

The Human Generosity Project: Enabling Collaboration over Networks
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From August 25th – 27th, the Banff New Media Institute at the Banff Centre of the Arts facilitated and provided the discursive site for “The Human Generosity Project, Enabling Collaboration over Networks”, that took on issues of complex collaborative models between artists and scientists, as well as the burgeoning alternative economies of peer-2-peer and the opensource movement. Moderated and directed by Sara Diamond—the executive director of the Banff New Media Institute, Media and Visual Arts as well and Television and Video at the Banff Centre—the summit brought together research scientists, software designers, network and cultural theorist, and most importantly artists using the new media to share and discuss the issues and possibilities around new forms of productive collaboration over networks. Falling, literally on the heels of Unforgiving Memory, The Human Generosity Project (HGP) attempted to carry many of the discussions from the previous set of panels with issues such as: the function of cultural memory in the age of the extremely impermanent digital archive; that fit extremely well with the issues of file transfer in the case of peer-2-peer, redevelopment and addition to interface while keeping the core structure intact (Linux) in the case of opensource, and really with the artists projects presented, this tendency towards an archive destroyer—the continual addition of information with not devices to catalogue. As well as the issues raised regarding the means and methods for accessing and exchanging large amounts of data that are stored either on a server or a network of personal computers. This complex exchange between artists and scientists was one of great interest and importance, highlighted throughout the event. Artists who would normally work in smaller networks were able to share a creative and expansive set of ideas that were set up against the large network, but methodological practices of the scientists in attendance.

Much like Unforgiving Memory, Diamond and the BNMI team worked without rest to create a frame that could promote the greatest amount of concentration in the presentation environment as possible. Panelists were set to a rigorous pace that moved into night sessions as the group, for three days, participated in the ideology of collaboration and the pursuit of the idea. The sessions however were broken up by two hikes, where participants were able to further interact and get to know one another on the trail, but to experience an essential part of Banff, nature. This dynamic of the outside, provided needed breaks from the conceptual-rigorous-zone and enabled the provision of the oldest form of collaboration and networking to take place, direct social interaction.

9:00am – 9:45am

Welcome and Introduction

Sara Diamond—Executive Director Banff New Media Institute, Media Visual Arts and Television and Film

As a customary practice of orientation, summary and direction for the group, Diamond kicked off The Human Generosity Project with a complex and succinct introduction, highlighting many of the keys points and terms to be covered in the event. Beginning with the possibility of new forms of social economy, for Diamond, peer-2-peer (p2p) client networking had emerged as one of the most engaging and potentially radical forms of computer practice. p2p, which used a relatively light

programmatically acted as tools for accessing and sorting large amounts of data on the database, and distributing that data to other users on the network at that time. This form of sharing was crucial for Diamond as it attempted to form new architectures and communities of exchange, enhancing social models. What also fit into this model has been the development of “sound toys”, or software tools that enable multiple users to compose and play (jam) a piece of music online. These tools, again light in both form and engagement encourage improvisation and play that isn't particularly narrative based or as structured as something like online gaming.

The potential for this type of interaction and exchange, continued Diamond, culminated again in the possibility of the establishment and existence of an alternative economy, which was not necessarily capital based. With developments in open source and the open source community, as well as the exchange of data of p2p networks, which was typically pop material but that of course could change. With this creation of another economy then, and the use of particular cultural tools or objects, Diamond went on to say that now, again in history the historical dilemma between good and evil are aligned. As public space and rights to freedom in the digital world quote activities of the 1920's, 60's, and 70's, the type of networked practice has both facilitated and provided an opportunity to form new collectivities that are either activist or pursue new forms of culture. This repositioning of views, as these situations bring, an interesting and at times interesting set of bedfellows, that being artists, engineers and scientists working together, at time comprising tight knit units that are international in location and internet in scope. Diamond posited that the new models that emerge from this practice do not necessarily have to fit or mobilized the toppling of a capital economy, but to provide an agitated site of resistance that reconfigures cultural economies.

Diamond concluded her introduction with the incorporation of several key ideas that were applicable and for consideration, coming from Unforgiving Memory. The concepts, in many ways were presented by Diamond to give a background, and/or skeletal framework to the surface engagements of software devices, that included: the consideration of collective memory as applicable to various levels of technology—database, library, archive, written and spoken language; how libraries and archives construct meaning around particular objects, memories and ideas; the obsession in contemporary culture to archive and store as much as possible through the process of digitization; the change in authenticity from the physical object to the intention of the maker; and finally the push and pull between free and regulated economies of data transfer and exchange.

The only comment to Diamond's introduction was by key note speaker Clay Shirky, who elaborated on Diamond's comments surrounding collectivities, by saying that within this model of digital oriented collaboration, there is slippage between groups working together because they are defined by a particular system, and those that work together because they share a common belief.

10:00 am – 11:30 am
Theorizing Collectivities II
Lev Manovich, Tapio Makela, Connie Sammaras

Lev Manovich—Associate Professor in the Visual Arts Department at the University of California and recent author of “The Language of New Media”—began the first panel

of the Human Generosity symposium with a curious comment, reflecting for a moment, that he had found it quite interesting that ten years after the collapse of the Soviet Union that there would be now such an intense focus and concern on collaboration and collectivity. However concerned with aesthetics, Manovich moved to an outline a trajectory beginning with modernism and moving on through to informationalism, in attempts to mark points of departure between traditional cultural objects, and the new cultural developments, primarily in the field of new media. Manovich used both the painting and the novel as examples of cultural forms from the modernist period that presented discrete and enclosed visions of the world. The novel and the painting during the modernist period for Manovich, represented two cultural objects that did not allow for the addition of meaning, other than what was given in writing or presented in plastic form. The paradigm shift can be noted to take place, at least in writing, in the mid 50's with the late structuralist work of Roland Barthes, who conceived of the text as rewritten every time it encounters—read—by a subject. Thus the text takes on a performative and subjective quality where the reader is considered to be part of the process of cultural creation, in collaboration with the text. Painting then, can be seen to move through a series of transformation, which gave rise to the heterogeneous art practices found within conceptualism, ending up as an interactive 2-dimensional surface in net.art.

Considering new media in terms of new cultural forms in both material and concept that have emerged over the past decade and a half, Manovich, when further to propose that the cultural objects that promote collaboration and collectivity are not necessarily immersive environments per-se but, softwares or concepts that are based on telecommunication. It is then the structure of the materials used that makes for a different type of artwork that is based on user participation and input, in this case it is the use of telecommunication lines and networks in the form of the internet that have produced this shift. With a history that rests in Brecht's utopia ideas about the radio play and two-way communication, new media tools and projects that involve interaction over telecommunication lines embody much of this spirit. The difference between these two practices, as made visible by Manovich, is the presence of the Graphic-User-Interface (GUI) that has a significant impact on determining how information is received and what meaning or form that information takes.

Tapio Makela presented second on the Theorizing Collectivities Panel, as he and Manovich were carrying over energy, as well as the dynamic of them both presenting side-by-side, from the previous event Unforgiving Memory. Makela, here, like in Unforgiving Memory presented his thoughts with precision, as he read from a recent paper entitled "Emperor's new interfaces: Old economy, old media and the rhetoric of the new", dealing with the shifts in global economies due to new media, primarily network technologies and open sourced softwares. Using the allegory of the Emperor's new clothes to preface his talk, Makela presented the irony of a new media economy that believes that it has rid itself of the class boss/worker paradigm, through the use of horizontal networks under the banner of individual as producer with digital tools. Although there is a belief in North American market practices that the new economy based on digital development and infrastructure has replaced old economies of imperialism that were tied to the extraction and refinement of natural resources, the new economy still practices the rights and roles privileging maximum profits at minimum cost. This profit above all else motive of many companies participating in the new economy, too, have changed the way they produce their goods. By outsourcing the manufacturing of routers, hard drives, hubs, and key boards, companies in the new economy in themselves become transit points that

further abstract their role in relation to traditional production practices, of locatable capitalist function. Borrowing from Manuel Castells, Makela regarded this new type of production as well as the space these new companies occupy, as they are not entirely fixed and rooted to one location due to vertical integration, as occupying the space of flows as opposed to the space of places.

As an alternative model, yet still suspicious of its inception as well as its ability towards a new radical economy, Makela spoke of both the hacker and open source communities. In his continued examination of the new modes of global capital, Makela found that the hacker community, although it operated under the banner of "all information should be free", and whose practice was about breaking through security, and systems of encryption on the internet, he found that they were not necessarily working together with a directed vision. That is, Makela stated that hackers were not really ones to collaborate and operated on a system of principles and ethics that looked to break through existing obstacles in the system, rather than create alternative modes of being. Open source on the other hand, for Makela, was the site for a directed vision in terms of developing an alternative economy that had the potential of radical change with the global order of capitalist development. Makela was critical however when it came to how this alternative economy was going to be sustained and what mode of currency or exchange would arise that would be able to displace particular functions of capital, such as the exchange and speculation of currency.

Los Angeles based photographer, writer and Associate Professor at the University of California Irvine, Connie Samaras presented last on the opening panel Theorizing Collectivities. Explaining the context and showing her artwork in slide form, Samaras spoke of past collaborative efforts have primarily taken place within activist networks, albeit protesting for free speech, transgression, or feminism. Like Makela, Samaras interests and concerns attempted to "unmask the mesmerizing surfaces of 90's pop culture and anxiety" through a series of projects that looked at corporate spaces of control, as well as attempted to tap into alternative realities, by charting dreams, and science through the transfer to consciousness and cognition. Dealing with dreams, Samaras presented a project where she had amassed and compiled dream data and dream charts from several clinics throughout the Los Angeles region creating a series of installations that exposed a potential for radical translation through the interpretation of emotion. Samaras, also spoke about the diversity and heterogeneity of practice she encountered while participating in the Asian Pacific Triennial, where a handful of curators, put together a show that included over one hundred artists. For Samaras this was the site and the context that enabled not only a completely diverse set of practices to be presented, it provided an opportunity to develop complex networks amongst the participants of the show.

Samaras continued by supporting the notion that both new media art practices as well as practices that created discursive scenarios or spaces, was apt to form models of collaboration, sharing and generosity. Taking images that issued a call, that both presented beauty and exposed the underlying power structures, Samaras presented a set of images representing military presence—fuel residue in the air over Los Angeles after tests of interceptor missiles developed for the STAR defense shield—police authority—striking photographs of police organization during the '99 democratic convention in Los Angeles—or extremely controlled corporate spaces—the lobbies and walkways at the grand hotels and casinos in Las Vegas. Samaras, posited that it was through the constant investigation, as well as the gaining of

knowledge as to the use and performance of new tools of our contemporary times, that a possibility to look beyond the surface would emerge.

There was a lively set of questions that both challenged and supported the ideas presented by the three panelists. First there was a comment made by Diamond in regards to Samaras work, in attempts to join her critique with Makela's, identifying that both were attempts to wrangle with dominant modes of power—surveillance/social control /capital—and that in each, their theoretical position needed to organize itself around a genuine economy of collaboration to further engage. Another member of the audience responded to Makela's attempt at designating a structure outside of currency or the exchange of dollars, by taking a model proposed by Lukacs that functioned not through a negative critique, but rather through doing the thing you are critiquing better, therefore exploding the foundations which previously held it in place. To that Makela responded by saying that he was not out to demonize money, or for that matter the narrative of money, but to rather define a different set of values that could foster an alternative economy possibly one that was based on symbolic as opposed to capital exchange. Clay Shirky, next, took on Manovich's idea of GUI and telecommunication devices that determined the most engaging cultural forms by stating that telecommunications existed prior to any type of interface, it is only through ftp, greater bandwidth and more powerful computers that that paradigm shift is made possible, it is not just the concept itself.

