Title “Sonic Horizon”
Genre Interactive Media Installation
Applicant's Role in Production       Artist
Production Format       Installation

Brief Project Description (do not exceed space given below)
“Sonic Horizon” is a Media Installation which uses a large number of multiple speakers to create a very strong “sense of place” – a sound environment where many multiple sound sources located at the periphery of the senses fuse together into one profoundly detailed soundscape.

“Sound Horizon” consists of between 50 and 150 medium-sized loudspeakers, used “naked” and without cabinets, each suspended within a plexiglass frame which forms a large circle (approximately 20 to 30 feet in diameter) within the gallery space, and which is placed roughly at head-height. As the speakers are “bare”, the kinetic motion of this many loudspeakers moving will also visually be an important part of the work: viewers will listen with their eyes in addition to their ears.

As listeners move within the center of the space they hear small individual sounds from each speaker. These fuse into one complex sound image, the details of which change as they move. As they approach the periphery, more sonic details are revealed immediately in front of them. The physical space of the installation is mapped to a changing acoustical “perspective” and the viewer’s ability to navigate this space is an idea that is at the heart of the piece. The idea is to create a space that is immersive, is navigable, and that rewards close listening with details and more information about the sonic environment. The piece exposes the richness, subtlety, and variety, to be found in everyday soundscapes.
Functionality is as follows: Video camera is used by the computer (out of sight in an equipment room) to track viewers in the piece, using standard tracking software. The computer then decides, based on the location of the viewers, what each of the speakers should play. It then sends control signals to each speaker's microcontroller, which then does the actual playing of audio using the mp3 player and the amplifier on each circuit board. The function of the main computer is sensing, interaction, and coordination. Each circuit board controls a set of speakers, and does all the work playing audio.
SHAWN DECKER

If you are sending more than one sample, please copy this page. Sample(s) must be cued: indicate how long each sample should be viewed for a COMBINED viewing time of no more than 15 minutes. If slides are included in this application, please list the title and year of the work on this form.

Title  Scratch Studies

Year  2001

Technical Information

Original Format

- Software
- Web
- Installation
- Other

Format Submitted for Viewing

- Software
- Web
- VHS
- Other DVD

Preferred OS

- Windows
- Mac
- Unix
- Other

Web Information  (answer only if sample work is in Web format)

- URL

- Browser requirement(s)

- Plug-in requirement(s)

- This sample requires broadband connection (fast Internet connection)

- A local copy of the sample work has been included with the application

Special Information For Viewing:

In menu, select "Video Documentation", then select "Scratch Studies"

Description of Work  (use an additional sheet if necessary)

see attached sheet.

Note: it is important to view this DVD using a good sound system.
**Scratch Studies (2000)**

(http://www.artic.edu/~sdecke/inst/scratch.studios.html)

*Scratch Studies* is the latest in a series of new works which create immersive sound environments through physical means (in this case, the rhythmic sounds of scratching) rather than using speakers. The individual works in *Scratch Studies* make use of piano wire connected to digitally controlled stepper motors which scratch steel plates in various ways. These “scratching machines” in this series are of different sizes, ranging from 4' x 4' square floor pieces to smaller 6"x18" pieces which are hung.

These pieces explore the rhythmic territory between “mechanical” and “natural” rhythms as caused by various kinds of imitative behaviors. Each work contains its own embedded microcontroller programmed to control the motor’s movements (and thus the scratching activity) by simulating various natural processes such as Brownian motion, 1/fnoise, and bird song rhythms.

Each of these works also electronically “listens” to the others, with each “scratcher” imitating the others in various ways. Various forms of imitation utilized include *reductive imitation* – where details are removed, *elaboration* - where details are added, and *literal imitation* where patterns are exactly copied. The resulting group behavior ranges from naturalistic group rhythmic patterns in which each individual “scratcher” is doing related rhythms (but with each machine still completely independent) to highly mechanical (and somewhat threatening) exact or near-exact imitation (when several “scratchers” are nearly completely synchronous with each other).

What is particularly interesting is how the group dynamic takes on complex emergent behaviors simply as a result of listening and imitating each other. If these works are turned on without any communication between them, they will simply each do exactly the same thing in unison (as they are all programmed identically). However, once these scratching machines are programmed to listen and imitate each other, the behavior of each individual immediately veers from that of the others (even though they are still programmed identically). Once this process begins, the group begins to develop a “collective memory” of rhythms which is passed from one machine to the next. None of the individuals possess this “memory” for very long; these “memories” only exist as they are passed from one machine to the next, constantly mutating and transforming during the process.

The installation documented on this video utilizes 10 separate pieces: 8 of the *Scratch Study #1: Moths* installed on the walls, and two of the larger *Scratch Study #3: Mitosis* installed in the center of the room. Obviously, in addition to the sounds they produce, each of these works also has strong kinetic and visual elements as well. For instance, in *Scratch Study #3*, one of the works in the Block Installation documented on the video, two large 4' x 4' plates sit on the floor side-by-side, each with a stepper motor in the center of the plate attached to a long gangly wire snaking up and then back down to the plate. As the motor jumps forward and backward, the wire skitters across the plate, gradually scratching a circular mark into the steel plate through time.
SHAWN DECKER

If you are sending more than one sample, please copy this page. Sample(s) must be cued: indicate how long each sample should be viewed for a COMBINED viewing time of no more than 15 minutes. If slides are included in this application, please list the title and year of the work on this form.

