Web-specific art:
the possibility to reach a greater audience without
losing characteristic of the works of art.

by

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iv</td>
</tr>
<tr>
<td>CHAPTER 1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>CHAPTER 2. UNDERSTANDING NET.ART</td>
<td>6</td>
</tr>
<tr>
<td>CHAPTER 3. ARTISTIC INFLUENCES</td>
<td>10</td>
</tr>
<tr>
<td>CHAPTER 4. TECHNCIAL PROCESS</td>
<td>18</td>
</tr>
<tr>
<td>CHAPTER 5. RESULT AND DISPLAY</td>
<td>24</td>
</tr>
<tr>
<td>CHAPTER 6. CONCLUSION</td>
<td>32</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>34</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>35</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>36</td>
</tr>
</tbody>
</table>
Artists have always been experimenting with new media. The history of new media parallels the development of technology. For thousands of years, artists have been utilizing conventional oil paint or ink as their medium. Technological achievements of mankind has accelerated since the industrial revolution of the late 19th century. Today, technology is rapidly changing and with it, the artist's field is expanding. Not frustrated by technological change, artists who employ new media – such as video, computer, and photography – see themselves as part of this change and wish to participate in it.

These artists are stimulated by the possibilities of new technology, not alienated by them. Like other artists who work in paint, wood or steel, these artists explore, and often subvert both the critical and technological potentials of the new media. Those technological advances have come from forward-thinking artists who probed the uses of media in their work (Rush 1999, p.9).

Of all new media introduced to art this century, the author chose to use the World Wide Web (WWW) as a visual art medium, because of its ability to reach a greater audience. The author's goal for this thesis is to inform viewers about his approach to making web-specific art.
CHAPTER 1. INTRODUCTION

When the author was young he was fascinated by new technology. Originally introduced to the computer in the fourth grade, the author vividly recalls spending night and day in front of it, enthralled and dizzy by the possibilities this new device possessed. At that time, it was an entertainment tool for the author. Due to academic pressures in high school, he had little time for computers. However, he was reintroduced to his boyhood fascination again in college. This time around the author used the computer as a creative tool for his art projects. He started using Photoshop as a painting tool, scanning his drawings and adding color. In graduate school, he continued to explore his interest by integrating computer-generated images with paintings. He began transferring scanned or computer-generated images to canvas using heat transfer paper (Figure 1). In this process, a computer-generated image was printed on heat transfer paper and the image was then transferred to canvas by

Figure 1. Sangbum Kim, “CP#1,” 1999
pressing it with an iron. He endeavored to incorporate new technology to his paintings.

As an artist, the author has always yearned to communicate with others through his work. In 1999, he began learning to use HTML (Hyper Text Markup Language, or rather, code used to format web pages for use on the World Wide Web) hoping to use the World Wide Web as a tool of communication. He learned HTML in order to display his work on the net – Art on the net. First finding HTML to be a simple, practical way for him to display his paintings, drawings and photography on the web, it was the author’s hope that with such a medium, he could reach a greater audience. With time, he realized that the web was, in its own way, an entirely different medium than painting. The entire image was transformed simply by scanning slides of paintings and drawings. More provoking yet was the author’s realization that by the time he posted the images onto his web, the original works no longer existed. Size, texture, color and many other elements were altered in the process. As he learned HTML coding, JavaScript (a scripting language developed by Netscape to allow designers to add interactivity to their websites) and other web design related skills, he realized the potential of the web as a visual art medium – art in the net. He thought if he could create works of art exclusively for the web for people to view through a web browser, he could reach his true objective: reaching a greater audience without losing characteristic of the works of art.

As the author began experimenting, he found out more and more artists were using the web as an art medium. “The web has opened up an entirely new arena for artistic endeavor – the creation of interactive works accessible to anyone with computer and a modem”(Rinder 2000, p.1). The author believes artists like Mark Napier made it possible to
distinguish more clearly between **art on the web** and **art in the net**. Andreas Broeckmann explains the difference between **art on the net** and **art in the net**:

**Art on the net** uses the Internet as a distribution medium, whether in the form of the virtual galleries, i.e. displays of 2-D artworks, photographs, computer graphics, etc., that in themselves bear no relation to the Internet, or in the form of a channel for conceptual artworks, in which case the Internet is an effective but potentially replaceable presentation tool. **Art in the net** is germane to the medium of the electronic network: it plays with their protocols and technical peculiarities, it exploits the bus and pushes the potentials of software and hardware – it is unthinkable without its medium, the internet. At the same time, art in the net shows a keen awareness not only of the technological, but also of social and cultural aspects of the Internet, and plays on them through hybrid, intermedial artistic strategies (Druckrey 1999, p.438).

