast a wide

net, rarely eliminating submissions on the basis of content. The more narrowly defined goal-oriented systems can be a productive way to generate dialogue about specific social or political issues, but on the other hand, aimless systems often lead to unexpected uses that prove beneficial. Both approaches have advantages that will be discussed in the following section.

GOAL-ORIENTED ······ AIMLESS

Aimless

Like a honeycomb providing the structure into which individual bees deposit honey, aimless systems supply the framework into which participants contribute content. While aimless systems often must privilege certain forms over others for practical reasons (e.g. YouTube is primarily oriented toward video), they solicit contributions from participants without a strong ulterior objective or purpose. The designer of such a system has implicit power over participants through system design, but this power is not expressed through overt content selection. Typically, the organization of these systems is flat, meaning that all participants within the system are roughly equal to each other.

The issue most commonly raised in the design and implementation of aimless participatory systems regards authorship. Authorship in participatory systems can be described on two levels: authorship on the part of the system creator, who decides to make an online participatory space to begin with, and authorship on the part of the participants, who contribute content to the system once it is up and running. In aimless systems, contributors garner the most recognition; the system designer generally remains in the background. By way of example, the creators of YouTube, an aimless system, made their first public appearance on the site only the day after it was sold. Aimless sites create the feeling that the authorship of participants is more important than the system designer because participants are free to contribute material whose content is not overtly dictated by the system designers.

Aimless systems tend to be democratic or flat, granting all participants equal rights and powers. For example, in *OPENSTUDIO*, all member have the same privileges, starting with 25 buraks and accumulating more or less wealth based on their activity in the system. Ideally, these systems function as a sounding board, in which the contributions of participants point to the issues most pertinent to them, rather than the system creator overtly imposing her own priorities. Aimless systems are open-ended and can indicate the values and beliefs of its participants through the content that they contribute.

Goal-oriented

Goal-oriented systems are characterized by strong ulterior objectives on the part of the designer, who seeks to address specific issues by soliciting a narrow range of content from participants. This control results in a hierarchical arrangement, in which the author of the system expresses overt control or delegates this control to specific participants, who then exercise it over others.

Like aimless systems, goal-oriented systems raise important issues regarding authorship. Typically, these highly scripted projects diminish the importance of authorship on the part of the participants, due to the control that the system designer expresses over content. This control can result in hierarchical systems that turn participants into anonymous semi-contributors. For example, blogs establish a structure in which a single person is in control of the content, with all other contributors restricted to the role of commentators. Call in radio shows, in which the control of the host is never in question even as she invites participation from the audience, illustrates this principle. *Emma On Relationships* has a similar distribution of power, inviting participation through a limited commenting forum that never challenges her ability to dictate the issues the show will tackle next. Likewise, *PLWire Telephone Tag* invites outsiders to call and respond to content posted on the PLW website, participating only in a limited way. The hierarchical structure of goal-oriented systems may function as a barrier of entry, as participants lack a sense of control over the material to which they are responding. However, goal-oriented sites rarely suffer from the formlessness that can affect aimless sites. They are often effective methods of addressing specific issues within a community.
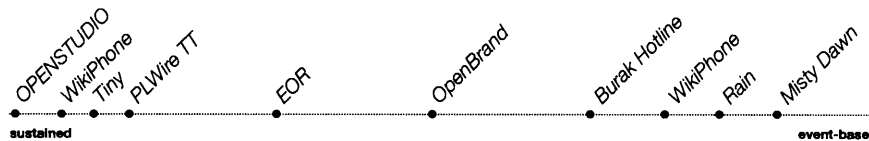
The goal-oriented vs. aimless axis highlights one of the principle difficul-

ties of participatory media: making sense of a multitude of voices. Aimless systems represent the truest expression of the fundamentally democratic aspect of participatory media, in which every participant is given an equal voice. However, it can be difficult to distinguish intelligible speech from the many overlapping conversations in a crowded room where everyone is speaking at once. Goal-oriented systems differentiate the signal from the noise by dictating the topic of conversation. Unfortunately, by limiting the range of acceptable expression, goal-oriented systems short-circuit the democratic potential of participatory media in exchange for directing participants toward a clear goal.

An initially aimless site that arrives at objectives by examining the contributions of the participants might be one way to negotiate between the poles of the goal-oriented vs. aimless axis. This approach has been implemented successfully in open source projects such as the development of Linux, but has yet to be tested extensively in participatory performance media.