Title: The Night Sounds

Year: 2000

Technical Information

Original Format
_ Software
_ Web
X Installation
_ Other ____________

Format Submitted for Viewing
_ Software
_ Web
_ VHS
_ Other DVD

Preferred OS
_ Windows
_ Mac
_ Unix
_ Other ____________

Web Information (answer only if sample work is in Web format)
_ URL ________________________________________________________(if more than one please list them below)

_ Browser requirement(s) __________________________________________

_ Plug-in requirement(s) ___________________________________________

_ This sample requires broadband connection (fast Internet connection)

_ A local copy of the sample work has been included with the application

Special Information For Viewing:
In menu, select "Video Documentation" Then Select "The Night Sounds"

Description of Work (use an additional sheet if necessary)

See attached Sheet.

Note:
It is important that this DVD is viewed using a good sound system.
My most recent work *The Night Sounds* consists of four corrugated metal water buckets, each approximately half-full of water, which are suspended from the ceiling by piano wire. The buckets are each placed in the corner of an 8' to 12' square space in the room. Attached to the top of each is a length of piano wire whose tension is supplied by the weight of the bucket, and is regulated by the amount of water in the bucket. Striking the piano wire is a thin cord attached to a small motor, which strikes the string once every revolution of the motor. A micro-controller controls the acceleration/deceleration and overall speed of each motor independently. The speed of the motors varies widely, from only a few revolutions per second (simple ticks) to several thousand revolutions per second (in the audio range, causing complex interference patterns between the frequency of the motor and the resonant frequency of the piano wire). The buckets themselves serve as a "sounding board" to amplify and radiate the sounds.

The sounds produced are designed to "coexist" with other environmental sounds in the gallery, and thus the piece does not require complete isolation (but a reasonably quiet location is best). The patterns of the piece as well as the nature of the sounds is modeled after crickets and cicadas found in the Midwest, both here in Chicago, where I now live, and also in Western Pennsylvania where I grew up. In both these locations, these sounds are ever-present in the summer, literally at times taking over the entire landscape with their sonic intensity. The means of sound production in this piece is, for me, highly organic, and extremely spatial in nature, with the metal buckets themselves serving as the resonators and sounding boards for all the sounds produced. These water buckets also reference my childhood days of farm life, where buckets just like these were hung from the rafters of barns to catch leaking water.
If you are sending more than one sample, please copy this page. Sample(s) must be cued: indicate how long each sample should be viewed for a COMBINED viewing time of no more than 15 minutes. If slides are included in this application, please list the title and year of the work on this form.

**Title**: Errant Behaviors  
**Year**: 2004

### Technical Information

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<tr>
<th>Original Format</th>
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**Format Submitted for Viewing**  
- **VHS**  
- **DVD**

**Preferred OS**  
- **Windows**  
- **Mac**  
- **Unix**  
- **Other**

**Web Information** (answer only if sample work is in Web format)

- **URL**: (if more than one please list them below)
- **Browser requirement(s)**
- **Plug-in requirement(s)**
- **This sample requires broadband connection (fast Internet connection)**
- **A local copy of the sample work has been included with the application**

### Special Information For Viewing:

Press "11" in main menu to see side-by-side videos, as in the installation. Press "1" to see individual videos.

### Description of Work (use an additional sheet if necessary)

Note: it is imperative that you view/listen to this work with a good sound system.

See attached sheet for description.

See attached installation photos from CAM Houston.
Anne Wilson
Shawn Decker

(Please refer to the attached installation photos, and the documentation DVD)

Errant Behaviors was created as a video and sound installation for an exhibition at the Contemporary Arts Museum in Houston (2004) in collaboration with artist Anne Wilson.

The installation is comprised of two 8.5' wide DVD projections on opposing walls of a 24' square gallery, and two stereo soundtracks. Although not synchronized, DVD1 and DVD2 play at the same time and continuously -- the play order is shuffled and there is no beginning or end. Each image/sound segment in DVD1 was conceived to play in relationship to each image/sound segment in DVD2.

Errant Behaviors emerges out of Anne Wilson's work Topologies, a sculpture first shown in the 2002 Whitney Biennial. The idea of working with moving images came directly from the kinds of viewer responses to Topologies -- projections of sci-fi scenarios, odd cityscapes, and futuristic worlds. In Errant Behaviors, the latent associations and meanings of Topologies are emphasized, enlivened, and acted out.

There is a relationship between humor and a darker aspect to the content in Errant Behaviors, evolving ideas about quirky growth, sometimes playful and sometimes sinister-seeming relationships, rude actions, repetitions and accumulations. The behaviors of Errant Behaviors have to do with aspects of impropriety, aggression and accident.

The sound compositions (Shawn Decker's contribution to the collaboration) utilize both processed recorded and found sounds to create environments of sonic activity that mirror the behavior of the visual images. The sound in some segments has a singular presence; other segments have a more cinematic presentation; some employ partially synchronized sound within a sonic environment. There is consideration throughout of the relationships between natural, human, and synthetic rhythms. The sound, played through four loudspeakers (2 for each DVD) intermingles, creating a single aural environment and drawing the two DVD projections together -- often in interesting and odd ways.
ANNE WILSON . Installation of Errant Behaviors in Perspectives 140: Anne Wilson at the Contemporary Arts Museum Houston, 1 - 4, 2004
Initially educated as a composer of both instrumental and computer-generated music my work, which began as performance and tape-based music composition, has gradually evolved to focus on media installations for galleries and public spaces. These installations, which make use of both physical and electronic media, include both solo works, as well as collaborations with other artists. In all my installations, I investigate the processes found in nature and in other large and complex systems, and the potential of computer programs to model or simulate such systems within time-based artworks. I am also interested in creating media installations which are physical and tactile in nature and which create immersive situations that echo those found in the real world.