The author’s initial use of the web as an art medium was, to put it lightly, an amateur effort. In 1999, he created three works (figure 2, 3 and 4) that were based on simple JavaScript, HTML, QuickTime VR (Apple's photorealistic cross-platform virtual reality technology), and gif animation (“gif” or Graphics Interchange Format is a bit-mapped, compressed graphics file format that is a standard for displaying images on the web). After learning the medium, he began to realize that his interest in producing net.art\(^1\) was equal to if not greater than painting. What attracted him was creating net.art that could be viewed anywhere and anytime in the world with a computer and Internet access. By using HTML and JavaScript, he was able to achieve simple interactive functions, yet he felt as though he needed something more. He wanted to add sound. The author felt and maintains to this day that the most powerful element at the disposal of a new media artist is sound. When

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\(^1\) In December 1995 when Slovenian artist Vuk Cosic opened an anonymous e-mail only to find it had been mangled in transmission. Amid a morass of alphanumeric gibberish, Cosic could make out just one legible term – “net.art” which he began using to talk about online art and communications (Greene 2000, p.164). In 1996, the very first net.art-meeting net.art per se was held in Trieste, Italy. The term net.art was ‘officially’ defined by Natalie Bookchin and Alexei Shulgin in their ‘Introduction to net.art (1994-1999)’ (Desk Organization 2002, p.1).
combined with images and motion, it can convey unstoppable emotion. By incorporating sound to the interactive functions HTML and JavaScript offered, the author believed he finally had the capability to create a composition that changed as viewers explored the screen. The author's desire for his work to surprise and excite, yet allow for viewers to explore as well as have a key role to play in the outcome of the composition by the path they took across the screen, had been realized.

Figure 2. Sangbum Kim, "Welcome," 1999
http://www.public.iastate.edu/~sbkim/xperiment.html

Figure 3. Sangbum Kim, "Mine Field" 1999
http://www.public.iastate.edu/~sbkim/xperiment.html
Figure 4. Sangbum Kim, “West and East” 1999
http://www.public.iastate.edu/~sbkim/xperiment.html
CHAPTER 2. UNDERSTANDING NET.ART

When Marshall McLuhan wrote these words in 1963, net.art was still decades away.

After three thousand years of explosion, by means of fragmentary and mechanical technologies, the Western world is imploding. During the mechanical ages we had extended our bodies in space. Today, after more than a century of electric technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned. Rapidly, we approach the final phase of the extensions of man – the technological simulation of consciousness, when the creative process of knowing will be collectively and corporately extended to the whole of human society, much as we have already extended our senses and our nerves by the various media. (McLuhan 1964, p.4)

McLuhan’s words are more easily applied to net.art than to any other art form. The web acts as a corporeal extension, bringing people experiences, conversations, images, sound and video. Because of its accessibility, it is a compelling artistic medium. The web can synthesize many media, and these media can be distributed through the network. According to artist and writer Andrej Tisma, “Net.art works are created exclusively for the Internet, for its language and technical capacities, and they address solely the users of this world wide computer network. Therefore, not only are they created in the language of the network, but are the most comprehensible and most effective in that environment and communicable by network distribution and presentation, i.e. through computer monitors and speakers. It is the configuration in which those works are at their most natural and in which they facilitate an active attitude of the viewers during reception” (Tisma 2002, p.1).

Art critic Clement Greenburg insists that each medium has its “own” characteristic. According to Greenburg, “For flatness alone was unique and exclusive to pictorial art. The enclosing shape of the picture was a limiting condition, or norm, that was shared with the art
of the theater; color was a norm and a means shared not only with theater, but also with sculpture. Because flatness was the only condition shared with no other art, modernist painting oriented itself to flatness” (Greenburg 1961, p.104). For Greenburg a defining characteristic of painting was its flatness. As a painter, the author also thought flatness was a major characteristic of painting, yet the author believed that painting must also allow for optical illusion. The author labored to better understand the characteristic of flatness in order to establish it more firmly in his area of competence.