11:45 am – 12:45 pm

P2P—Revolution? Retrenchment? Thinking from the user perspective.

Keynote from Clay Shirky

The keynote address was given by New York based journalist and Peer-2-Peer (P2P) advocate in the O'Reilly network, Clay Shirky, who presented a concise history of the internet in terms of the development of P2P and the open source movement. With Arpanet as his primal scene Shirky drew several diagrams explaining how the internet was organized in the early 80's. Shirky explained that the internet was made up of a cluster of very large government or university computers that were connected mostly in the University of California north-south band, as servers, each with a static and fixed IP address. The IP address enabled these larger computers to find each other in the dark essentially because they designated a fixed identity for each machine, and made up what would be imagined as an inner-ring of connection, with servers on inside, connected to each other and personal computers on the outside, used primarily for home/office work but not connected to a network per-se. Shirky explained that it wasn't until 1984' with the introduction of the Macintosh Graphic-User-Interface (GUI) that the computer was seen to imagine a space of the construction or manipulation of images. Before the GUI, computers were merely very large text processors or data compilers, but with a GUI, a visioned file structure, the design and interface to these files became not only important but had an impact on how people saw their personal computer.

Going back to the primary history of computer communication, ironically nothing happened to the personal computer and its connection to the larger internet for ten years. What did happen was, was that personal computers became faster and cheaper, and the development of a home modem was made available that allowed personal computers to communicate with one another rather easily over the telephone lines. The major breakthrough however came with the introduction of html and the (image) tag, that fused the graphic user interface that was appealing

and allowed more people to purchase computers because of the wonders they offered, with the basic text messaging that had been going on for the past ten years with the further branching out of things like the Arpanet. In the early 1990's however, even with the development of the first GUI web browser called Mosaic by Tim Berners-Lee, the vast majority of people that are on the internet today, did not make the move until sometime between 1994-99, dubbed the years of the "great wiring". Personal computers continued to come down in price while their quality and dynamism continued to develop, and as more and more personal computers began to connect to the internet, IP addresses began to be assigned by internet service providers, a right that was previously only reserved for servers within the specific connected environment. The first P2P tool that was implemented during this time of the "great wiring" was ICQ, where users would download a small application that would allow them to connect to a central server and make contact with either friends on other machines, also on the internet or meet new people. The central server then acted as a handshake machine.

Because servers occupied the inner ring of IP addresses and known connections, personal computers, which were, during the early to mid 90's relegated to be fringe members in the world of file exchange and storage made a break out move with the development of Napster. Instead of personal computers uploading to a central server in order to communicate or file exchange with one another, Napster provided a model where home users could run an application that would turn their personal computer into a temporary server that could be searched by other PC users with the same software, elsewhere in the network. Instead of having to have a designated IP and know where you were going in the network, once using this software a user would be able to search the machines of other users, thus creating a distributed network of client servers.

What came to be amazing about Napster, and what moved P2P from becoming to being, was not only the amount of home users using the software, but how much digital material was being transferred over the network. In terms of human generosity Napster was predicated on the notion of abundance where songs that entered into the network and downloaded by other users would be duplicated and remain in the system. Users were also encouraged to leave Napster running even when they weren't at their computers to make available their own personal mp3 libraries to other users who may be browsing and downloading at different times of the day.

Ethically, as Shirky pointed out, this may seem to be the pinnacle of generosity on the part of computer users. Considering the fact that downloading a file off of the internet does not destroy or use up the material like it would a traditional resource. But, and Shirky drew a rather funny model to illustrate this, that if you were to consider all of humanity and scale it on a graph from selfish-to-selfless, you could probably graph Mother Theresa at one end and, any good time capitalist on the other end. If you were to then do a bell graph charting our entire ecosystem from selfish to selfless, viruses or parasites would most likely exist on the selfish side and bees would be at the other, taking resources and distributing along the way. Shirky concluded that humans, within the graph and within the model were not in fact, the most generous bunch in earth's ecosystem. Meaning that, although it would take individuals time to buy CD's, burn CD's, rip their CD's, convert each track into an mp3 and then finally release it to the Napster community, users who would want to download those tracks were not responsible to replace what they had taken, nor were they responsible add their own ripped tracks to the community. The Napster

model that Shirky proposed was based on an economy of laziness, that is if users could get the pop music they wanted for free, enabling an open system that didn't require than much time to gain a sufficient volume or library of music.

In the early days of Napster, Shirky continued, there were three things that were thought to have potential power of ruining functioning of the system. Critics first thought that the system would and could be flooded with songs that people were absolutely not interested in, therefore curbing user taste and interest. Napster however had counter measures which were based on empowering the user to make the choice of whether he or she wanted to hold onto a piece of music or not, therefore determining its fate on the network. Just as 'bad' songs could be awash in the network, 'good' songs could be uploaded and made available just as easily. The second criticism of Napster was that there was no means of promotion or advertising, informing users/consumers of other groups or music they may be interested in. Without information from the musical elite, Napster was for a time thought of as a platform of limited scope in terms of choice. Again, Napster seemed to thwart this offense, not by having a text window that popped up when the user logged on telling him or her of new releases, but by either allowing users to chat online, or look through another users mp3 library, enhancing their knowledge of other people's tastes which most likely fed their own. The third question for Napster that came to charge was that somehow the ecosystem that made up Napster would not be replenished due to freeloading and the lack of uploading by users. This last criticism out of the three seemed the most possible as users were able to go online only to download songs and closing the software shortly after to ensure no songs would be uploaded from their own machine. Again although this appeared to present a problem for Napster, the number of users had grown exponentially, allowing for extraneous persons who did not particularly want to 'share' to participate in the Napster network without making a real difference.

The key to Napster, repeating from earlier in this section is that fact that Napster operates on a distributed network that enabled personal computers to act like small servers, accessible to other personal computer users without having to go through a central server. This distributed model however has not only been used for file exchange and storage but for algorithm computation, such as is the case with seti@home, or the organization for extraterrestrial research. Because seti has essentially been calculating movement within star systems they have an immense amount of data to monitor compute and catalogue, requiring enormous processing and computational power. And because it is not conceivable that seti, they themselves would not own a super computer like those found in military installations etc, they have decided to farm out or access computational time on the drives of personal computers hooked up to persistent internet connections, all over the world. What seti has done is view computational time on the computer of a home user as time that can be donated, both monetarily and temporal, therefore relying on the generosity to users, allowing set to take over their machines when not in use. Shirky formalized this economy by breaking down how much a computer would cost a home user over an average life span of two years or twenty thousand hours. Shirky concluded that it costs the user, approximately five cents per hour, whether their computer is on or off, thus making it almost like a cash donation to allow seti to take over a users machine, when they are not using it in order to perform machine specific computation—that is computations that are small enough to be performed on a less powerful machine yet still add to the objectives of the greater whole.

Shirky moved from P2P architectures to open source explaining the general theory of open source first and then the distinctions between the regular distribution of open source code, things like the gnu public license (GPL), Apache server software, and finally Linux. Shirky described open source as very much the reverse engineering department of the software world, where a given program either is completely taken apart and dissected for its code, or the program is reconstituted through a series or set of code samples; either way that new code is made available to the public, who then could write new code and modify the program for no cost. In the case of GPL, the source code is given to the user to develop interface software but the developer then becomes bound by the license or agreement to give back the source code for any modifications made to the software. Apache server, however operates on a complete economy of generosity as it allows users to make what ever changes they like to the source code without the need of maintaining the rights over that code. Linux, which in many ways is the most developed out of all three mechanisms, operating in an economy that is both public and private, has had the most development performed to its operating system and interface, while remaining reliant on a model that is similar to GPL. Using a kernel as the immutable part of their operating system, Linux allows and promotes users/developers to make additions to the interface and functionality of their OS, while keeping the kernel entirely intact, and by making available the source code to other developers in the Linux community. The Linux kernel, acts as the central planning committee as to what direction the software will move in a somewhat autonomous, somewhat protected zone.

The problems or possible crisis that has emerged in the open source community revolves around issues of quality development and control. Although developers in the open source community would love their software to be as widely used as possible, and that users participate in active resistance of corporate power structures by producing their own interface components, benefiting all users through new invention, the regulatory bodies of the various levels of open source are concerned about quality. Although essentially anyone could code, and anyone with patience and hart could build interface, open source developers still want to maintain some sort of integrity and consistency to the product. As well open source softwares, and this is the case with Linux, is in constant need of specialty additions to be made to their operating system, such as those that track changes in the consumer world in relation to graphics, video and audio. Because Linux would like to be an alternative to Microsoft or Macintosh it faces the challenge of competing with these mega-conglomerates who work with industry, promoting changes in hardware to be compatible with their own software.

Clay only faced several questions as a number of comments were integrated into his extremely comprehensive talk, but one in particular was that of redundancy fielded by Manovich, who asked if any transmission between computers with recognizable addresses was P2P? Shirky responded saying that yes, since 1972 any machine that could have an IP address could be spoken with, connecting two or more users together constitutes a P2P network. However the contemporary manifestations differed continued Shirky in both form and content, as the material passed over P2P networks, as in the case of Napster was not just chat or communication but the exchange of economic goods, thus leading P2P to exist on the side of marking possible radical economic rupture.

1:45 pm – 4:15 pm
Writing Machines

Co-Moderated by Lev Manovich
Marek Walczak, Mark Napier, Adam Chapman, Mary Flanagan

The Writing Machines panel, which kicked off right after lunch and after all of the participants had a chance to digest the many engaging ideas around new forms of communication, collaboration and economy, settled into to another round dealing with the crunching and munching of data and code. The Writing Machines panel included New York artists, Mark Napier, Marek Walczak, Adam Chapman, and University of Oregon Professor Mary Flanagan, each of whom had a similar approach to the collection and processing of data from the Internet. Writing Machines sought to look at the new uses of language, albeit textual or photo-visual, where artists have been allowing for a certain amount of user input in collaboration with algorithms designed by the artist, thus creating a work that is somewhere in between a conversation and a formal exercise.

Mark Napier has been a software developer for approximately fifteen years and has been involved in the net.art scene since 1995, and since has been featured in a gamut of articles in art magazines ranging from Artforum to Artbyte, and was recently included in SFMOMA's 010101 show last winter. Napier primarily showed several projects that can be found at <http://www.potatoland.org> that really take on this notion of a fractured and recombinate web space. Napier first spoke on and presented one his classic early works "digital landfill", a perl based software for the web browser where users could enter into a provided text field, any website on the www to be added to the landfill. The software would then extract heavy and extraneous elements such as images that would either take too long to download or text that would not fit the parameters of the final presentation area. The selected contents, which primarily consisted of <html> text and .gif images would be tinted a slight yellow or green and deposited with semi-transparency over top of past entries, creating a user negotiated environment of the most loved and hated things on the web. The "digital landfill", also contained an archive of past layers, as the text and images entered could conceivably take up too much processing power if loaded in its entirety.

Napier next, presented one of his most dynamic works "P-Soup", which was build with the JavaScript programming language and allowed possibly for the most sustained interaction, out of all of his work as it was based on mesmerizing visual effect combined with a musical jam session. The opening page of "P-Soup" is of a gradated circle, that when the user clicked on it, would produce both a sound and a ripple effect corresponding to the sound—much like dropping a rock into a pod a set of waves are created. "P-Soup" then extended this notion of, sound, motion and wave by enabling multiple users to log into the software, and join in the jam session. The audio that is produced when a user clicks too, is based on the different tonal values of chimes, moving the space from possibly a tranquil one—user alone, listening to single chime, watch a minimal set of waves move across the screen—to a space that is more active and dynamic—user collaboration in the production of a mini-score with the software algorithm and other users.