Investigation of the human role in the physical world is an ongoing interest of mine, including the less obvious ways in which technology is changing both our understanding and perception of our environment. My work has been greatly influenced by the ideas of R. M. Schafer (author of *Tuning the World*) and others who have explored the ways in which technology has affected, and mostly diminished, the richness of the aural aspects of the world around us. Like Schafer, I believe that the introduction of a host of mechanical and electrical sounds into our environment has greatly desensitized us to the subtle and complex systems of interrelationships and causalities found in nature, replacing them with what Schafer calls “flat-line” sounds—sounds which are constant, unchanging, and relatively devoid of information about the environment. One goal of my installations then is to explore the qualitative aspects of environmental sound, rhythm, and spatial relationships, and to create immersive spaces which explore the tension between the man-made environment, and the found sounds and patterns of nature.

One strategy I use is to build installations composed largely of sounds and actions produced by simple mechanical devices. These techniques include the use of motors to sonically activate metal objects (piano wires, etc.) and are often kinetic in nature. All the sound is produced acoustically, without the aid of loudspeakers. Due to the physical nature of these works, the distinctions between sonic, visual, and spatial elements begin to blur. These are hybrid/robotic systems, in which custom-programmed micro-controllers (single chip computers used in industrial
control and robotics) are used to control each mechanical element within an installation. Many sets of these computer program/mechanical element pairs are interconnected within each piece, with each reacting to the others in the installation, and also to the surrounding environment. These interactions create a complex system of interrelationships between the individual devices that simulates the manner of operation of natural systems. The interaction of these systems behaves in unpredictable and complex ways, resembling the "emergent behavior" observed in a wide range of natural phenomena. The merging of the kinetic, aural, and visual in these immersive installations, creates a language of actions, relationships, and complex causalities.

In my interactive installations, I am not interested in creating systems with repeatable interactions and simple causalities. For example, my works are not interactive in the sense that you wave a hand or step into a sensor’s zone and get a repeatable, reaction from the work. Rather, the relationship I am after is more akin to the subtle and complex ways in which our presence in a living environment triggers complex changes which may not be fully understood, and are not always the same, but which nonetheless ground us the subtleties and richness of our environment.

Another related approach I am beginning to explore is the investigation of the (mis)use of speakers in a "naked" mode, outside their enclosures, as kinetic objects and as single sound sources that may be combined in sufficient quantities to form spatially immersive environments.

Finally, I have also collaborated with several artists on video/audio installations that, while not interactive or involving programmed systems, still deal with many of the same concerns of immersive audio, (using Dolby Surround) and with natural systems and sounds. These pieces are created using many of the same generative systems and processes I have been describing above in their creation.

Shawn Decker – “SONIC HORIZON” Project Narrative

THE IDEA BEHIND “SONIC HORIZON”

I have conceived a large media installation project that is a direct extension of the ideas that have driven my previous installation work, but which also explores new territory. Many of my previous installations have used multiple mechanical elements to create spatially rich kinetic and aural immersive environments. “Sonic Horizon” is a media installation which uses a large number of loudspeakers in an unconventional way to create a very strong “sense of place” – a sound environment where many individual sound sources located at the periphery of the senses fuse together into one profoundly detailed soundscape. This kind of environment is impossible to create with conventional stereo or even with Dolby surround sound playback. My approach requires many speakers, many independent channels of audio, and requires technical and creative research to develop various techniques for managing large numbers of independent sources.

PHYSICAL DESCRIPTION

(Please refer to the attached diagram while reading this physical description).

“Sound Horizon,” consists of between 50 and 150 medium-sized loudspeakers, used “naked” and without cabinets, each suspended within a plexiglass frame which forms a large circle (approximately 20 to 30 feet in diameter) within the gallery space, and which is placed roughly at head-height. The speakers are each suspended with rubber cables to isolate the sound from each loudspeaker from the overall structure. In this way, each loudspeaker produces a sound (and a motion) in that spot only. This circle of speakers has one or more gaps that allow viewer/listeners to enter the space. Each speaker has its own microcontroller, mp3 player, and amplifier circuit. Each of these are controlled and coordinated from a central computer which tells each speaker what to play, and when to play it. In the center of the circle, mounted on the
ceiling and facing downward, a video camera is used by the central computer to track the location of viewer/listeners within the circle and to change what the speakers play in response to their movements.

WHAT YOU WOULD EXPERIENCE IN “Sonic Horizon”

In this piece I am interested in creating a sonic portrait of a specific soundscape from everyday life. I imagine this as being a location that is one I personally experience regularly, is not something exotic, but rather something everyday. A site that combines natural sounds with urban or suburban sounds. The kind of sonic space that one normally wouldn’t pay that much attention to. The piece is interactive: As listeners move within the center of the space they hear small individual sounds from each speaker. These fuse into one complex sound image, the details of which change as they move. As they approach the periphery, more sonic details are revealed by the speakers immediately in front of them. As they walk around the periphery, various detailed aspects of the environment are revealed in different parts of the circle. The physical space of the installation is mapped to a changing acoustical “perspective” and the viewer’s ability to navigate this space is an idea that is at the heart of the piece. The idea is to create a space that is immersive, is navigable, and that rewards close listening with details and more information about the sonic environment. The piece exposes the richness, subtlety, and variety to be found in everyday soundscapes.