What are the characteristics of net.art? According to Andrej Tisma, there are three characteristics of net.art: Action or Interactive Nature, Hyperdimensionality and Immateriality (Tisma 2002, p.1). The author believes that no single characteristic in and of itself is unique to net.art. To the contrary, he feels that the web is the only single medium to which all three characteristics can apply.

**Action (Interactive Nature)**

During an email interview with Mark Napier, he indicated that “the essential character of the web would have to be action. Viewers can take actions such as clicking or moving images, and activating the artwork. The piece itself can take action, maybe in response to the viewer, or in response to some other factor. That means that time plays a big role in this art form. How does the piece move over time? Over short periods? Over long periods? Can the user influence the piece instantly? What happens if they continue interacting for a longer time?” (Napier 1999, p.1). In net.art, viewers choose the paths and links they will take to move through the work. They are often in a position to build their own text, visual, or other contents as a kind of commentary or an essential element of their work.
Viewers then activate numerous elements of the work – picture, sound, animated and video fragments – thereby developing their appreciation of the work through an active experience. Net.art encourages viewers to create their own narratives.

**Hyperdimensionality**

Another characteristic of the web is its hyperdimensionality. It is the author’s belief that hyperdimensionality is the reason he embraced net.art. Because net.art exists in the network, it can be in many places simultaneously. The author’s works can exist on many people’s computer at the same time. When it comes to reproducibility, hyperdimensionality places net.art at the top in the age of mechanical reproduction among all other media art. The very distinction between original and copy becomes meaningless in the net.art world. Net.art can connect different places, by linking people into a dialogue through the artwork itself. Because net.art is a real-time worldwide network, it allows for a level of collaboration between two or more people. This hyperdimensionality characteristic makes net.art available to viewers world wide simultaneously. Unlike video art, net.art artists can achieve hyperdimensionality at a low cost – in some cases it may not cost anything at all. The video artist Nam June Paik often said that someday the TV guide would be as thick as the Manhattan Yellow Pages and that every artist would have his or her own channel (Pinchbeck 2002, p.1). That bold prediction never came true because of commercialism in TV. However, this could become true if every artist gets his or her own web site. For the author, finding a medium in which he could achieve such a characteristic while spending relatively little money was a dream come true.
Immateriality

The third common characteristic of net art is immateriality. Some may find it peculiar that a web work, in actuality, does not exist in real space and material form, but only as a digital code on a computer disc. “All information is reduced to binary code, a series of zeros and ones, creating a dynamic arena in which images and objects can be melded, morphed, or made to disappear” (Rinder 2002, p.1). It can be perceived only on a monitor and speakers, in the form of thousands of glimmering pixels and sounds, but only after a web browser and plug-ins decode the binary code, thus making it both viewable and audible for the receiver.
CHAPTER 3. ARTISTIC INFLUENCES

For inspiration the author, like many artists, looks to the work of others, and builds upon ideas from his studies in pursuing creative endeavors. Artists do not work in a void, and thus are continually influenced by their experiences: what they have seen, heard, felt and read.

Pop Culture

In this information highway society, the author thinks it is commonplace for artists to be influenced by or from pop culture. The author finds inspiration in everything around him: magazine, television, cinema, Internet or just everyday life. He does not have any prejudice regarding the things that surround him, and as such, concurs with the following words from pre-pop artist Robert Rauschenberg:

“I was bombarded with TV sets and magazine, by the excess of the world, I thought an honest work should incorporate all of these elements” (Hunter 1999, p.100).

Pop artists sought to stress all that was wonderful or ambiguous in most ordinary objects, often in objects that nobody stopped to look at or to admire. Ever since the author was an undergraduate he was intrigued by the work of the pop artists of the sixties. He found the approach used by Rauschenberg, Johns, and Warhol very appealing and was fascinated by their choice in subject matter. Their use of everyday images, objects, and situations made him look at his own everyday surroundings differently (figure 5). Dorothy Secker talks about pre-pop artist Robert Rauschenberg:
As he discovered how quickly the disreputable castoffs were estheticized (the beauty of a rusting license plate, for example, became apparent to everyone), he abandoned his combines and began to compose with images daily disgorged by the press: the split-second action that takes place on the baseball diamond, in a parachute, in a traffic clover-leaf, at a Forth of July parade or among the swinging clubs of riot police. Photograph sections were transferred to canvas by silk-screen process (Seckler 1966, p.73).