AXES 3 / Event-based vs. Sustained

The final axis refers to the way participatory projects exist in time; either as short event-based actions, or in a more sustained, continuing manner.
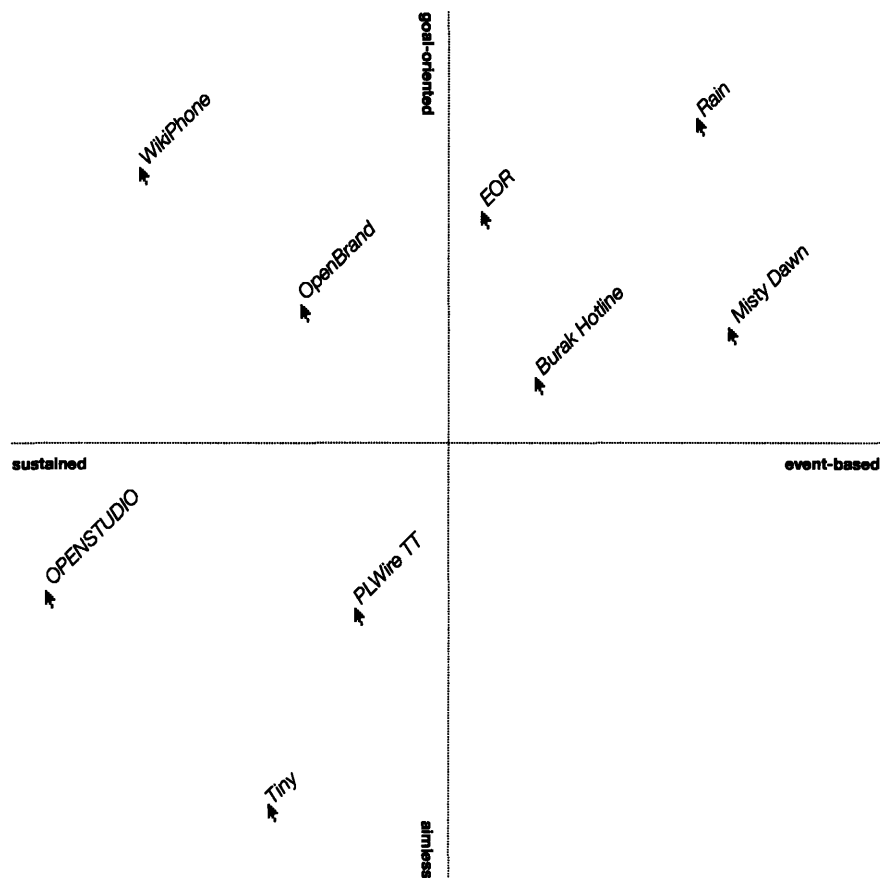

Event-based

Event-based systems require real-time interaction between people. The roots of these systems lie in the happenings discussed in the background section. The happenings were brought about by artists who sought a direct and powerful artistic practice whose ephemeral product could not be bought or sold. The events occurring in online participatory space have a predetermined beginning, middle and end, and take place over a relatively short period of time with expiration dates, all of which distinguish them from sustained events on the Internet, which often unfold over years and

have no clearly defined time-structure. Historically, most event-based systems involved synchronous interaction between participants, but online spaces are changing this by enforcing norms of asynchronous socializing. *Rain* and *Misty Dawn* are traditional event-based exhibitions. *Misty Dawn* was installed in a gallery for a fixed amount of time. The power of event-based systems is in the collective -- many people come together to experience the same event at the same time. Real-time systems lend themselves to collaboration, as people create and react to the efforts of other in a swift, intuitive way. *WikiPhone* attempts to capitalize on the power of event-based systems by inviting people to collaborate simultaneously from various locations. Event-based systems aspire to function like physical meeting places, such as cafés, concert halls or galleries.

The relatively short periods of time in which creation takes place in event-based systems have the advantage of focussing the energy of participants. However, because the memory of a significant event can rarely match the experience of the event itself, the power of event-based pieces often diminishes rapidly once they are completed. The limited duration of event-based artworks was their primary appeal for many early participatory artists, who sought to prevent the sale of artworks as commodities on the art market. However, the same ephemerality of event-based pieces make it difficult to develop lasting relationships.