It is also important to remember that because the speakers are all “raw” (outside of enclosures) there is also a strong visual and kinetic component to the work. Each of the speaker surfaces move in relation to the others, and with so many speakers, this amounts to a good deal of movement. In many ways, this piece is just as kinetic as many of my previous “robotic” sculptures, and allows viewers to listen with their eyes, as well as to see with their ears.
MY CREATIVE PROCESS: HOW I WOULD DEVELOP THE PIECE

My creative process is one of experimentation and discovery. I don’t always precisely know what exactly will work, and often discover new ideas along the way. For instance, I have no idea of how many speakers one needs to get the detail and spatial complexity I am after. Likewise until trying this system out in a prototype form, I won’t know what the best approach to the sonic material would be, or to the interactive responses that the system should make to the listener’s location. So, my approach to developing this piece is to first build simple prototypes to work through different ideas I have, and then to work from this experience to a final version. I have a fairly clear idea of the kind of experience I want the viewer/listener to have, but the details will develop out of the exploration of the exact capabilities of the system, and the possibilities that present themselves as I work.

FEASIBILITY AND FELLOWSHIP USE

My previous work and extensive exhibitions have prepared me to pursue a work of this scope – and the technologies here mirror those I have used in previous kinetic and robotic projects, as well as sound installations using raw speakers. Likewise, my soundtrack work in pieces such as Errant Behaviors (included as a work sample), shows an example of my previous work with digitally-processed field recordings and the creation of a multi-channel soundscape (in this case - 4 channels of audio).

Fellowship monies would be used to give me release time from my teaching responsibilities (much research and development time is involved in pursuing this work) and other research related expenses, as well as to purchase the extensive materials needed.
Shawn Decker – Rockefeller Fellowship Application

Budget

Release time from SAIC $15,000.00
Speakers, cable, and other hardware $1,000.00
Travel $2,000.00
Video camera / sensing software $1,500.00
Computer and related components $3,000.00
Microcontrollers and other misc. electronic components $2,000.00
Fabrication of circuit boards, etc. $4,500.00
Fabrication of plexiglass $1,500.00
Other misc. hardware $500.00
New microcontroller programming system $2,000.00
Documentation expenses $2,000.00

$35,000.00

Narrative:

Release time: This item is the amount needed give me a 1/3 release time from my teaching position at the School of the Art Institute of Chicago for a full year. Because I develop all my work directly, doing all assembly, research and development, construction, and programming, time is the critical element for me in developing new works.

Travel: A modest amount of money to allow me to attend exhibitions and conferences related to the work, and to develop international venues for its exhibition.

Fabrication of Circuit Boards, Plexiglass, etc.: These items are for fabricators that I use for making industrial grade circuit boards and mechanical components necessary in constructing the work.

Microcontroller Programming System: Given the extensive use of on-board programming in this work, I will need to upgrade my current programming system.

Documentation Expenses: Money to produce a professional quality videotape and DVD of the work, for purposes of developing exhibitions of the work, etc.

Other Expenses: All other line items pertain to materials directly used in the construction of the work: speakers, cable, the video camera and computer needed, and other electronic components and hardware.
Shawn L. Decker

EDUCATION

1987  Doctor of Music, music theory and composition, Northwestern University.
1982  Master of Music, music theory and composition, Northwestern University.

ACADEMIC POSITIONS

1988-present  School of the Art Institute of Chicago: Current Rank, Full Professor, Art and Technology and Sound departments. Teach courses in experimental applications of computers to art, sound and music composition, acoustics, sound synthesis, media installation, computer programming, etc. Chair of Art and Technology department, 1994-97.

1982-88  Assistant Director of Operations, Northwestern Computer Music Studio, Northwestern University: Coauthored grants and other fund raising materials which raised over one million dollars to support the studio's activities. Designed and implemented the primary sound generation and music software for the studio. Coordinated the development and usage of computer music systems by composers, musicians, and researchers, and was responsible for developing the principal music software used at the studio. Wrote and published articles and papers on this work. Composed and produced numerous music compositions and soundtracks for a variety of media. Coordinated and performed music and sound production work, including work done for the CBS "Twilight Zone" television series.

1982-1985, 1988  Instructor in Music Theory and Composition, Northwestern University: Taught graduate level courses in computer sound synthesis, computer-aided music composition, computer programming and MIDI production techniques, and undergraduate courses in aural skills. Was responsible for assembling studios for large-system computer music work, as well as for personal computer-based MIDI music production. Wrote various grants and received thousands of dollars worth of equipment and software donations from numerous corporations in support of these studios.
A Small Migration, 2004 – Premiered as part of the Biennial of Electronic Arts Perth (BEAP) in 2004. This piece uses 16 piano wires strung from gallery wall to gallery wall overhead, like an overhead trellis, with microcontroller-driven motors which drive the strings using various natural processes to create rhythms which ebb and flow organically and spatially.

Bird’s Nest Helsinki, 2004 – Kiasma Museum, Helsinki. A site specific Installation with Artist Jan-Erik Andersson. A Giant Bird’s nest, with piano-wire and microcontroller driven sound installation was installed in a public space – the 10 story atrium of the Helsinki Sonomat, adjacent to the Kiasma Museum.

Bird’s Nest Wakefield, 2004 - Wakefield Public Arts, Wakefield UK. A site specific Installation with Artist Jan-Erik Andersson. A Giant Bird’s nest, with piano-wire and microcontroller driven sound installation was installed outside the main building at the Wakefield Publics Arts Center.

Errant Behaviors, 2003 - Contemporary Art Museum Houston, and Art Chicago 2004. A collaborative work with Artists Anne Wilson – double video projection, with 4 channel immersive audio. Two channel video based on animated lace and thread, with audio tracks for each channel. The two channels are projected on opposing walls, and 22 short sections are randomly set against each other.