Pop artists injected a new vitality into each of these approaches, often basing their work in the principles of collage and assemblage as a way of opening their art to a plethora of sources equally available to everyone through the mass media. Whether using these *objets trouvés* (found object) in their raw form, copying them by hand or replicating them by resource to mechanical techniques such as photography or screen printing, they made a point of drawing attention to the fact that they were merely recycling motifs and artifacts that already existed (Livingstone 1991, p.15).

![Figure 5. Robert Rauschenberg, “Retroactive I” 1964](image-url)
Barbara Kruger is a contemporary artist who has influenced the author’s work. Her images are elaborations of pre-existing images and are a comment on mass culture and reproduction as representation. She rephotographs and reformulates images to assign them different meaning by adding texts and other graphic elements (Lovejoy 1989, p.112) (Figure 6).

Figure 6. Babara Kruger, “Untitled” 1987

A pop artist Rosenquist also influenced the author greatly. Rosenquist juxtaposes realistically mass products such as cars in out-of-scale relationships to other pictorial elements to make viewers see more clearly, while at the same time proposing a deeper mystery (Lovejoy 1989, p.66)(Figure 7).

Figure 7. James Rosenquist, “I Love You With My Ford” 1961
The idea of using every day objects or juxtaposition of images from pop culture and assigning different meanings to them has been a significant influence for the author.

**Nam June Paik**

Korean Born video artist Nam June Paik was always at the forefront in appropriating new video technology, such as at the Sony Portpak in 1965. Paik employed the dé-collage techniques of deconstructing images and techniques through chance procedures in order to expose their hypocrisy (Hall 1990, p.75). In *Global Groove* (1973)(figure 8), produced through the Television Laboratory at WNET in New York, Paik introduced a global model of artist’s television. In this work, Paik developed a collage technique by synthesizing images from a variety of sources (Japanese television, avant-garde filmmakers such as Robert Breer and Jonas Mekas, and other artist from John Cage to Korean Folk dancers)(Hall 1990, p.75).

![Figure 8. Nam June Paik, "Global Groove" 1973, Stills from Video](image-url)
Growing up in Korea, the author had the opportunity to learn about Paik and see his work. The author vividly recalls watching Paik’s global satellite project *Good Morning Mr. Orwell* (Figure 9) live in 1986. Though too young to understand his work, the event left a deep impression in the author’s mind and has taught him that new technology can be used as an art medium. Thanks to Paik and his work, the author acquired the belief that visual art is more than just paintings, sculptures and drawings.

![Figure 9. Nam June Paik, “Good Morning Mr. Orwell” 1986, Stills from Video](image)

**Mark Napier**

Mark Napier, a painter turned digital artist, packed up his paints in 1995 to create innovative artwork exclusively for web. His *dmachine* (figure 10) uses JavaScript to display and hide the images, and detect mouse movement. He explored interactivity, and created a composition that changed as the viewer explored the screen, so that their mouse movements could trigger many different possible combinations of images. He wanted the viewer to play an active role in his design, to find the different artworks by exploring them. The author was influenced by that fact that Napier used the web as the art medium. The web was his raw material. Thus he created art from software that is readily available to anyone with access to its medium.
Technology and New Tools

In a medium heavily dependent on technology, these technical changes ultimately became aesthetic changes. The author can only express something visually according to the limits of a given medium’s technology (Hall 1990, p.103). In painting and sculpture, it is the concepts and uses of materials that change in the art. With technology-based art, the medium itself radically changes when the technology changes (Rush 1999, p.192). File size is a major issue as it applies to the web. When the author creates work, he tries to keep file size small. Because of the limit of the file size, his work tends to be small in dimension, employing a good deal of video and sound loops. As the bandwidth (a measurement of the
amount of information that is transmitted over a network at a given time) of the networks, software and hardware improves, the author’s work will change in scale and style. John Sanborn talks about the artist’s use of tools:

Our use of tool is what separates us from the rest of the animals. Our sophistication with various form of technology (from the knife to the atomic bomb) defines us as “civilized” creatures. The Artist has always defined his tools as part of the creative process. Paintings are steeped in color theory, the texture of the painted surface, and the tactility of the paint itself, as much as with the subject being painted. Music written with the sound of an orchestra or the abilities of the recording studio in mind, with the merger of compositional form and musical “content” resulting in a work of art. It is not surprising, then, to think of the charcoal used for cave drawings, the pencil, or the piano as the advanced artistic technology of its time (Druckrey 1999, p. 368).