The third work presented by Napier, a work in progress though likely to now be found on the [potatoland.org](http://www.potatoland.org) website, was called "netflag 2". Using another java based applet, Napier created a software that allowed users to create their own flag, a flag represent that nation of the 'net', made up of every single component found on the flays of nation-states today. The "netflag" however, like "digital landfill" archived the changes made to the flag that was displayed along a scroll bar that presented a

vision of the work, much like numbers would appear on a slot machine. Users were also able to gain information as to the meaning of each symbol represented on the flag, thus finding out as much as changing, the meaning of each flag.

Napier did come under some criticism from, at times wily, Lev Manovich, who had first thought that Napier's work, move further from the twentieth century notion of collage and collage network. Although Napier didn't seem to mind the criticism, he expressed to the audience that he was more concerned with creating a digital archive and a context for user interaction to be traced, than a specific concern with the radical rupture of a modernist art historical lineage.

The second presentation of the afternoon was given by Adam Chapman, a recent graduate from the New School—receiving his MFA in Creative Writing—and an artist who has shown in the School of Visual Art's "Digital Salon", and has had press in journals such as Leonardo, and the New York Times. Chapman to follow suit with Napier, introduced three completed works, "Impermanence Agent", "Rope", a website project in collaboration with Natalie Jerimienjenko called "corporateimagination.org", and a work in progress based on video and interactive narrative. Beginning with the oldest and largest work of the selection, "Impermanence agent" was developed in collaboration with Noah Wardrip-Fruin, Chapman, and Brion Moss, which attempted to establish a customized miniature narrative using relatively dumb artificial intelligence, based on the users browsing habits. The "agent" in "Impermanence agent", gather images and text to be displayed in a small Netscape Navigator window located in the lower right hand corner of the users monitor. The application, once initiated would last for one week where the agent set as its task to arrange and organize the text and images into a loose narrative that does not have a fixed content, and is slightly understood by the user in their recall of past web-sites. The conceptual backbone of the piece rested on an investigation in to death and the representation of death online by the collaborators. Not only did they consider a host of web-sites that displayed funeral scenes, dead bodies, and wills and obituaries, but 404 pages (file not found pages that appear inside of the browser), and the notion that the stuff of the web is truly impermanent.

The second project presented by Chapman was a recent solo project titled "Rope", which was based on the Alfred Hitchcock classic of the same name. This project, sharing a similar emphasis on narrative or narrativity as "Impermanence Agent", Chapman digitally recomposed the Hitchcock film, interweaving the first half of the film with the second half, forming a checker board like grid that presented the movie in real time. Along the right hand side of the video display, Chapman presented a text based narrative that was written in pace with the film. The narrative dealt with banal interaction and basic human emotions and interactions.

Following "Rope" Chapman quickly ran through a collaborative project he has been working on with acclaimed New York based artist Natalie Jerimienjenko, called "corporateimagination.org", and the proposal for an upcoming interactive installation containing narrative elements. The work for corporateimagination.org was similar in its quality to "Rope", where stock promotional footage from major U.S. corporations was altered with the placement a marquee of scrolling text along the bottom portion of the screen. The text looked much to be a retranslation of what was appearing in the video, presenting statistical and factual information regarding the immanent inequities of power founded by mega-corporations. The proposal then, as described by Chapman was to be an installation of a see-saw, where video clips would be

triggered by the moving of the playground toy up and down. The work aimed to question the inequity of power structures.

The comments Chapman were quite valuable in their intention. It was speculated by the moderation panel consisting of Diamond and Manovich that the work was as much about time as it was about collaboration. With collaboration existing between the user, the agent and the resultant art work/narrative developed from the text and images. It was also mentioned that the work did much to represent this notion or idea developed by Manovich called "Info-Aesthetics" that encompassed a new form of representation that was predicated on the intersection between the representation or incorporation of the process handling and controlling data, and the material representations of the art object. To both of these claims, Chapman explained that he thought of the "Impermanence Agent" to be much about an ambient interaction, that the interaction was in fact dependent on the actions of the user, but not directly and that time possessed qualities of accumulation, rather than the artwork just existing over time.

Mary Flanagan was third to present, where she showcased the highlights of her creative practice that spanned and intersected the teaching of new media, software development and design, and internet based art practices. Flanagan began by speaking of a theoretical position employed in the production of new media based artworks, in particular user oriented projects, stating that she was building creative tools and projects to facilitate the breakdown of direct roles of the author and authorship. Privileging then, community building, organization through local networks and collaboration, Flanagan brought up over the video display channels (located at <http://www.maryflanagan.com/>) courseware she had developed in with Director multi-server that enabled students to upload and present their art work, as well as post and have online discussion with other students. The software that could support any file format was essential for Flanagan's teaching process because it created a system where students were able and supported in developing their voice, while remaining within a scholastic and rigorous environment. This courseware was also modified to provide a platform for disadvantaged groups to post to, and have online discussions with other members in those specific burgeoning communities.

Popping in a CD-ROM, Flanagan began to describe a 1994 educational interactive narrative project entitled "Nile Passage to Egypt", designed for the Discovery channel was an attempt at upon the part of Discovery to engage with the concept of the 3D space, and to provide a type of knowledge in a radically different form of delivery. Apart from producing a sophisticated educational environment, Flanagan told a rather curious story that dealt with the social norms and construction of young boys and girls. Beta testing the software on a group of ten year olds in early '93, Flanagan found that when young boys began the program and were placed within a 3D scene that was representational of a boat at the head of the Nile river, facing towards Egypt, that they would begin to guide the boat and eventually race back to the temples at the mainland. The young girls, Flanagan observed however, when put in the same position, would take their time in the boat, checking out the journal and educational information devices placed in the boat for the very purpose of teaching the student about the "Nile Passage to Egypt".

The final project Flanagan presented was a two-part project that consisted of a work done in the late 90's called "phage", and its recent counterpart "collection". Based on the theories of Carl Jung and the theories of the collective unconscious, Flanagan wrote a software application, that once installed scans the users hard drive,

plumbing the depths on a retrieval mission of remnants of past data processes and transfers on the computer. The findings, consisting of images and text are then transformed again in an alternate window on the users desktop, are represented in a 3d form. "Phage" seeks to make visible, material, and spatial, found and forgotten hard drive information. "Collection" builds off of "Phage" by taking the next step, where the application downloaded by the user, uploads found images, sounds, and text scoured from the same source to a central server to be displayed alongside the findings of other users hard drives. The space that is created is representative of a floating image mind map, using the metaphors of sea, the ocean, and spatial imagination.

The comments directed towards Flanagan, attempted to reflect back to her, what the project was about. Several participants felt that the project seemed like an emergent psychology of the internet, where computers, which possess so many 'mind' metaphors became the active subject of analysis. However, even though the work did provide a context and form for the consideration of the machine mind as reflective of the computer mind, a point was raised that there was a real struggle for the development of meaning in the work, that the images and sounds that were put together in the same 3D space did not function to form new meanings or new languages of the mind.

Marek Walczak, architect and new media artist, capped off the panel and the day with the presentation of two collaborative works that have involved the conversion of textual and acoustic information into the material of a 3D vrml space. "Adrit", an online and interactive setting in collaboration with artist and writer Helen Thorington, composer Jesse Gilbert, began in 1997, presented first at Ars Electronica in Linz Austria. "Adrit" combined the specialties of each artist, audio, text and 3D vrml, which were performed and networked to an installation space from three remote locations. The content encoded in and streamed out of the server was based on three fictional yet seemingly physical locations: a harbour, a city and the human body. A set of scenes, sizes, scales and scores were developed around these themes which were then remixed live, with signals sent back and forth between each collaborator, with the record of that transfer and collision appearing on a screen in the gallery or performance space. Documentation of the work can be seen at <http://www.turbulence.org>.

The second work shown by Walczak, was also a collaborative effort recently completed alongside Martin Wattenberg and presented at turbulence.org entitled "Apartment." "Apartment" as described by Walczak created both 2D and 3D space based on text entered into a field by the user. Walczak and Wattenberg, designated twelve rooms that corresponded to some four thousand words that were entered into a database. When words were entered into the text field the floor plans for the room would be created, and the word that called the construction of the room would be placed as a floating flat object within it. Words such as "food" or "television" would produce such rooms as the kitchen or a living room, making users able to construct a matrix of room/word associations in the construction of their apartment. Words that were not part of the list of 4000 were relegated to float in diminished color outside of the apartment structure. The text that was entered into the apartment was then used alongside a set of search tools to find and obtain images from the World Wide Web that corresponded with the text, and turned into a VRML 3D space. The 3D space could then be accessed through the "Apartment" browser where users would be given an abstracted fly through account of the generated landscape.

No questions were asked of Walczak as participants were quickly ushered out of the lecture hall in the direction of a tour guide ready to take the group on an evening hike.

Monday August 27th, 2001

9:00am – 9:30am

Welcome and Introduction by:

Sara Diamond

Sara Diamond started day 2 of the "Human Generosity Project" off with a blissful and concise summary of the previous days hottest and most debatable topics. Juggling the hot topic of the new, Diamond connected the ideas regarding hacker culture, open source and the creation of an alternative and therefore trans-local and trans-national economy with Clay Shirky's explanation of the praxis of peer-2-peer in a world predicated on global capital. Both of the movements, which have been ushered through increased use of digital technologies that enable abundance through the copy, upload and pirate, as well as the hacker-ethical framework of desiring information to be free, Diamond begged the audience to consider how power was applied even in this seemingly utopic condition. From the newness of structure, Diamond addressed Lev Manovich's concern with the newness of form that was made possible through the new tools of digital production that differed from the previous century's avant-gardes reliance on analogue materials. Although Diamond picked up and presented Manovich's idea of the remix, she also added the notion of language games as a possible strategy to make the disparate pieces of the remix, resonate with greater meaning than what is found in the aporas of their postmodern form. The new then shifted like so many signifiers from the immaterial, finding form in the quick and expensive architecture of the Las Vegas strip. Commenting on Connie Samaras's work, Diamond made a connection between this hyper-real vision and the vision of the computer screen, a place that is clearer and somehow has better resolution than real life. However instead of following Samara's deconstructive line, Diamond prompted the audience to create tools of rigor and multiplicity that would enable the banal pop landscape to be transformed.

As language spilt over, almost to the first speaker, Diamond connected the idea of the 'trace' which was very present in the previous "Unforgiving Memory" conference, to Clay Shirky's off mike comment that software always looks like the team that has designed it. Within this given language structure, Diamond asked the audience to consider how psychic processes are affected and were effected during the interplay between the interplay of artificial and natural languages.

9:30am – 11:00am

Intimate Technologies, Direct Communication

Co-Moderated with Clay Shirky

Jason Roks, Nathon Gunn, Pat McDonald

The Intimate Technologies panel was the first example of the conference that looked at changes and developments in the commercial sector in regards to online services and content, specifically peer-to-peer and its product of exchange. Due to the delightful and opportunistic turmoil left in the wake of Napster, a number of software development companies have formed in order to try to develop a viable and marketable software client that provides a certain amount of flexibility and choice for

the user, why protecting copyright and corporate share and investment. What was extremely interesting about engaging with these speakers after Clay Shirky had prepped the group on how Napster functioned, the lines of deterritorialization and reterritorialization were clearly drawn.