Apple Concert, 2003 - Video/Audio installation utilizing Dolby 5.1 surround sound, in collaboration with Artist Jan-Erik Andersson

The Paradise, 2002 – Video/Audio installation, in collaboration with Artist Jan-Erik Andersson Purchased by the Espoo Museum of Art, Espoo, FINLAND for their collection.

Klosterstrasse/Berlin, 2002 – Site Specific installation at the ruins of a 12th century Church in the heart of Berlin (the oldest remaining building in Berlin). This site is used as a site-specific Sculpture park and is run by the City of Berlin. In this piece I hung small speakers throughout a tree in the church ruins, and created a canopy of smany mall sounds distributed at many points around the listener – these sounds were made up by “morphing” human whispers with various insect sounds.

A History of Our Breathing, 2001 - . A collaborative piece with Kristine Thompson. This work used fans arranged in a semicircle, whose speed was controlled to reflect a history of our breathing patterns over a period of a week. The speed of the fans ranged from barely moving to moving quickly, and reflected a sense of the rhythm of human breathing.

Soundmap, 2001 - an interactive multimedia piece for the WWW which was premiered in the Maine New Media exhibition during the fall of 2001, as part of the Boston Cyberfest.

Last Friday Night, 2000 - a multimedia piece for CDROM / WWW which was created for Annette Barbier and Drew Browning’s collaborative artist project "Home": works by various artists exploring the idea of home. This work is a sound and visual landscape of a quiet night in the Pennsylvania Mountains where I grew up. (2000) This piece was first shown at the International Symposium of Electronic Art 2000, in Paris, FRANCE, and subsequently at Ars Electronica, and other international venues.

Scratch Studies, 2000 - A series of networked electro-mechanical pieces using micro-controllers to control motors which scratch the surfaces of various sized metal plates (ranging from small wall-mounted works, to very large and heavy floor pieces), scoring and marking the plates, and creating scratching sounds which are a study in natural rhythms and imitation, algorithmically produced. This work has been exhibited at numerous local and international venues.
Worldwide Chocolate Heart Project, 2000 - An interactive installation done in collaboration with Finnish artist Jan-Erik Andersson as part of Brussels 2000, Centrum Bruxelles, in Brussels, BELGIUM, and also exhibited as part of Helsinki 2000 (both installations are linked by Internet) in Helsinki, FINLAND at the Lasipalatsi Media Centre. (Sept. 1 - Sept. 30 2000) as well as in Malmö Sweden in March, 2002.

Desert Travels #3, 2000 - A "performative Installation" which was performed as part of the Sound Field 2000 festival of experimental music and sound art in Chicago. This performance uses custom built motorized string instruments that completely surround the audience and are controlled via a single laptop computer (centered within the audience) to create a sound environment that is entirely "acoustic" and immersive.

The Night Sounds, 1999 - This work consists of four buckets that are each hung from the ceiling, suspended by piano wire. A microcontroller controls the speed of 4 motors attached to each string creating constantly changing rhythmic patterns modeled after crickets and cicadas found in the midwest. This work has been exhibited at numerous local and international venues.

Kiipalo Puutarhaoppilaitos, 1999 - A commissioned permanent sound installation which is installed in a WinterGarden in a Horticultural school in Kiipalo, Finland. The installation will use more than a dozen channels of environmental audio all recorded in the immediate area. “Idealized” short segments of sound are stored digitally and randomly combined via 8 loudspeakers to create a constantly changing fabric of natural sound.

Wire Field, 1998 - This work consists of a set of 32 piano wires strung within a gallery which are tuned specifically to the space. The motors are activated by a computer program which monitors and reacts to the sounds inside the gallery as well as the surrounding outdoor environment. The program operates in a manner similar to biological and other natural systems creating a system of interdependencies direct analogous to the natural systems around us.

Music from the Well-Fed Abyss, 1998 - A sound performance done in collaboration with Jan-Erik Andersson which utilizes primarily the sounds of eating and digestion (picked up with special audio equipment) both live and from recorded sources.

Divided Circle, 1994 - an electro-mechanical sound sculpture/installation which consists of two large metallic semi-circles with steel elements which are "spun" by motors to produce sounds. The entire piece is activated by a small microprocessor which incorporates rhythmic and spatial sequences based on bird-song and on "cyclical" Indonesian Gamelan patterns. (1994).

Exchange, 1988 - an ambient sound and visual installation with visual artist John Boesche which ran continuously for one week at the One Financial Place Main Lobby (home of the Midwest Commodities Exchange), Chicago IL, spring 1988. The opening of the installation was broadcast over WFMT in a special noontime live broadcast in conjunction with the New Music Chicago Spring Festival '88.
SELECTED EXHIBITIONS

2004:

Moores Gallery, Fremantle, AUSTRALIA, as part of the Biennial of Electronic Arts Perth (BEAP): *A Small Migration*, electro-mechanical installation.

Kiasma Museum, Helsinki, FINLAND: *Bird's Nest Helsinki*, collaborative work with Jan-Erik Andersson.

Wakefield Public Arts, Wakefield ENGLAND: *Bird's Nest Wakefield*, collaborative work with Jan-Erik Andersson.

Art Chicago 2004, Chicago, IL: *Errant Behaviors*, collaboration with Artist Anne Wilson, Video and Sound installation.

Contemporary Art Museum (CAM) Houston, TX: *Errant Behaviors*, collaboration with Artist Anne Wilson, Video and Sound installation.

Paul Klein Gallery, Chicago, IL: *Scratch Studies*, interactive electromechanical installation.