Twenty years ago, computers offered a palette of 64 colors. Today, a computer can produce a hyperrealistic 16 million colors and store more than 100 gigabytes (GB) or the equivalent of 100 billion written characters of information. The computer runs all the necessary programs the author needs and stores the information generated, allowing the author to sketch and experiment before his work goes live in the web. The author’s project was possible with the aid of a low-cost digital video camera, editing software and FireWire (one of the fastest peripheral standards ever developed). Using FireWire and iMovie (video editing software from Apple), he could transfer digital video data to his computer. Using iMovie he was able to edit and export in a format and size the author desired. Flash (a bandwidth-friendly vector-graphic animation software) has given him the opportunity to pursue those images that would have otherwise not been possible. Flash can generate a SWF (the file format used by Macromedia Flash to deliver graphics, animation and sound over the Internet) file that includes animation, audio, interactive video, bitmap graphics and vector
graphics. A SWF file can contain all the multimedia and can be viewed in a web browser with a plug-in called Flash Player. According to Macromedia, as of June 2002, Flash Player is used by over 436 million people – the most widely viewable rich client technology to deploy content and applications (Macromedia 2002, p.1). Without Flash, the author would have likely taken a very different creative path. His work would have not been able to achieve the level of animation he currently employs via Flash. Further, without Flash, the author’s work would assume a far more static look and be devoid of sound. Indeed, the result would have been very, very different.
CHAPTER 4. TECHNICAL PROCESS

The author's goal was to create web based interactive art that was more personal with images that were related to his interest in using popular culture; both images and sound. To achieve his goal, he tried many different technical approaches. He experimented with JavaScript, QuickTime and GIF animation. Yet in the end he found that using Flash was the best method in which to achieve his goal. It was the perfect tool because of its ability to both handle multimedia with interactivity and to optimize movies in a reduced file size. While the author was developing the process to achieve his goal, he realized that the process was becoming as personal as the finished art. In this section, the author will review the process involved in creating one of his works using *Duck And Hide* (figure 22) as an example.

First, the author selected the footage he was going to use. He recorded television as he was watching it using a VHS video recorder. Later he transferred the footage to a Digital Video (DV) camcorder through a cable. Once he had his DV formatted footage on mini DV tape, he captured the footage into iMovie connecting the DV camcorder and computer using firewire. In iMovie, he took the footage and cut it up into small useable clips to use in his work later on. (Note: a video-editing tool such as Premiere or Finalcut Pro could be used instead of iMovie.)

Finally finding a clip with which he was satisfied, the author exported the clip as a Quicktime movie file. Since file size is such an important factor in the online world, the author kept the clips fairly small in dimension – usually 320 pixels wide and 240 pixels high (figure 11). He then set the frame rate to 10 frames per second (figure 12). His footage, in its DV state, ran at 29.97 frames per second, but he did not need that many frames to create his
animation. Furthermore, if he ended up using all the frames, his animation would be far too large. Thus he did not bother to apply any compression, since he was going to import into Flash, since it would compress all the files on its own. Because of this, he exported the files at the highest quality possible.

Figure 11. Expert QuickTime Setting

Figure 12. Compression Setting

Once the author had the footage in QuickTime format, it was time to make take the QuickTime movie into the PICT (the Macintosh native picture format) sequence. Creating a file in Flash, setting the frame rate to 10 (the author matched it to the frame rate of the Quicktime file) and setting the dimension to 320X185 (figure 13), the author imported the QuickTime movie to Flash and placed it at the first frame. He then added frames in the
timeline. At this juncture, it was time to export as PICT sequence. Flash named the files sequentially, the author named “nuclear” as his base name, and frames were named nuclear0001.pic, nuclear0002.pic, nuclear0001.pic and so on (figure 14).

Figure 13. Flash Movie Properties

Figure 14. Exporting Flash as PICT Sequence

The author again created a new file in Flash. He then imported the PICT sequence files. He selected the first PICT file in the import dialogue and clicked import. Flash offered to import all files in sequence (figure 15). At this point, all of his frames were sequentially in
place within his Flash file. He had to adjust the pacing and timing on the clip until he stumbled upon the speed and duration that worked best for him. Trial and error played a major role here: elongate certain frames, shorten others, or eliminate redundant frames from the file. After the author had paced the clip and cleaned it up, he added sounds into it and created interactivity using action script. He added action in the frame for the looping effect (figure 16) and also added action to the button for interactivity (figure 17). When he was satisfied with the result, he exported the movie as a SWF (the file format used by Macromedia Flash to deliver graphics, animation and sound over the Internet) – and set JPEG (Joint Photographic Experts Group, a lossy compression technique for color images which has become a standard for displaying images on the web) quality to 35 and Audio Stream to MP3, 16kbps, Mono to reduce file size (figure 18) – and brought the SWF file into html.