Sustained

In contrast to the fleeting nature of event-based participatory systems, sustained systems operate over a long period of time, unfolding through the unpredictable accumulation of asynchronous interactions. Sustained systems intentionally encourage these asynchronous interactions in order to provide a framework for powerful, long-term relationships. All of the online experiments described in the thesis are examples of sustained systems, except for *WikiPhone* and *Burak Hotline*, which contain elements of both extremes. For instance, *OPENSTUDIO* aims to create a community through asynchronous interactions between people. The most lasting relationships appear to have been developed through the exchange of multiple drawings over a period of months. *EOR* is another sustained system, in which participants return to the web site to view and respond to new episodes. The *Burak Hotline* exists on the middle ground of the axis between sustained and event-driven systems. The project uses the lasting community of *OPENSTUDIO* in a semi-sustained contest. *Burak Hotline*

may have been more successful if it had been event-based, such that members of *OPENSTUDIO* were only invited to call for a short, one time offer, similar to a holiday sale.

Sustained systems can become stale, stalling out or withering away, like any long-term relationship. However, sustained relationships can also strengthen over time through the accumulation of small actions by individual members. Deployed effectively, sustained systems have the potential to create strong community through the agglomeration of multiple asynchronous encounters.

It seems that the online spaces with the most potential combine both event-based and sustained systems. This is the case with *WikiPhone*,

which is a long term sustained meeting ground for event-based collaboration, offering the most potential for community building in online spaces.

In this chapter, we have concluded that playful systems strengthen ties between participants, building community. We defined three axes and located the projects along each of them in order to develop an understanding of the principles governing the design of participatory media. By identifying the advantages of various approaches, this analysis lays the groundwork for future research into participatory systems.

Conclusion

The creation and distribution of online content is changing. Remixes and mashups are traded back and forth among participants in a seemingly endless loop that at once bewilders and hints at the potential of the new modes of creation and distribution.

From the trading of smaller and smaller pieces of information, the next logical step is to network the act of real-time creation itself. Instead of trading bits of completed creative capital, we will trade information as we are creating it. The move toward collaborative creativity will depend as much on participation from sources dispersed across the web as it will on the software and network architectures to support it.

Participatory media capitalize on the growing trend toward independent production by formalizing the structure of participation among these dispersed groups. Encouraging participants to contribute content to publicly accessible sites occurs for various reasons. It can be the purpose of generating traffic to the sites where content is posted, for its own sake or for economic reasons, e.g. to sell advertisement space on the sites generat-

ing the traffic, or for more idealistic ends, such as providing new spaces for people to engage collectively in the creation of culture, or providing spaces where participants can gather around common interests, and engage in critical dialogue about them. Perhaps it is possible that creativity and commerce could merge in a way that would permit these activities to occur simultaneously.

At the moment, however, it would seems that the majority of online participatory sites are focused more on generating hits than on the more idealistic ends that could realize the social potential of these systems. The participatory art movement of the 1950s and 60s demonstrated that performance and participation can be a powerful medium for addressing contemporary social and political issues. This will only increase with the broadening of the base of participants, from the small number of people that were engaged in the rarefied art world to the millions of people that are online every day in contemporary online communities, combined with recent technological advances.

Although it is tempting to see online participatory spaces as the manifestation of something altogether new, these spaces represent a new location for an activity as old as human society: the collective elaboration of meaning. Online participatory spaces are the continuation of a public sphere where society mediates its disputes and examines its values. We looked at a number of creative online participatory projects. The projects explore the potential of these new online participatory spaces by engaging with them directly, providing frameworks in which members can gather to engage in creative acts. These playful experiments establish participatory performance spaces online where people can discuss and critique social and political structures. We can distill the following design axes for online participatory media from the experiments:

1. **INTROVERTED VS EXTROVERTED** Introverted systems that become microcosms of the outside world, in contrast to extroverted systems, which draw material from elsewhere on the web.
2. **GOAL-ORIENTED VS AIMLESS** Systems that aim to achieve a specific goal, in contrast to aimless systems whose primary objective is to encourage the maximum amount of expression from the greatest number of people.
3. **EVENT-BASED VS SUSTAINED** Event-based systems that take place in synchronous online encounters, in contrast to sustained systems that unfold over longer periods of asynchronous interactions.

The hope is that the outcome of the experiments will lead to a better

understanding of the design principals governing participatory performance online, in order to better capitalize on the powerful impact that these systems can have as vehicles enabling social and political change.

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etoy Corporation: http://www.etoy.com
i love bees: http://www.ilovebees.com
Google Will Eat Itself: http://gwei.org

PROJECT LINKS

PLWire Telephone Tag: http://plw.media.mit.edu
Emma On Relationships Call-In Show http://emma.media.mit.edu
Burak Hotline: http://burakhotline.media.mit.edu
OPENSTUDIO: http://openstudio.media.mit.edu
Amber Frid-Jimenez: http://www.media.mit.edu/~amber