Wäinö Aaltonen Art Museum, Turku, FINLAND: *Apple Concert*: video/sound installation (Dolby 5.1 surround sound), collaboration with artist Jan-Erik Andersson.

Sculpture Gallery, Helsinki, FINLAND: *Paradise*, video/sound installation with Jan-Erik Andersson.

A+D Gallery, Columbia College, Chicago, IL: *The Night Sounds*, electro-mechanical installation.

Open End Gallery, Chicago, IL: *Scratch Studies*, interactive electro-mechanical installation.

2003:

Klosterstrasse, Berlin, GERMANY: Site-Specific Installation in sculpture park run by City of Berlin.


Galleri 21, Malmö, SWEDEN: *World-Wide Chocolate Heart*, collaborative interactive network installation with Jan-Erik Andersson.

2002:

CADE2001, Glasgow, UK: *Night Sounds* and *Scratch Studies*, interactive electro-mechanical installation.

Block Museum of Art, Northwestern University, Evanston, IL: *Last Friday Night*, sound and image work, included in Annette Barbier and Drew Brownings *Home* project.

Boston Cyberfest: *Soundmap* an interactive multimedia piece for the WWW, presented by Maine New Media.

Slusser Gallery, University of Michigan, Ann Arbor, MI: *Divided Circle: Music for 16 Stirrers*, electro-mechanical sound installation.

Ars Electronica Center, Linz, AUSTRIA, and V2_lab, Amsterdam, NETHERLANDS: *Last Friday Night*, sound and image work, included in Annette Barbier and Drew Brownings *Home* project.
Contemporary Arts Council, Chicago, IL: *A History of our Breathing*, installation with Kristine Thompson.

2000: Block Museum of Art, Northwestern University, Evanston, IL: *Scratch Studies*, interactive electro-mechanical installation.


Gallery for New Media, Sao Paulo, BRAZIL: *Last Friday Night*, sound and image work, included in Annette Barbier and Drew Brownings *Home* project

ISEA 2000: Forum des Images, Paris FRANCE: *Last Friday Night*, sound and image work, included in Annette Barbier and Drew Brownings *Home* project

Betty Rymer Gallery, Chicago, IL: *The Night Sounds*, electro-mechanical sound installation

*Sound Field 2000*, Chicago, IL: *Desert Travels #3*, performative electro-mechanical installation.

1999: Ukrainian Institute of Modern Art, Chicago, IL: *The Night Sounds*, electro-mechanical sound installation

San Francisco State University Museum, San Francisco, CA: *Divided Circle: Music for 16 Stirrers*, electro-mechanical sound installation

1998: Rockford Art Center, Rockford, IL: *Divided Circle: Music for 16 Stirrers*, electro-mechanical sound installation


Chicago Cultural Center: *Divided Circle: Music for 16 Stirrers*, electro-mechanical sound installation.

1996: Randolph St. Gallery, Chicago, IL: *Divided Circle: Music for 16 Stirrers*, electro-mechanical sound installation

1994: Chicago Filmmakers, Chicago IL: *Divided Circle: Music for 16 Stirrers*, electro-mechanical sound installation


SELECTED GRANTS, AWARDS and COMMISSIONS

2004
Ragdale Foundation Fellowship and Residency, October, 2004
Roger Brown Estate Residency, September 2004

2003
Illinois Art Council Individual Artist Fellowship (Interdisciplinary and Digital Arts Category)

2002
Illinois Governor's International Arts Exchange Program, August, 2002
Ragdale Foundation Fellowship and Residency, June, 2002
Rockefeller Media Arts Fellowship Nomination

2001
Ragdale Foundation Fellowship and Residency, August, 2001

2000
Illinois Arts Council Individual Artist Fellowship (Interdisciplinary Arts category)
Evanston Arts Council Individual Artist Project Grant

First Prize, *A4 Arnheim Architectural Award*, Arnheim, NETHERLANDS. A collaborative computer animation with Joshua Mosley and Steve Waldeck for a proposal of a sound-light installation for the Atlanta Airport (this project is currently one of three finalists for this commission).

Ragdale Foundation Fellowship and Residency, June, 2000

1999
Illinois Arts Council Individual Artist Finalist Award (Interdisciplinary Arts category)

1998
Commissioned permanent architectural sound installation, Kiipula, FINLAND.

1997
Named one of 15 "Chicagoans of the Year" in the Arts by the Chicago Tribune for 1997.
2 week Residency in Turku and Helsinki FINLAND, sponsored by Chicago Artists International Program, the Turun taidemuseon, Turku and the Nykytaiteen museo, Helsinki. June and July, 97

1996
Chicago Artists International Program sponsorship, Oct. 96
Ragdale Foundation fellowship and residency, June, 96

1995
Faculty enrichment grant, School of the Art Institute of Chicago, to support ongoing work.

1993
Illinois Arts Council Special Project grant to begin work on a piece utilizing field recordings of birdsongs.
Ruth Page Award Nomination (Collaborative Artist) for the interactive live electronic score for Shirley Mordine's "Truth Spin".
Faculty enrichment grant from the School of the Art Institute of Chicago to support ongoing compositional work utilizing field-recordings of birdsongs

1992
Commissioned by the Mordin and Company dance ensemble to write a interactive live electronic score for a new work. The piece "Truth Spin" premiered in spring 1993.
1991 Commission for a new work from the Chicago Saxophone Quartet, which was premiered in the winter of 1991.