Although he used several software systems, the author believes Flash is the most important software “tool” in the processes of making his interactive net.art. Flash is a vector based animation tool. The author was told that Flash is not designed to handle non-vector-based elements – such as photos or movies. Questioning the validity of what he had heard about Flash’s capabilities, he tested its limits, and was pleased to find that it could not only
handle photographic images, but do a superb job of handling them. This breakthrough came in handy for what the author desired to do. Thus he developed the ability to execute and control the entire process in Flash.

Figure 16. Applying Action Script to Frame

Figure 17. Applying Action Script to Button
Figure 18. Exporting Flash file to SWF file
CHAPTER 5. RESULT AND DISPLAY

As a result, the author created short web-based interactive narratives using Flash. In 1999, he purchased a domain name called bananamilk.com to use as his studio space. As of May 2002, he had a total of 10 interactive works in display in http://www.bananamilk.com. All the works can be accessed through a web browser with a Flash player plug-in.

Figure 19. Sangbum Kim “This is Roast Beef” 2002
http://www.bananamilk.com/main.html

This is Roast Beef (figure 19) contains five video loops. It allows viewers to navigate by clicking the asterisk symbol. In this digital age, television never stops broadcasting. It has become a symbol of commercialism. After regular programs are aired late at night, infomercials are broadcast. Now programs have become commercials, or maybe commercials have become programs? This is Roast Beef was inspired by one infomercial the author was watching one sleepless night. The infomercial often shows the same scenes over and over again. The repetition is hypnotic and mind-numbing.
CP#1 (figure 20) contains five video loops. Viewers can navigate by clicking a hidden button. Four buttons are hidden in the image of the checkpoint. When viewers move the mouse, the image reacts to it. When the author was in the Korean Army, he was stationed on the border between South and North Korea. Everyday for nearly two years he observed the North Korean checkpoints. It was less than 100 ft. away, yet it was not possible to get any closer. Watching a television documentary about the Korean War reminded the author of the significance of those checkpoints.
Help (figure 21) has six video loops. Clicking three buttons in the middle will bring viewers to a different stage. Due to the terrorist attacks that occurred on September 11, 2001, it is getting more and more difficult for people to immigrate to the United States. America has always represented a safe haven for immigrants seeking freedom from terror and war. However, the events of that tragic day have seemingly changed that. If only that day had never happened...

Duck and Hide (figure 22) contains seven video loops and two sound sources. Viewers navigate by clicking the button on the upper right corner. When the author was in elementary school, he and his classmates had a bomb drill every month. The sirens would go off and the class would all duck and hide under their desks. Little did the author realize that this type of drill was also done here in the United States approximately forty years ago. It is ironic that mankind has developed nuclear weapons for protection, but ultimately, we hide from them.
Ping-Pong (figure 23) has four video loops that can be swapped by clicking them. One night, while watching a "classical" movie on television, the author noted a scene with Gregory Peck playing a game of ping-pong with a supposed Chinese leader. This scene, in the author's opinion, represents the relationship between the two different nations.
Tailwing in Motion (figure 24) is a study of animation. The author longed to create animation using stop-motion images. Moving the mouse to the right or the left increases or decreases the speed of the vertical movement. When the speed increases, the stop-motion images are not seen as standing still, but rather, they appear animated. The author wanted to create an illusion created by interaction, in response to his casual yet abstract query as to whether or not the things he sees are, in fact, real.

![Animation Images](image1)

Figure 25. Sangbum Kim “Warcam” 2002
http://www.bananaamilk.com/main.html

Warcam (figure 25) has four video loops. Viewers can navigate clicking an animating button on the upper left corner. This button represents time. Over the last 9 months, the author has come to the realization that not a day goes by in which he does not see war scenes and breaking news and notes scrawling across his TV set. It now seems to the author as if war never stops on this Earth.
Untitled (figure 26) was inspired by the constant playing of the two hijacked planes crashing into the World Trade Center. After seeing the footage so frequently, the author could close his eyes before the planes crashed and still see the fiery explosions in his mind. He saw those tragic, devastating collisions without even having to watch the rest of the footage. The author wanted to take the pain and all of the impact of that footage away, just for a while. He wanted to imagine what it would have been like had those planes just flown right by the towers on September 11th.