Pat MacDonald, a founding representative of PeerGenius, a legal and safe peer-2-peer web client application, spoke of the environment which his company was founded and how their product differed from the competition. Seeking opportunity in the post-Napster world, PeerGenius was developed to provide an alternative that did not disrupt the traditional power and market share that make up the recording and media industry. Unlike Napster, which was essentially offered basic search, chat and selection functions, PeerGenius was in the position to offer a customizable location from which users could work. PeerGenius did however look to establish both trust and credibility on the side of the user and on the side of the corporation through the extended use and placement of cookies and other browser security measures that would account for the users shopping habits. What PeerGenius offered the record companies however was the unique selling point where every file that appeared on the PeerGenius server, and was accessed by paying customers would be encrypted, preventing the further distribution of the song, but also ensuring the quality of the music or video file.

The client would essentially work as a gatekeeper to a cash of content, which it would encode on the way out and during the download process. The content provider would submit condoned content only. That is, content that fit within their particular contractual and copyright agreements that they were willing to release in digital, online form. What seemed to be the most progressive move made by PeerGenius, and explained by MacDonald, was their willingness to pursue a radio broadcast model of distributed content, where allotted content is given for distribution only requiring an initial fee. This would free-up PeerGenius from having to negotiate and divide profits on every download, rather provide capital before hand, even possibly allowing even a greater selection of content be added to the mix.

The cofounder of BitCasters, Nathon Gunn, a new media company specializing in streaming media interfaces presented a recent project that his company had been working on with support from Media100. BitCasters, who started out as a media lab devoted to the facilitation and development of artists project, held onto this mandate as they moved into the commercial world. Charged with the tasks of establishing online distribution channels for companies such as Miramax, Gunn and his team decided to create an 'in-house' interface that facilitated artists production (in this case film and video makers) on their server. Media100, a digital video software company provided BitCasters with a compatible online editing platform that was located inside of a web interface that allowed users to upload digital video and other audio/visual media to there server and edit. Users were charged fees for how much time they spent on the system, as well as storage space on Bitcasters server, both of which were considerably less expensive than the standard industry fees. The videos that were edited and composed on their system were then added to a catalogue of videos made by other users that were accessible for viewing by other users or visitors to the site.

The conceptual strategies that Gunn presented to the audience focused primarily on the desire to create an online video jamming space where users could contribute artwork, that was seen not only in a peer environment, but had the possibility of exceeding the boundaries of BitCasters through the movement of talent. Gunn

articulated that he wanted this space to be much like Farmclub, that was accessible to a producing community but also would be visited and would have engagement with the larger media players. On a basic level of exchange however, Gunn had organized a payment scale that went to individual producers from advertising companies every time their video was shown. This meant that when producers completed their production they had a choice of which corporation they would like to partner with, and whose advertisement they would like to appear alongside the artwork. Each time the video was shown, an advertisement would be played and the maker of the work would receive a marginal sum from the advertiser.

Sara Diamond asked a challenging question of Gunn as soon as he finished speaking, want to know who was accountable for what appeared for viewing on the website. That is, if the web-site really is about the production, hosting, and playing of videos who was responsible for quality control, and then who was responsible for organizing and cataloguing the videos so that viewers to be able to make sense of what they were looking at and find what they need. Diamond also asked if there was a system in place that acted like Amazon.com where users of the site were able to post feedback and responses to what they had purchased and what recommendations they had for further reading. Due to the length of this question and the deflections of answering this question properly made by Gunn, the next presenter was ready to go.

Jason Roks, one of the founding programmers of the illustrious software piracy client "Hotline", presented with feverish urgency his new project PXPmedia (pxpmedia.org). The idea for PXP, primarily came out of Roks engagement with "Hotline", which is a software client that allows for secure channels to be established between client and server that enable the piracy of software to take place, as well as his engagement with recent peer-to-peer models that have had to conform to market restrictions due the copyright crisis caused by Napster. Roks presented PXP as attempting to be the best of both worlds as a software that encoded and offered content up for distribution along peer-to-peer and open server channels that did not infringe on copyright or intellectual property laws, yet provided content(s) for free. How PXP worked, was that it encoded content produced by a film or video maker, turning it into a downloadable PXP file to be distributed via the local and decentralized networks of peer-to-peer as well as traditional server side hosting. Once the content (the primary case would be in the form of a digital video) was downloaded and played by a viewer through a QuickTime player, a message would be sent to the PXP server that would provide the database and data tracking system with the time the video was watched, the IP address of the viewer and what video they were in fact watching.

With this information, the PXP server intern would send a series of advertisements to be played as commercials, in the media player of the viewer, thus making the downloaded video segment take on a very traditional television economic model. By injecting a series of commercials into the encoded file, revenue is generated from the advertiser to the producer of the content. By playing the video, the producer gets paid. The more the video is distributed along peer-to-peer and traditional networks, the greater amount of revenue is generated, working with the idea that the video will be circulated in accordance with fashion and popularity.

Co-moderator Clay Shirky was the first to ask Roks a question regarding a. how PXP video clips would be visible within the great pool of content that makes up the internet and b. who would act as a gatekeeper determining what and how much PXP media is released into the ebb and flow. For Roks, the issues of gate keeping was not

a primary issue due to a 'faith' in the producer to produce what ever they saw fit as content, but acknowledged that there was a need to track and monitor the video clips. This need for Roks however would be fulfilled by internet bots, or web robots that would really preclude the need for a constant human monitor. Diamond followed with a question that was directed at both Roks and Gunn, asking if the economy of desire created for the downloading and viewing of these works based on anything other than surface fads that certainly sign 'cultural production' but don't really provide a wide viewing public with rigorous material. Gunn's answered this question by saying that there was a conflict regardless between producers of content and media corporations that had the real power to regulate what content and messages are sent out to a viewing public, the BitCaster project for him was an attempt at furnishing at least an open structure. Roks, who took more of a libertarian approach felt that viewers in general did not really have a problem with watching ads anyway and were a responsive audience to what they were given and would be able to determine what is good and bad therefore setting standards that were determined by what was turned on and what was turned off.

11:15 – 1:00pm

New Collaborative Economies of the Internet

Neil Sieling, Ken Jordan, Jan Hause, Celia Pearce

The "New Collaborative Economies" featured three current projects that were an attempt to alter structures of capital at local, national and global levels redirecting energy and wealth towards philanthropic causes. Each panelist proposed the plans for organizations that could act as alternatives to current, more standardized and quite inefficient institutions of giving, in attempts to garner trust as the driving factor between the exchange and the donate. By far this was the most optimistic panel in terms of direct application of technology to make visible social change.

The first panelist, and one who really engaged the audience with his proposal of giving, was one of Sun Microsystems's principle architects, Jan Hauser. As a member of the philanthropic organization "givingspace.org", Hauser presented their conceptual wrestling with the question of how to deliver a self-organizing global infrastructure that would create opportunities and movement within and environment that would enable philanthropy to take place. Structurally, and very much in league with Shirky's presentation about the shift in IP placement from static to dynamic, this radical rupture was one of the "openings" from which "givingspace.org" was to organize. The other way was to develop a mark-up language based on a derivative of XML called PML or the "philanthropic mark-up language." With the development of this lightweight infrastructure Hauser expressed that "givingspace.org" was hoping to create a scalable model that could support exuberant and global contribution. As well, with proper security measures taken, alongside the display of confirmed receivership on the part of the organization, "givingspace.org" hopes to gain trust and therefore momentum from the donor.

For "trust" to be the basis of generated donations, Hauser said that patrons or other philanthropists would have to see that the donation they make is actually going to the cause they hope to sponsor. Unlike larger institutions such as UNICEF or things like Jerry Lewis, where only approximately 29% of the total donation reaches its intended destination, "givingspace.org" intends to give 100% of the donation to the recipient while negotiating a service cost on top of the given sum. Hauser continued by saying that because they were working with a new technology systems that have to engage with industrial networks, that this collaboration will make it possible for

individuals who have either donated capital or goods to follow up with what they have given and the community they have affected, possibly to foster a stronger and more permanent relationship. Due to a propensity towards inclusion and the ability to translate and relay information to the "givingspace.org" domain with PML, the needs of communities will be more properly addressed by having donors see what the particular individuals need, and understand what they are giving. It would also allow for solutions to be found that could begin to attempt to answer long term needs and questions for the community.

Working with a crowd rather excited with the "givingspace.org" project, Hauser fielded several quick questions addressing further, how exactly the project was to operate. Ken Perlin began by asking how "givingspace.org" planned to fundraise without doing what other philanthropic organizations were doing. Hauser answered, by saying that "givingspace.org" was not in the business of fundraising but rather accepting donations, and therefore didn't need to solicit or raise funds in a traditional fashion. The second question, and always a crucial one with dealing with computers and new media technology, came from Clay Shirky who asked how do people that are serviced by "givingspace.org" interact with PML if they don't have access to the web? Due to the lightweight infrastructure of PML the network for "givingspace.org" is planned to be incredibly vast, moving back and forth between infrastructures of old media and new media. Hauser said that it was important to create such a web in order to produce a system that was accountable, and therefore a place where donors can go with trust.

Neil Sieling and Ken Jordan, spoke second as two representative members of the vast yet disparate philanthropic internet group called "Web Cabal". Web Cabal was described by Seiling as loose think tank team that was concerned with articulation of zones economic exchange that could be used for philanthropic causes that worked above and beyond the zones of capital. That is, looking for exchange networks that were even more pervasive and immaterial than current market structures engaging with capital, or taking from capital at a level that is pure interest and pure speculation. Web Cabal faced the similar concerns of established trust among donors as "givingspace.org", but unlike "givingspace.org", Web Cabal was not really as optimistic in terms of how to generate revenue –not interested in donation per-se— to prevent the degradation of the planet. Resolute in their recognition that the capital was necessary and that it operated along some of the furthest reaching and most sophisticated global networks, credit and bank interest seemed like the perfect places to found their economy of need. Proposing a "green" credit card, Seiling said that Web Cabal was working to establish a relationship with a bank that would articulate the interest policy of one of its credit cards so that a part of the interest gained would go towards the effort of the Cabal. The process and effect of using the credit card in this matter allowed the Web Cabal not only to receive the much needed resources for their schema's, but to push past and attempt to accede the current market logic of capital.

Ken Jordan, writer and recent editor of "Multimedia: An underground history from Wagner to Virtual Reality", spoke of the second phase of the philanthropic effort by the Web Cabal, which attempted to account for the communication network needed to inform card holders and other interested individuals of the activist issues needed to be fought. Using the open-source JAVA applet, Envoy, the Web Cabal was planning on modifying the client software so that it would encourage and enable an ease of communication and the updating of information around the community. Envoy would work, however much like the Cabal credit card and still maintain its ties

to the commercial community as that was the communicational framework the client was organized in, yet it would provide for this extended dialogue.

The audience, although deeply impressed by the ambition of the project and keenly interested in the possibility of it actually yielding results were rather confused as to how it would in fact function. For instance Web Cabal had not stated which bank they were working with, nor what causes the generated revenues would go towards, nor how Envoy would interface as a peer-to-peer model with the credit card. Seiling and Jordan, although they did not have specific details to give as to whom was sponsoring the credit card, they did state that it was important to have a bank onside in order to have economic leverage and ensure a level of stability. They also said that Envoy was to be used primarily to establish and aggregate community that would be made aware of global social issues as well as to promote the distribution and use of the credit card.