1988 "Exchange", a week long sound and visual installation for the Lobby of the 440 S. LaSalle St. building (which houses the Chicago Commodities Exchange), was commissioned by "One Financial Place" and the LaSalle Club in conjunction with the New Music Chicago Spring Festival '88. The opening of the piece was featured in a live WFMT broadcast.

Received thousands of dollars in equipment support from corporations in support of music studios at Northwestern University. Donors included Opcode, Dr. T's, Mark of the Unicorn, Passport, Digidesign, and others.

1987 "Wet Grass", a music and multi-image piece, was commissioned by Triton College as part of their "State of the Arts" festival.

Illinois Arts Council Individual Artists Fellowship Award.

Grant from the System Development Foundation, with Gary Kendall and William Martens, for continuing support of the Northwestern University Computer Music Studio. $297,000.

1984 Grant from the System Development Foundation, with Gary Kendall and William Martens, for support of research and to expand the computer music studio at Northwestern University $892,835.

CONCERT WORKS

Concert Works (all pieces BMI)

Desert Travels #3 (home made string instruments, laptop, electronics), 2001

Desert Travels #2 (live electronics / laptop/ custom string instrument), 2000

Truth Spin Suite (tape or live performance), 1995

Desert Travels #1 (Bass Clarinet and electronic percussion), 1992

Wishing for the War to Cease (Saxophone Quartet), 1991

Rising Song (synthesizer, electronic percussion, sax, guitar, voice), 1990

Quartet. (synthesizer, electronic percussion, sax, guitar), 1988

Northern Migration (tape), 1987

Wet Grass (tape), 1987

Nightbreak (vocals, keyboards, sax, clarinet, and vibes), 1986

A Vague History of Light (brass ensemble), 1986
(concert works, continued)

My Country  (2 synthesizers, marimba and computer controlled synthesizers), 1986

Movement Music  (Violin and computer generated tape), 1984

Construction with Plains and Curves  (tape), 1982

Music for Dance

Truth Spin  - a 25 minute interactive electronic score commissioned by Mordine and Co. Dance Theatre. Light Sensors on stage were triggered by dancers to trigger an entirely “live” electronic score generated using a computer.

SELECTED PERFORMANCES

Truth Spin, collaboration with Mordine Dance Theatre: live electronics, using light sensors triggered by dancers

Evanston First Night, Evanston IL, 12/31/96
Columbia College Dance Center, 11/19 - 11/20, 1994
Chicago Cultural Center, AIC benefit performance, 1994
Columbia College Dance Center, 5/6 - 5/15, 1993
International Parliament of Religions meeting, Chicago, 1993

Desert Travels #2 (Live Electronics / homemade instruments), 1998

The Cliffdwellers, Chicago, IL, 1998
Art Institute of Chicago, 1998

Truth Spin Suite  (tape/live electronics)

Lunar Cafe, Chicago, Sept. 27, 1996
University of South Carolina Computer Music Festival, April 12, 1995

Desert Travels #1  (Bass Clarinet and electronic percussion), 1992

Art Institute of Chicago, 1992

Wishing for the War to Cease  (Saxophone Quartet), 1991

Curtis Hall, Chicago IL, 7/94
Harper College, Palatine IL, 8/93
Rossini Theatre, Pesaro ITALY, 10/92
St. Mary’s College, Winona MN, 3/92
Unity Church, Oak Park, IL, 2/92
Paine College, Augusta, GA, 11/91
Georgia State University, Atlanta GA, 11/91
LaGrange College, LaGrange GA, 11/91
Praire Performing Arts Center, Racine WI, 5/91

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(selected performances, continued)

**My Country** (2 synthesizers, marimba and computer-controlled synth.), 1986:

*USArts festival, Akademie der Künste, Berlin, GERMANY, 5/93*
*New Music Chicago Spring Festival '87, Curtis Hall, Chicago, 4/87*
*Triton College "State of the Arts" Festival, River Grove, IL 4/87*
*Univ. of Illinois Circle Center series, Chicago, 10/86*
*Links Hall performance series, Chicago, 1/86*
*Pick-Staiger Concert Hall, Evanston, IL, 2/86*
*Cernan Space Center, River Grove, IL 5/85-7/85*
*N.A.M.E. Gallery "Performorama Series", Chicago, 3/85*

**Rising Song** (synthesizer, guitar, bass, electronic percussion, voice, sax), 1990

*Edge of the Looking Glass, Chicago, 1990*
*Univ. of Ohio, Bowling Green, Ohio, 1990*

**Quartet** (synthesizer, electronic percussion, sax, guitar), 1988:

*Satori Gallery, Chicago, 6/88*
*Madison Arts Center, Madison Wisconsin, 1989*

**Wet Grass** (for tape); from a multi-media piece of the same name, 1987:

*Kapture concerts at Links Hall, Grace Place, and N.A.M.E Gallery, Chicago, 7/87*

**A Vague History of Light** (brass ensemble), 1986:

*Pitzen Brass Ensemble, 1986 concert series, St. Luke's Church, Evanston, 6/86*

**Movement Music** (Violin and computer generated tape), 1984:

*Moming Dance and Arts Center, Chicago, 7/85 and 1/87*
*N.A.M.E. Gallery, Chicago, 6/85*
*New Music Chicago Spring Festival '85, Chicago Public Library Cultural Center, 4/85*
*N.A.M.E. Gallery, 6/85*
"Three Chicago Composers in Concert", presented by N.A.M.E. gallery, Chicago, 12/84*

**Nightbreak** (vocals, keyboards, sax, clarinet, and vibes), 1983/86:

*Univ. of Illinois Circle Center series, Chicago, 10/86*
*Artemesia Gallery, Chicago, 6/84*
*New Music Chicago Spring Festival '83, Chicago Public Library Cultural Center, 4/83*

**Construction with Plains and Curves**. (computer generated tape), 1982:

*Krannert Center for the Performing Arts, Urbana, IL 12/86.*
"Three Chicago Composers in Concert", presented by N.A.M.E. gallery, Chicago, 12/84*
*Museum of Science and Industry Centennial Concert, Chicago, 8/83*
*New Music America '82 festival, Installation in Monroe street garage, Chicago, 7/82*

**Full-length performances**
"Works by Shawn Decker" - A full-length concert presented at Pick-Staiger Concert Hall, Evanston, IL 5/86. which received city-wide attention, including a Chicago Tribune preview article.