Flashback (figure 27), in which viewers can navigate by clicking a “!” button, was inspired by place: a racquetball court. One day, while attending his local gym, the author passed a racquetball court. While passing it, his mind was flooded with thick memories of his
Army days. It was in the Army where he learned Tae Kwan Do in an old, musty racquetball court incredibly similar to the one in the gym.
Wall cam (figure 28) has three animation loops. Clicking three buttons in the middle will bring viewers to a different stage. The first one was downloaded from a web cam that shows the Western Wall in Jerusalem. As he downloaded the images, there was endless fighting. It seemed tragically ironic that in such a holy place, the fighting never stops.

Day-to-day life experiences resonate as a key theme in the author's work. No one clear subject matter prevails in the work of the author, for as one day changes to the next, so too, does the author's subject matter and motivation. Bananamilk.com is where the author expresses his feelings and emotion. It is an interactive journal, allowing viewers to springboard off the author's own emotions and feelings to create something of their own.

On May 7th and 8th of this year, the author had a MA exhibition in gallery 181 of the Iowa State University Design Center. A large screen Projector was connected to his computer and projected to a wall. There, the author used an amplifier and four large speakers to maximize sound effect. That very day, www.bananamilk.com went live. The author's studio was opened to the public. As soon as his site was open, the author began promoting his site. He quickly found that major search engines such as Yahoo and Google had already categorized net.art as its own section. In early June, the author submitted his site to Yahoo and Google for a possible listing in their web art section. He also found web sites with links to net.art, such as Rhizome.org. Rhizome.org is a net.art hub that exhibits and links net.art. Currently bananamilk.com is listed under http://www.rhizome.org/artbase. The author will continue to promote his site in cyber space. At the same time, he will also be pursuing ways in which he can exhibit his net.art in traditional gallery settings.
CHAPTER 6. CONCLUSION

Since the main goal of the author’s net.art was to reach a global audience, he has been keeping a watchful eye on his web usage statistics. In June 2002, a total of 730 people visited his site, worldwide. For the author, this is a sentimentally-rich reward. It is his hope that as time passes, the number of people visiting his site will increase. As an artist currently living in Iowa, the author always felt it was difficult to show his work to the masses. But now, suddenly, it is not where an artist works that’s important, it is their work.

As a traditional media artist the past and future were defined to the author in terms of years. Working with the web has changed that definition to months and in some cases days. This indicates to the author not only that the web world has influenced his thinking, but also that the entire process is open to change within a very short period of time. When the author considers the changes that have occurred in the past several years, he is quick to realize that anything is possible and, above almost anything else, the author must stay flexible and constantly be open to new ideas.

Recently, the author became aware of the incredible availability of mobile devices with Flash playback capability, such as pocket PCs and Nokia 9290 Communicator. Keeping abreast of these advances, the author plans on his next work for bananamilk.com having a downloadable SWF file for such devices. As he begins work on this project, his desire to create net.art using live data has grown more ambitious. A planned future project will employ live data from others’ web sites or data viewers to interact with his own project.

In the future, with increased bandwidth and faster computers, the net will become a different space. There might be a strong push to conform the net to broadcasting standards,
but the author believes that many areas of the net will resist and continue to promote interpersonal communication and sociability. This, he believes, will create tension. It may be harder for individual artists to establish their presence, but more people around the world will be online. The author strongly believes that net.art will continue to develop new strategies to survive and evolve in this new environment.
APPENDIX: ACCOMPANYING CD-ROM AND OPERATING INSTRUCTIONS

CD-ROM contains all files of “http://www.bananamilk.com” as of June 2002 and the presentation used in the final oral examination in June 2002. Minimum system requirements: Pentium II 200 MHz or PowerMac 233 MHz, Window 95/98/2000 or MAC OS 8.5 or higher, Internet Explorer 4.0 or higher with Flash plug-in or Netscape 4.0 or higher with Flash plug-in, 32 MB free RAM, Sound capability, CD-ROM drive.

This CD-ROM is for readers who want to view my works without an Internet connection. The creative component may be viewed with any web browser by opening “index.html”. The final oral presentation content may also be viewed by opening “title.html” in presentation folder.
BIBLIOGRAPHY


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