Venice Beach based artist and educator Celia Pierce was last on the panel to present a general outline of collaborative economy of practice in the gaming industry, alongside several past and current projects that attempt to account for community and the multiple. Pearce began by describing the current configuration of the online gaming world that is made up of interactive desktop games such as Tribes, Ultima Online and Everquest. These games, which effectively are never completed, but do provide interesting and exciting 'missions' have created not only a diverse group of devoted players, but have also created a community that thrives on the interaction and exchange to the point of building their own video games. Online games such as Tribes, provide both an active playing field (in this case one that is very much a shoot'em up) as well as an opportunity for social interaction as players are able to chat with one another developing interestingly complex and hybrid relationships. What has becoming increasingly compelling about this practice is that game producers have provided the source code to their game engines online, allowing interested and avid game players to develop not only their own players, but entire levels, even entire games. The site of creation, collaboration and communication are then facilitated within this platform.

Pearce moved on to speak of a recent and current project that worked off of the established frame of collaboration except outside of the digital realm. The first project Pearce presented was a collaborative painting that was carried out by members of the community and tourists who happened to pass-by a forty square grid established on a flat black wall, on one of the side of Pearce's studio and living space. With a sign set out in front of the grid which established basic ground rules, such as: only one square per person; and don't paint outside of the square, individuals were given white paint, paint brushes and encouraged to "get it on". In a series of slides Pearce presented a lively and quite engaging scene that resulted in almost around the clock painting, the addition of squares and the production of real and inclusive collaboration. The second project presented by Pearce, was an attempted group critique of the funding policies in the United States by the National Endowment for the Arts (NEA), which was reduced to primarily nothing in the late 80's and only gained resources in the mid 90's to fund the conservative artistic practices or desires of educational or religious organizations. "Church of Art" was born as an attempt to found an organization that would fit into the funding criteria of the NEA, but where the funds granted would go to artists, as opposed to more conservative and less fundamental organizations.

2:00pm – 4:00pm

Collaborating with Virtual Characters; Online Drama and Improv; Designing Agents, Designing Avatars
Ken Perlin, David Furlow

The "Collaborating with Virtual Characters" panel, minus Lizbeth Goodman whose presentation was moved to the middle of day 3, consisted of two cultural producers who engaged with open structures of either narrative, the graphic manipulation of a character, or the source code itself. The panel then looked to give an account of extensible projects that had an impact beyond their visual quality, either through conceptual process and cognition in the mind of the user or through the modification and application of the software program to perform a specific scientific experiment.

New York University Professor and computer scientist, Ken Perlin began the panel with the aid of his website, hosting a number of projects that have been formative points in his cultural practice. Perlin who programmed primarily in JAVA, specifically JAVA 1.0 for ease of use on the web, introduced this end of his practice as embodying a TRON like aesthetic, that acknowledged the limitations of the medium and allowed for a randomness to occur, emphasizing engagement. An expert in the development of filters and brushes for virtual objects, Perlin presented a series of textures he had made for a sphere and archway online, that were rendered in real time as the user interacts with the object online. The filters were of a randomizing rock texture over an archway as well as a gem-like effect applied to a sphere that was comprised of a number of smaller spheres. Speaking about process along these incredibly sophisticated objects, Perlin stated that he thought of his practice as a collaborative effort between his concept and the mathematical algorithm, where he found working together and off of each other produced the most interesting results.

Apart from his graphic or formalist work, Perlin presented two projects that were not only interesting online works, but whose source was made available and implemented in a therapeutic setting. The first project was rough geometric representation of a woman's face that the user was able to manipulate, in terms of emotional and physical quality, and animate in a loop along those emotive and gestural lines. What was compelling about the project apart from the fact that the face allowed for complex manipulations, was that the face was used by Psychologist Dorothy Strickland, who was using the technology of virtual reality, and virtual representation to teach autistic children how to recognize physiognomy. Because the source was made available to Strickland's research group they were able to make active modifications, incorporating shapes, forms and sounds that were more conducive to their clinical process. The other project developed by Perlin was an open sourced graphical user interface for a handheld computing device, running off of JAVA that initially acted as a standard calendar and notepad, but again was incorporated by the clinical world to serve as a platform for notion, record keeping and diagnosis.

Scott Snibbe was the first audience member to comment on Perlin's work, saying that his process allowed for an interesting intersection between programmer who works alone and one that works in a team, readily sharing ideas and facilitating production. Sara Diamond asked the first formal question concerning the 'face' project, asking if Perlin had thought about the expression of cultural differences in the facial expressions, working like an anthropologist almost, to produce a readable gestural language. Perlin responded by saying that the computer was not necessarily necessary in developing a context for the display of other emotions or expressions, referring to the handheld interface he developed, claiming that it as another interface

type could accommodate a range of interaction. Celia Pearce asked a closing question, pressing Perlin to reveal some of his process in negotiating the space between the original development of the application and the open sourced and reformulated version that exists in the real world. Perlin responded by saying that he would like to get greater feedback from the kids and work off of their energy, seeing what works and what doesn't.

David Furlow, an artist working in the field of interactive drama presented a current project that he has been working on in collaboration with the Banff New Media Institute, to air as a pilot project for the British Broadcasting Corporation, online. Furlow explained that "Simidrama" (<http://www.simidrama.com/banff/edrama120.htm>) attempted to create a virtual drama space that allowed twelve to sixteen participants or users to collaborate in the production of a video drama. Although Furlow had been given enough resources to develop this project and promote it via BBC's Channel4, Furlow was still concerned with the amount of available bandwidth for multi-user graphic interaction and the eventual resolution of their efforts in streamed digital video form. The roles that each user will take are divided between actors and directors, who use and articulate a series of scripts, developed by Furlow for the user base at hand to act out. Furlow's intentions, along with those of the BBC is to make the project educational where the interactive experience, is just that, it takes time to go through the dramatic sequence where the process ultimately provides an environment from which to learn.

By merging a dramatic space, and a production space with a space that is open to use and usability of participants, Furlow wanted to create a reflexive environment that was responsive and supported improvisation. The scripts then, would reflect this open tendency for user improvisation and correction providing a context for greater interactivity and hopefully more fun. The conceptual core of this project for Furlow was not only the development of interesting narrative and the use of streaming capabilities over the broadband UK grid, but rather to question and in many ways recreate a social space, or a 'commons'. The software then, if it were to fulfill Furlow's highest expectations of becoming an informative site of education, improvisation and exchange, then it could be ported and customized in other environments, albeit the school or as a resource tool for the local constituent.

Furlow was asked the first question by another graphics and interactive drama expert, Jakub Segen, if he might enhance his project by adding 3D elements as the Macromedia streaming server software now contained the appropriate components to make it possible. Another comment came from Adam Chapman who suggested that, if the incorporation of 3D was not made that Furlow consider changing the view that the users have of their character and the scene in which they are interacting. Sara Diamond also made the comment that although the project was challenging on the level of providing a site for social drama and narrative to emerge, that in order for it to deliver in a good, hard manner, it needed to have an aesthetic quality that was worthy of the term 'hook', thus making it accessible for a greater range of users who are both engaged by the drama and the aesthetic.

4:15pm – 6:15pm

PLAY! Toys, Performance Assists, Games: Physical and Networked
Scott Snibbe, Jim Andrews, Andruid Kerne, Michele Teran, Scott Delahunta

Following an engagement with dramaturgical pose, the "Play" panel welcomed the idea of language based systems, but reconfigured the narrative landscape allowing

for greater heterogeneity and investigation into the image, the body and the collaborative art work.

“Play” for the panelists meant just that, as each exercised a fluency in computer code and creative problem solving, creating projects that attempted to occupy the cultural third space, somewhere between the inside and outside of the ‘box’. This concern by every member of the “Play” panel, translated into projects that interacted with the body, graphic and sound, affecting the computational apparatus while affecting the user.

Artist and programmer Scott Snibbe, began the “Play” panel with a historical contextualization of his practice, informed by theories of phenomenology and early innovations by artists working in animation. Snibbe, whose artwork negotiated the rupture between figure and abstraction, attempted to account for a notion of the body that is formed through language and perception (both internal and external). Snibbe paraphrased a passage by Husserl that exemplified this trajectory, saying that in the process of perception of image, sound or object, information is lost going to and coming from consciousness, thus lending perception to abstraction. This philosophical position was placed in material form by Snibbe through the example of two early animators, Len Lie and Oskar Fissinger, who used very precise tools of photographic representation to create abstract forms and narratives. Lie, in the 1930’s invent cell-box animation, where he directly scratched into exposed film cells, creating images and narrative sequences that bore the hand of the artist and the mark of the body. Fissinger too experimented with the photography and animation, creating a real-time performative recording, capturing onto film the abstract movements and gestures of the artist hands as he moved them through the fabric sheet of the lumigraph.

In 1990, Snibbe pursued this interest of the combination of performance and animation, moving his investigations to the computer, creating a series of motion paintings. The motion paintings were based on Snibbe’s fascination with the mouse cursor, the item on the screen he said, had the most interest as it contained the gestures and motion of the human body. After creating a preliminary set of works, Snibbe constructed a more functional motion painting in the JAVA programming language that allowed for an interaction and production of abstract shapes that mimicked and moved in response to mouse movements. In 1995, Snibbe ported the motion paintings onto a network, where the project was presented at Ars Electronica. The project was renamed “Motion Phone”, as it required user participation and interaction, as well it was developed before the ‘internet’ proper was established, through the writing of a program in Basic IP and a client protocol in ‘C’, called RPC. Although “Motion Phone” did not allow for either voice or text communication, it allowed users to interact with one another over a network with abstract shapes and visuals. Snibbe described piece as creating a ‘flow’ experience, similar to the playing of a video game but with out a narrative or end goal. Snibbe also said that interaction was without latency as he had wrote the program to have dynamic movement that carried for several seconds after the user had moved the cursor, thus compensating for any synchronicity lost over the network.

Framing the next two projects with a quote by Maurice Merleau-Ponty, designating the body as the most active agent in discerning and determining space, and studies of the body in space as seen through Descartes, proxemics, ethology and voronoi diagrams, Snibbe spoke on “Boundary Functions” (1998) and his most recent work “Breath Series” (2001). “Boundary Functions”, was an installation created by Snibbe

that attempted to turn a virtual space inside out, by creating a map on the floor that indicated the relationship of proximity between viewers who entered the space. What Snibbe found to be the most interesting component of the project, was how socially determined it became when installed in different cultural locations. Although the project was a fundamental examination of plotting and of the Cartesian grid, Snibbe found the responses of viewers to differ depending on cultural location: in Germany participants went to opposite ends of the room from one another; in Japan participants crowded in a large group filling the room.

"Breath Series", the most recent work by Snibbe was an attempt to create a metaphorical mirror, or an object that responded in the same way that it was acted up. Considering breathing functions and the articulation of the body through breath, Snibbe created a electric fan-like object that blew back at the user in response to their breathing action. Snibbe said that someone described the project as "creating artificial wind", which although it sounded a bit absurd signed the negotiation of affective computational apparatuses.

Jim Andrews, co-founder of webartery.com, an interactive sound artist and poet was second to present under the title banner of "Play". Andrew's own historical trajectory of practice was rooted in poetry and creative writing, and made a wholesale move to the web in '95 finding it to be possible place where graphic, text, and audio could merge. Andrews, not only began by pursuing projects that supported his former discursive environment but pushed discussions to ones concerned with poetics and new media, narrative and the internet, and thus amassing a network of artists and writes who engage in a very serious way the hyper-textual world. Andrews' artworks from this time consisted of hyper-textual plays that produced visual puns in the making of interactive languages. Andrews presented one work from this time called "Seattle Drift" which contained a series of phrases about Seattle that drifted across the users page as a result of interaction. As Andrews became more involved with the production of work on the web, developed more sophisticated programming skills in both Macromedia's LINGO and JAVA languages. What came out of these early experiments were a set of projects that were still very much language based but engaged with the process of transition and metamorphosis, from something recognizable into a poetic or enigmatic form. Andrews presented a set of JAVA projects called "Animisms" where a series of photographic images would morph into another set of images, as well as a number of stills from animations playing with the (re)representation of the figure and of text.

Andrews then moved to a more recent project, escalating in its sophistication, called "Nio", which was a hosted project as part of turbulence.org. Andrews framed this work by recalling an interview he read with Brian Eno in 1995, where Eno meditated on the future sound of music saying that music as a consumable and complete form, was heading towards customization. Musicians would no longer producing 'finished' works, but rather highly developed source material, through which consumers could mix, play and determine how that particular 'piece' of music was to be played. "Nio" for Andrews addressed this issue as it took on not only the reformulation of the 'audio' track, but also the negotiation and addition of textual or graphical manipulation as well. How "Nio" worked was that audio tracks were designated to have graphical equivalents. Once these equivalents were selected they would be laid down as an audio channel, users could then select a multitude of graphic elements/audio tracks that would form a composition. Andrews established a system where the audio tracks, once mixed could be put in sync with one another, providing a site of congruence. The audio, through the graphic elements were represented as a

maelstrom in the middle of the browser page, increasing and decreasing in intensity as the user played. Andrews also allowed for this work to be open to modification, in that he had provided server space for users to upload and develop new applications or sounds, changing and enhancing the content.

Another participant who carried over from the previous symposium was recent PhD recipient in computer science, Andruid Kerne. Working under Ken Perlin, Kerne gave thanks to the instruction he received, dubbing it truly as something worth to be called "human generosity". Kerne went on to introduce a recent and developed JAVA based project called "Collage Machine", which he described as an applet supporting the process of emergent meaning and connective relationship in the act of web browsing. Kerne located "Collage Machine" in the trajectory established at the beginning of the previous century by artist Marcel Duchamp, who with "Fountain" (1917) revealed the context dependency of art, bringing the found object into the gallery, and the DADA movement of around the same time period that privileged chance operations and selection to make poetry, music and art. Kerne presented "Collage Machine" as the spectacular, projecting it across two adjacent walls in the presentation space. "Collage Machine" was described by Kerne as a software program that takes the shape similar to that of a web browser that reads the users computer cache in order to find a listing of all the URLs, he or she previously visited. "Collage Machine" cycles back through each of the past web sites, randomly selecting images from each of them. The images then appear inside of the "Collage Machines" interface, and are given to manipulation by the user.

The "Collage Machine" described by Kerne, had three main components that were essential to its operation. The first was the active intelligence agent embedded in the "Collage Machine" that had enough smarts to find URLs and sort through them, the second was the grid visualization, or where the images that were selected by the agent were placed inside of the browser frame, and third was the interactive interface in the form of a toolbar that allowed users to manipulate, delete and rearrange. These three elements for Kerne not only embodied the functionality of the work but it provided a link between the interface and the theoretical intentions behind the work. The agent then was viewed by Kerne as part of the system that acted on behalf of the user, somewhere in between machine learning as in finding out where to go, and direct manipulation as users could also enter in new URLs that they would like to "Collage Machine" to cover. The model or interface provided the ground from which new meaning and association could be formed, revealing both the intentions and tastes of the user in their final curation of the images remaining in the browser, as well as provided a context of persistence providing more and more content to be dealt with. The random selection of images that was based on a weight-system was also integral for Kerne as it kept track of what users decided to keep in the browser, thus affecting what images were pulled the next time the agent was enabled. These three components compounded into the code in collaboration with the aesthetic framework were an attempt by Kerne to have directed theoretical intention retaining a plastic form.

Michelle Teran and Scott deLahunta were the two representatives of the collaborative new media performance art group, "Hot Wired Live Art 2" (HWLA2) the second installment. Comprised of eleven artists from Canada, the United States, Norway, Germany, and the Netherlands, HWLA were at the Banff Centre for the Arts under the co-productions program for approximately fourteen days. During that time the set out a mission statement, where they were attempting to make ten "software prototypes", which could be used in other performances and events later in the year,

and during future times of collaboration. Teran was the first to speak for the group, who were seated in the audience and checking in via the wireless network, and began with an encompassing yet precise metaphor for their activity, that "for every input there was and output". Their collaboration for Teran could fit into this model that they were looking for and experimenting with new possibilities for plugging in and drawing from, technical, electric, emotional, physical and human power sources. Teran continued by describing that the group dynamic was founded primarily on the interactive hub software called "Keystroke", which enabled online audio and video mixing to occur, as by using that software with the programmers of it present, they were as a group able to direct energies towards new uses for the software, as well as expansive moves both in testing their own limits as well as the limits of the platform. As each day's prototype was framed by an early morning workout session, consisting of either tai-chi, synchronized swimming, or fencing, as well as more formal meeting in the lab-environment, HWLA were able to both physically and mentally bounce ideas off of one another, creating a dynamic that exceeded the boundaries of the box. Interfacing pocket PC's with wireless modems and other audio video inputs through keystroke, HWLA were able to not only 'jam' offsite, but intervene into the social space that makes up the town site and artists facility at Banff.

Delahunta was next to speak and presented the work of HWLA in a more exuberant manner, standing and using the dry-erase board. The grounding term that he used to describe the affects and process of HWLA was "fun". In that the time period for the group to work together and that each member of the group brought with them a tremendous skill set, and could contribute towards an urgent body of work, that the mandate was to be a positive, stay up late and leave crumbs in each others bed, kind of thing. Delahunta testified to the importance of having an actual software design team on board that were able to facilitate questions and accommodate changes to help further the prototype generation. As well, Delahunta found the intersection between physical, aural, and visual activities to enrich the collaborative process they were participating in. Delahunta concluded by incorporating an idea presented by Clay Shirky earlier on in the day, where he said that "the software built looks like the team that built it," thus HWLA for Delahunta was a perfect example of this incorporation as physical, performance, and audio, materials were used in simpatico with the traditional form of computer based software.

The first question for HWLA came from Sara Diamond who asked what was learned or negotiated while in a space that was not only about the interaction of audio, code and visuals, but between each other as collaborators from different socio-cultural backgrounds. The answer came not from Teran or Delahunta, but from another HWLA member, Pere, sitting in the audience who said that they didn't really worry about that during the process, as he described the setting like how children play in a sand box and everyone shares, moving from generalized to specific forms. HWLA did however come under some criticism by both Lev Manovich and Tapio Makela, who exclaimed that really HWLA couldn't fail in their processes as their products were really about the use and incorporation of new software as well as the hanging onto a certain amount of hippness through use of music. Analogous to Manovich, Makela reminded the audience about the magic of the new technological device and that the 'toy' can at times be more interesting than the artwork made or avoid the artwork altogether leaving content to fall by the wayside. This criticism however was not well accepted by the audience as HWLA opted for power in production, even if, that production was supported by 'new' new media devices.

Day 3

9:00am – 9:30am
Welcome and Introduction
Sara Diamond

Diamond again, began day three with a valuable and insightful recap and contextualization of some of the key ideas from the day before. First for Diamond was the incorporation of new materials and the transfer of thinking around production from traditional modes that resided within the box to an expanded range of incorporation propelling the search and discovery of new knowledge. The question of meaning in this process speculated Diamond resided at again different levels, and in the case of HWLA, be seen through the changes of code made to the software “Keystroke” as well as the new hacks implemented and tested during the process. Foreshadowing the presentation by Saul Greenberg to happen later in day 3, Diamond made a connection between a constant consideration by artists and programmers of the body in relationship to the computer and input/output devices that it connected to. Diamond posited the question of what does a relationship like this turn in to, where input devices are constantly changing alongside the code for the output devices as a result of their interaction. Making this leap, Diamond offered that the possible answer for this would be looking towards the fields of improvisation and jazz, aiming to borrow and compare knowledge and datasets. Working back through the metaphor of the jazz band to HWLA and “givingspace.org”, Diamond stressed the importance of a realization of these new forms of collaborative environments that were the most part, functional and scaleable, mobilizing resources and producing energy when necessary. However, and this really connected to the P2P work presented by Gunn, and Roks, and in accordance to presentations earlier in day one, was at times uneasy rubbing with the term ‘censorship’, when faced with the need for curatorial license to be applied to processes, practices and objects that are completely open.

Out of artistic production to the consideration of the reinvestment of energies in the political sphere, Diamond recalled Shirky’s notion of both the power and the tragedy of the commons, in the need for a differentiation between social and public space and where politically transformative potential now resides. In considering P2P and open source as these radical practices that acted as “open” discursive space, Diamond made clear to the audience, that these practices need certain protections or else they will become “feeding” lanes for capital incorporation. The practices for these “open” discursive spaces also needed to negotiate that space of abundance or generosity that would either lead to the exceeding of systems of info-capital already at play or attempt at establishing an alternative network base that does has a protective capacity. Using these ideas of exchange and value as a springboard, Diamond launched into the burgeoning fields of cultural practice such as collaborative gaming environments, that is predicated by a system of dedication, appropriation, and recombination, whose affects produce not only new games but grassroots community as well. Ending Diamond contrasted this type of environment, which is primarily American, with the collaborative practices of European artists, finding a tendency of European practice to move outside of the “box”, dealing with more formal or ‘spiritual’ subject matters, while American practices were happen to stay in their own environment, using irony to act as their suture.

9:30 – 11:30
Online Spaces: Public and Private: Structures of Learning and Play; Multi-User Environments
Saul Greenberg, Robert Nideffer, Anne Nigten, Matthew Sloly, Jeannine Parker

The first panel of day 3 of the "Human Generosity Project" consisted of an attempted articulation of collaborative and indexical systems, providing access to either data produced in the form of a human trace, or the human body itself through monitoring and associative systems. Including five panelists that spanned three continents, "Online Spaces", provided a historical glimpse of past visual and ethical practices over inter-networks and assumed the location of the discursive space as apriori.

Saul Greenberg, a computer scientist from the University of Calgary began the morning panel by presenting his research on the development of video based software's that enabled chat and social interaction. Greenberg was concerned primarily with making an accessible and more functional version of either high-end video conferencing software or programs such as C-U-ceeme, available for lab or office environments. These client applications, which were based on the "killer" chat applications, ICQ and AOL instant messenger, were in development by Greenberg and his research team that enabled a robust and durable chat/work environment that be scalable for either the group or the individual. Greenberg also saw the development of video based chat interfaces, as essential tools for telecommuters and flex-time workers, who either by choice, network or circumstance were based out of the home and needed access to a more dynamic work environment of information transmission centre. The main concerns for a project like this for Greenberg were: 1. how to judge that availability of person on the other end, what do they see of the room as based on the interface of mediation; 2. the problem with the information of communication placed on a screen without any other devices, to prompt users, on either end, if a question needed to be asked or a conversation needed to get through.

In his demo Greenberg presented several interfaces that he and his research team designed, as well as several quick projects his students made using input-output devices interfacing with the computer. The first set of interfaces allowed communication to occur via direct video interface, users could type messages to each other as well as see each other's faces. The second set were more sophisticated as they allowed for access to a streaming video image or the lab space or office space that the recipient worked in, and allowed for the user to time when they wanted to speak with the recipient. The interface was also structured in such a way where there were "privacy" options that, once turned on would either turn the screen a different color, providing only the contours of the most prominent objects in the room, or make the entire video window blurry, giving only a general sense of presence. One of the most innovative or that tongue-and-cheek chat interfaces that let the recipient know that the user wanted to speak was a "whack the alligator" game, where alligators popped out of their hole, signifying an incoming message: the message could only be received, and the video screen would only come up after the alligator was "WHACKED".

Greenberg was only asked one question by Diamond, who was curious to find out if there had been any work done using interfaces that produced a smell or acoustic signals, as well as the capacity for subtlety of detection by the cameras and software used in the projects. Greenberg answered that they had tried to use a device that burnt scented wax, as well as the development of sensors that could detect shadow and pattern. One of the problems expressed by Greenberg was that with sound it was difficult to regulate the balance of sound or the level of sound depending on when a person was in the room or not, another level of interface would have to be developed for that type of room/proximity sensing.

Robert Nideffer, Assistant Professor at the University of California in the Studio Art department, and one of the panelists who carried over from the previous BNMI event "Unforgiving Memory", presented two projects: a long term JAVA based client called PROXY; and a collaborative project performed recently at a DARNET conference called UC digital Arts at the University of Arizona, that deal with the idea of agency. Nideffer described his project PROXY as a multiplayer text based game environment and ftp client dealing with control power and agency, or what it means to be positioned as proxy. Logging into a somewhat playful yet critical environment, the user is asked to fill out a personality chart that embodies three central characteristics that are accounted for in game play: the first ambition; the second anxiety; and the third alienation. The software, as well as the online representation of yourself acts (no matter) what in a dysfunctional manner based on what you entered into your chart, as you are positioned in regards to other players much along the lines (and this is a partial subtext to the work) towards other artists, academics, and rival members in community where resources are scarce. Users interact with one another on two fronts: the first is through the exchange of files that are uploaded through the ftp function, allowing sharing and exchange to occur; and secondly by battling discursively with other players the top theoretical issues of the day, in a designated but cliché theory speak (feminist, Marxist, masculinist, post-structuralist, essentialist etc). Players gain points with successive battles won, as well, are able to gain greater discursive skills in the practice area. Points lead to greater permission and ultimately greater agency.

The performance at the UC digital arts conference at Arizona State University, involved Nideffer as well as a number of other artists/theorists who decided to create a proxy for themselves at the conference by placing b-movie legend, Karen Black to act as their stand in or "agent". Black was outfitted with a wireless microphone and wireless camera that allowed Nideffer and co to channel their answers to questions, thoughts and insights. Although the group was working with ideas around the autonomy of the subject, what it means to have a live subject stand in for an artificial intelligence agent, their intentions regarding this event as a good place to exercise theoretical muscle and spurn stimulating discourse, turned into a rather dreadful time for Black as well as the proxy group. Due to the fact that the audience was presented with a living agent as a "stand in" for several key participants at the event, as well as the fact that Black was not the most obedient of subjects and from time to time voiced her 'own' opinions, the audience turned on her, which meant on the proxy group. Nideffer presented this project with both reverence and disdain, on part because he felt that there was a number of urgent theoretical questions and real life situations brought to the foreground, but it was done at the expense of the "feelings" of not only an individual but a group that was made quite hostile and quite uncomfortable.

Sara Diamond, who was also present at the event, was able to speak on behalf of the UC digital Arts audience as well as further contextualize the event for the "Human Generosity" audience. Diamond expressed that the performance of the subject position, in this case occupied by Karen Black, made a conceptual leap, making it impossible for the performers to know the situation and the setting in the conference room. The hostility then towards Black but the other UC digital Arts members should not be taken personally, as everyone in the room essentially understood the situation at hand. What became an issue was how smart of an agent, when it is remotely controlled, be when deployed onto rather precarious terrain. One of the problems Diamond found was that the agent did not perform,

technically her function very well as there were pauses and gaps between reception and answers of questions. Diamond also expressed, agreeing with Nideffer that audience members were put-off by their lack of participation throughout the event, missing a dynamic growth environment, and that it was a major blow to the conference that Black was put in a position where she was attacked. What was interesting about the project, Diamond went on to say was that it was a compelling visioning of what future human computer interface design could look like, as well it also addressed the question of presence to the point of physical abstraction, making a distinction between the inside and the outside on campus.

Anne Nigten, manager of the V2_lab in Rotterdam Netherlands, attempted to bridge the gap between open source processes and cultural production through the presentation of a current project in development by V2_lab's software design team, called DataCloud. The second version of a previous collaborative effort DataCloud 2.0" was the attempt at creating a visualized archival software program that would allow artist and/or users to upload work or texts, and provide the ground for chat and other forms of P2P exchange. What made DataCloud unique was not only the visual form it took (a cloud that was composed of multiple nodal points that could be zoomed into, revealing their contents) but that it acted as generative database that allowed for the addition of artifact and collaboration of participants in order to make it function. Objects that were added to the DataCloud as well were to be extensively catalogued with a rigorous set of metadata tags and headers, making the cloud not only more programmatically sound but searchable as well.

Alongside DataCloud, Nigten outlined the efforts of the V2_lab software team who were engaging with the development of software that could be used by artists and arts organization ranging from database to graphic tools. Nigten explained that it was a major concern for the lab to develop open source alternatives that could support database projects such as DataCloud, that would not only use less resources in long term projection, and would be available via the open source models of "copyleft" and or GPL (General Public License). In engaging with the development of graphic software tools, such as equivalent versions of Macromedia's Director and Apple's FinalCut Pro, proved to be large endeavors in their scope, but ultimately presented two productive possibilities: the first as the creation of software for artists that could be distributed as freeware, helping to facilitate not only the art, but the graphic worlds; and second the bonds formed between other arts organizations through joint efforts and resource pooling through the development of this variable medium.

Sara Diamond began the question comment period by saying what she felt, and which really echoed the consensus of the audience, that the collaborative ties formed through the process was the real strength of the project. Diamond however did express some reservation in how much time and resources where to possibly go towards this development that would be taken away from enabling the production of a greater amount of artworks, and facilitating artists to do so. In response Nigten said that the most important thing for them as a development unit was not the collaborative ties per-se, resting on the fact the primary channels had been established and were secure, but the dissemination of the tools for artists, who ultimately will be at a greater advantage with free gear. Diamond followed up by asking a question regarding the nature of DataCloud, and if it was in fact an environment where users can code new objects, that is add them without having to go through a network admin. Nigten responded wrapping up the session by saying

that artists and producers would be able to place their own objects in the cloud, recomposing their sites of interest and intersection with other artists.

Art Centre Graduate student and former practicing artist from Toronto, Matthew Sloly presented a body of work that intersected with DataCloud in that it attempted to render a 3D virtual space online, discursive. Considering these 3D spaces much in the way Hiedigger would, an “enframing” device or gestalt that set the ground for the development and discovery of potential. The potential for Sloly found form open-sourced multi-user online environments that allowed for flexible selves and variable languages to emerge. Working on collaborative virtual sculptures with Michael Heim, Sloly worked towards the creation of minimalist labyrinths that could be rendered to form new spatial formations online. Sloly also expressed a set of work that he had done with Miltos Manetas at the “Electronic Orphanage” in Los Angeles called “Worlds ++”, where Sloly used the multi-user software, “Active Worlds” to support and facilitate a chat environment.

Science fiction for Sloly also played an important role in the expression and development of online forms. Instead of following conventions of 3d modeling in space, Sloly sound to construct spaces that provided extensible interaction to occur between users. The work that was presented by Sloly apart from its theoretical support and collaborative strategy, found its aesthetic in a cross between super-modernist style and Russian Constructivist apparatus. His sculptures and worlds functioned much in the same way in that they both attempted to found an architecture, yet not provide a proper ground to support the polis, or that very development of a discursive space. This rupture allowed for not only engaging spaces to be created but, for Sloly to work with and avoid the limitations, frustrations and joys of software designed for online 3D environments.

Jeannine Parker, one of the original members of a web integration development team from the early 90's gave an historical account of communication as she described the move from the phone to the net, specifically text. Due to her position working in the department of consensus, Parker was sensitive to the changes in agreement that occurred as result of a change in media. Parker explained that new modes of social interaction were created as a result of chat and instant messengers, which was different from the phone community as it supported a greater range in the development of relationships. All of a sudden communities could be found and maintained through these online channels.

The discussion followed from this rather inconclusive presentation was lively enough as Clay Shirky took exception to Parkers notion of community as an arbitrary and accidental process. Shirky felt that communities were intentional as they were places for like minded individuals to hang out, that even in the case of accidental formations such as in the case of the most obscured sub-cultures would be enabled to develop more stable communities. Parker responded by saying that even though there were solid formations they were still ultimately subject to gate keeping as members were to determine who was in and who was out. It was however contested that there would be a reward system established in a community to keep people in place and in play that went beyond the interaction of just chat, but of course there was another concern raised to the point where consideration must be taken when streamlining these models along tech languages to make sure that the benefit to the user is properly articulated.

2: 45 – 4: 30pm

Building Systems, Building Tools

Wm Leler, Jakub Segen, Sheelagh Carpendale, John Tonkin & Sara Diamond from Code Zebra, David Furlow, Lizbeth Goodman

The afternoon and final session of the "Human Generosity Project" attempted to address work by scientists and artists who were specifically working with language systems, either in the form of code that produced database infrastructure, the direction of polygons to produce a 3D animation, or the facilitation and rendering of chat systems based on the intensity of discussion and semiotic analysis. The panel then moved from the consideration of open-source from a programmer's perspective as opposed to the cultural theorist's stance, into a discussion of two virtual puppetry or interactive animation systems, finding resolution in Sara Diamond's Code Zebra project.

Wm Leler, also a panelist who carried over from the previous event "Unforgiving Memory", spoke from a programmer's perspective on the terrain that embodies open-source, free software and extreme programming. Beginning with the heading of the conference and as a word of both hope and contention, Leler defined "generosity", differently as someone like Clay Shirky would, as the process of giving in order to get back something in return. Leler felt that most people gave of themselves to get something back, to the point that he saw the so-called war between Microsoft and Linux, not as a battle between "good and evil", or even one about market share but rather about attempting to gain greater access to the skills and apparatuses of production. Leler continued his critique of software in general by saying that the current state that software is in is "rather dismal" in that even operating systems that have practically unlimited funding such as Microsoft Windows 2000 is still riddled with bugs. Although one of the solutions to this would be the opening up of Windows to open-source groups in order to speed up development, and attract good programmers by providing incentives, Leler described complex programming processes as much about innovation as they were about carrying code over from the previous version, refining and renovating. This practice leads to both a greater ease of development, as generations of code can be brought forward but it can also present problems if the proper programmers are not on staff to add or fix deficiencies that were originally in the software. Leler described Sun Microsystems as having the best JAVA programmers in the world but that they have problem with code for proper browser interfacing because they don't have the resources to hire a team to fix those problems. This is the case for all complex and large scale projects.

Within the open source sphere, Leler made a distinction between source and binary, as two types of code that have been distributed alongside the actualized software. Binary, is precompiled code that does not reveal the programming process that makes up the software and it becomes difficult for other programmers to decipher the inner workings and structure. Source on the other hand provides completely the full source code and operating structure of the software, allowing for redevelopment as well as borrowing, to occur. A programmer needs the source code to actually do what he or she wants to do. Leler then made the proposal that programmers should move away from interpreted languages as there was greater potential or intervention to take place in compiled languages and scripts as the engines to perform such tasks were freely and widely distributed. In considering generosity alongside the distribution of source code, Leler presented the argument that generosity did not really cause such a radical fuss as people were thinking and describing. For Leler open-source was essential to the computer programming environment, but didn't need to be made into such an ordeal, as he cited the example of the code for web

pages readily available for use helping web development and graphic design, and the acceptance for that. One of the most exciting and progressive things that Leler described however came towards the end of his presentation as he spoke about a new mode of production in the programming world called “extreme programming”.

Unlike traditional programming where an individual programmer works almost autonomously on a task that is later to be compiled as part of the larger piece of software at a central or (an)other location, extreme programming requires two programmers working on the same piece of software, at the same time, together. The process is fundamentally different because ‘how’ the programming is performed is radically altered. Extreme programmers when working together, act like skiers racing down a hill, each pushing each other to see who will make it down the fastest without a specific recollection of what exact lines they took over the course of their journey. Extreme programmers then don’t establish a long terms sketch of a project as their projects are made complex and complicated but ultimately are to be completed in one day. Plans are made for where and how code is to be arranged daily, as the problem or task at hand varies as localized problems such as security holes or the integration of new software components is truly done with a “rush and a push”.

Leler, after his engaging and somewhat contentious presentation was first asked a question by another programmer/pirate of sorts, Jason Roks who wanted to know if there were any copyright infringement mechanisms in place for GPL, and then how to sustain the operation of clients that were open source yet still needed to be part of a capital matrix. Leler didn’t have a direct answer for either question per-se, but he did provide an interesting insight regarding open-source and the usability of software, saying that traditionally software (such as Unix) has been open sourced when it no longer has a useful function, thus making the salvage and reconstruction effort remain both inside and outside the dominant sphere of proprietary software production. Sara Diamond then made a comment finding the description Leler presented of extreme programming to be quite compelling as it urged a change in programming discourse from copyright and ownership, to collaboration and pleasure. Leler agreed, saying that put into question those old models regarding collaboration, he did however reveal one of the fundamental reasons for the proposal and implementation of extremem programming: the protection of copyright by having programmers work extremely fast on bits of code not allowing them to develop much of a memory for what they had done. Mary Flanagan, took exception to comments made that extreme programming was any different from traditional programming environment, as programmers were in constant chat with one another. Leler disagreed however saying that extreme programming is like programming backwards, where no trail is left over from what has been done, the history, although a substantial project remains, has been obliterated. Lev Manovich, taking the position of a cultural critic and in someways art historian or art curator, found that he did not see anything new in terms of developments in visual cultural dynamics as a result of open-source. Although this statement could not necessarily be disputed, Clay Shirky shifted the conversation back to economies of practice, saying that the spillage for open-source will come in the form of service. People using those services will have the modes and means to produce aesthetic changes. Diamond also countered by saying that open-source, and this type of programming was really about expanded literacy, and of course would have an impact.

Former Bell Labs researcher, Jakub Segen, presented several recent projects incorporating the emerging technologies of computer vision, gesture recognition and

voice over IP. Segen founded his research in the development and articulation of alternative interactive interfaces with the computer that could have both practical and entertainment application both on and off the network. Ambitious in his attempts to merge computer visioning techniques, where cameras perform gesture recognition on the body, Segen was currently integrating these systems with web browser navigation systems enabling the user navigation through the internet without having to be stationed at a PC. The apparatus of analysis for the browsing subject was described by Segen as rather sophisticated, not only in the integration between camera and gesture, but voice recognition as well, allowing manipulation of images and objects on screen. The programming language Segen was using was primarily C, but incorporated the open-source GPL graphic libraries as well as a wireless voice transmission protocol called RAT. RAT was able to change an audio stream, which usually takes on an analogue logic in regards to memory, into a list whereby it could parse and located key words. This protocol then allowed for integrated and lightweight voice recognition. RAT combined then with the gesturing software would develop a matrix of nodes on a series of lines with intersecting trajectories. The core software then would be able to interpret if there were any mistakes or misunderstandings in either the voice or gesture recognition duo.

Segen moved to show and describe a recent project presented at SIGGRAPH 00', where he had installed a program that read the gestures and movements of users waving a baton like a conductor. Dependent on the frequency and rate of gesture, users were able to control a line of dancing 3D characters on a screen in front of them. Accompanied by a score of music that sounded like it could be located somewhere in the early part of the twentieth century, users were asked to be the conductors of this dancing band of stick figures. When the user waved the baton quickly, the dancers would pick up the pace moving from front to back and side to side across the screen, kicking their legs up high. When the user truly acted the part of a conductor and slowed their pace to almost a grinding halt, the dancers would decrease in size and move along the far horizon of the plasma screen.

In simpatico with Segen and a rather well planned addition to the discussion on virtual models and the translation of human action into screen event, Lizbeth Goodman, who had missed her presentation slot on day 2, spoke about the recent developments at SmartLab, UK. Goodman described SmartLab as a burgeoning research/media lab development facility that was initiated by the University of Surrey and was supported, in part by the British Broadcasting Corporation, to promote and facilitate distanced learning. Working with more of a distributed model, where sites throughout southern England, in between London and Surrey, could be used as educational centers, SmartLab was attempting to articulate this educational framework. SmartLab in conjunction with the University of Surrey was also give PHD granting status that allowed the intersection to occur between research and development communities on both sides of the graduate divide. Goodman was experiencing some difficulties with in part by spearheading the project due to the granting structure in the UK, which demanded a fictional set of narratives around what projects will be carried out in media space, to centres that did not have a history and therefore would not know projected project outcomes and expenditures. SmartLab however was working in many ways on an improvisational speed negotiating between other media institutions in the UK in order to provide an active site for online learning, and really the development of interactive narrative and performance. Although Goodman did not present the virtual puppetry projects at "The Human Generosity Project", their group has been developing a performative system and apparatus that allows human dramaturgical disposition to interact with a

cast of twelve foot tall programmed, responsive and interactive puppets. SmartLab, due to their negotiation between undergraduate and PhD, as well as between professional software development and the hosting of artists as researchers has also provided a context for artists to participate in the discussions regarding the development of software tools, ultimately having an impact.

Following Goodman, Sheelagh Carpendale a computer scientist from the University of Calgary, specializing in computer graphics, texture mapping and information visualization acted as a bridge between two and a half days of individual presentations and the final group presentation to be made by the Code Zebra team, capping off the event. Carpendale began by expressing the difficulty in creating effective and appropriate visualizations of complex data sets in 3D form. Because of this incongruence between numbers and visual images per-se Carpendale described the process a one of interpretation and abstraction, non-spatial in its design. Carpendale went to make the important distinction between information visualization and information design, where information design is the practice of determining how data should be structured, such as in the case of database; whereas information visualization accounts for what the data is too look like. Information visualization, as it has emerged alongside the development of the greater graphics capabilities of computers, has become an eager but young field. Meaning that there is a greater history of agreed upon practices used in the structuring of information, as opposed to how dynamic data sets are too look in a graphic form. Due to the relative newness of this type of practice rendered on computers, Carpendale issued a call for the development of a number of libraries or open-sourcing of other computer scientist's algorithms and research developments in order to make the process, generative and generational. One possible strategy that Carpendale offered for this was in fact quite similar the extreme programming model, explained earlier, where the representation of the dataset would be made cellular and not localized, allowing developmental trends and efforts to be directed in sustained bursts on focused areas, thus allowing the rendering of something like complex proteins, or DNA models, to become plausible and dynamic.

Sara Diamond switched roles from moderator to artist as she introduced the collaborative project she is heading called *CodeZebra* (CZ). Diamond began by describing CZ as a collaborative communication system and pattern generation machine that attempts to determine the emotion and tone of conversations and debates through color coding and visual on screen location. Artists and scientist's fulfill the function of those who engage in the debate as the representation of their chat data takes the form of voronoi structures, based on reaction diffusion algorithms. According to a narrative or 'primal scene' that places both artist and scientist in a mangrove swamp, embodying a zebra and an ocelot, respectively, participants are grouped as a specific animal in accordance with the type of data they produce. Patterns are generated from this new subject position for the participant that are based on reaction/diffusion patterns developed in collaboration with Marcello Walter and Diana Dominguez. Participants engage within an active pattern field each time they post, changing their relationship to both other users and to the animal pattern relationship they have established. Users also have the ability to cast themselves into the historical record of their posting and chat engagement. Through the visualization of chat data specific to the user and 3D visualization will be created when the user hovers overtop of their 'moniker' or online identity, allowing an entry into past encounter.

David Furlow carried on from Diamond, to explain the gaming function fashioned into the *CodeZebra* chat space. Dependent on animal grouping, the games serve the purpose of extending dialogue outside of the realm of 'pure' chat between participants. These games, which are primarily language based, and surrealist in both hilarity and absurdity, force users find new consensus around shared knowledge, definitions, and traditional roles or positions. The games are initiated once a threshold is reached, as an indicated rupture in the event horizon by a series of 'dumb' artificial intelligence agents (AI) that determine the type of game a gamer is playing. The outcome of every game session is mapped onto the historical timeline of the moniker, as users recall what went wrong and where turning points occurred.

John Tonkin, JAVA programmer and prototype developer for *CodeZebra* closed the circle, providing insight into the functional apparatus of the game. Tonkin described the chat process as similar to a peer-to-peer model that was bound within a narrative apparatus. The chat experience of *CodeZebra* was enhanced through the collection, organization, and reinterpretation of user data allowing for analysis to happen over a geography and interpretation to occur over a sometimes rocky, sometimes placid terrain. The data retrieval was to be based on a number of dumb AI agents that checked sentence structure in the postings of users to determine what animal category they belonged, what pattern is to be developed or mapped, what color relationships would occur, and when games were to be played. The AI agents ranged from the subtle to direct in their reading allowing for a drift in determination, where the change in user patterning occurs after the repression barrier is breached.

After the *CodeZebra* team finished speaking, Sara Diamond opened up the final question period, as a chance for participants to either comment on the project or to offer final thoughts in regards to the event as a whole. Lev Manovich was the first audience member to address the *CodeZebra* project, where he asked the group to consider other historical examples of the organization of language, such as that found in poetry, as well as physical or body articulations found in dance. As a suggestion for their artificial intelligence intervention, Manovich asked that they look to the financial world for examples of sophisticated implementation of data analysis tools. Diamond responded saying that, there was an attempt to look more at a discursive environment, engaging with the rhetoric of poetics, but coherently attempting to deal with gaming and conversation. Adam Chapman added, as he commented on how beautiful the interface and interaction functioned, asking if they were considering a fabric line to be printed as based on the patterns generated. Diamond responded that the fabric ideas were certainly in the work, as she thought of that as one of the engaging features extending beyond the interface.

Moving to general impressions and suggestions for the conference, Celia Pearce suggested that if the "Human Generosity Project", were to have a sequel for to include debates around the post-human, techno-human and the human engaged with play and pop-culture, including some of the threads found in places like E3 (Los Angeles annual gaming conference). As a representative of the Canada Council for the Arts, and in attempts to summarize some of the key aesthetic discussions that occurred during the event, Marilyn Burgress posited that the distinction and emphasis between remix and collage be looked at transnational flows of value, and that we should question this idea of the mythical author along with the truth function he/she brings in regards to distinction. Andruid Kerne added to the notion of generosity asking the audience to think outside of the realms of capital production, and work in the scalable fields each had an impact on. That is for software designers, artists theorists and engineers work together to form economies that, if not topple

the entire capitalist infrastructure, provide zones for alternative economies to emerge. Clay Shirky, who had presented a set of succinct and plausible arguments in regards to economy over the entire summit, responded to Kerne in defense of capitalism, saying that capital was one of the few that worked well globally, enabling greater networks to be established and fostered counter-point to form, within the local, thus bringing about a reconsideration and revaluing of social bonds and communication. Neil Seiling put forth the last comment for the event, which provided a radical spin, in that he urged panelists to consider like Luckas did almost a century ago, to pursue critiques that attempted to do better than the established order, providing a context and concretization of a jumping point. Human generosity is very much that first step.