**Television Broadcasts**
- PBS Broadcast of the Annette Barbier video "Woman's Movements", in 1990
- PBS broadcast of "My Country" (collaboration with video artist Annette Barbier), in 1989 and 1990
- PBS and Learning Channel broadcasts of Annette Barbier's "Table of Silence" video (soundtrack), spring/summer 1988.
- WTTW Chicago broadcasts of "Louis Sullivan, the Function of Ornament" (soundtrack) 1987, 1988

**Radio Broadcasts**
- Swedish Public Radio Broadcast of interview, sound recordings from "Wire Field", 6/97
- WNIB, WNUR and other local and nationwide broadcasts of a program on "Computer Music in Chicago" I produced for the Experimental Sound Studio's series "Sounds from Chicago", which included the piece "Wet Grass". 1990
- WFMT live Chicago broadcast of Exchange sound and visual installation (with interview) at 1 Financial Place, Chicago, IL. 4/88
- NPR broadcast of music from Cranston-Csuri, as part of a segment of "Morning Edition".
- NPR broadcast of "Nightbreak" on the "USA Ear" new music program, Fall 1985
- New Music FM series broadcast of "Construction with Plains and Curves", a joint nationwide satellite broadcast by NPR radio stations in Chicago, New York, San Francisco, Minneapolis, Washington DC, and other NPR affiliates. The broadcast was also aired on various European stations via the European Broadcast System. beg. 9/83.
- NPR affiliate WBEZ Chicago broadcast of "Movement Music", 4/85

**CURATED EXHIBITIONS**

**Paradise Lost? e-commerce and the web** - an exhibition of on-line work I organized at School of the Art Institute of Chicago which challenges and subverts conventional uses of the WWW driven by e-commerce and other "practical" uses of the web. Betty Rymer Gallery, Chicago April 6-May 31, 2000

**Reinventing the Box** - an exhibition of new electronic media art by international artists which was co-curated with fiber and computer artist Ingrid Bachman, and was sponsored by the School of the Art Institute of Chicago and by the Goethe-Institut Chicago. This exhibition was presented in conjunction with the Eighth International Symposium on the Electronic Arts. Betty Rymer Gallery, Chicago Aug. 22 - Oct. 1, 1997

**FILM AND VIDEO SOUNDTRACKS**

Soundtrack for the Annette Barbier video "Women's Movements", seen on PBS and other broadcast networks.

Sound design and music for the Tom Finerty film, "Trust Me", which has won numerous film festival awards.

Collaborated with video artist Annette Barbier on the music video "My Country" which has been featured at the New York Museum of the Moving Image and "Artists Space" galleries, has been seen on PBS and other networks, and won the 1988 CAN award for "Best New Music Video".

Composed and produced soundtrack for the Chicago Historical Society's "Streets of Chicago" video, which has been on exhibit since late 1988.
PUBLICATIONS

Decker, S. Without Speakers, Recent Sound Installations, CADE 2001 proceedings

Guest editor and contributor to special YLEM issue on Sound Installation


SELECTED PRESENTATIONS


Recent Sound Installations, presented ISEA 2002, Nagoya, Japan

Sound Installation without Speakers, presented CADE 2001, Glasgow Royal College of Art and Design


Visiting Artist, Northwestern University, Art and Technology program, Evanston, IL 2000

Invited Speaker, Ultimakonferansen, Ultima Contemporary Music Festival, Oslo, NORWAY, Oct. 1999

Visiting Artist, University of Michigan, School of Art, Ann Arbor, Michigan, Feb. 1999

Invited Visiting Artist, Univ. of Wisconsin. Madison, Inter Arts and Technology Dept., April, 1997

Presentation on the Art and Technology Dept., School of the Art Inst. of Chicago, to the International Symposium on the electronic Arts, Rotterdam, the NETHERLANDS, 1996

Digital Creativity Inside Out, presented at the 1996 International Symposium on the Electronic Arts, Rotterdam, the NETHERLANDS.
(selected presentations, continued)

Session chair, panelist, and presenter in the Total Museum conference Oct. 25 & 26, sponsored by the Art Institute of Chicago Museum Education Dept.

Guest Artist, Roosevelt University Dept. of Music Theory and Composition, 1993

Presented invited lecture/demonstration to Apple Computer executives and employees on current and future personal computer music applications and systems. 1990

Invited lecture/demonstration of digital techniques for spatial sound processing presented to Walt Disney Studios, Burbank, CA. with Gary Kendall and William Martens 1986

Invited lecture "An Insider's look at MIDI systems", presented with Brian Schmidt at the University of Chicago's 2 week FM synthesis and MIDI seminar. 1986


OTHER PROFESSIONAL ACTIVITIES AND SERVICE

Chair of the Eighth International Symposium on the Electronic Arts, (ISEA97) hosted by the School of the Art Institute of Chicago. This symposium of electronic art, music, literature, architecture, etc. was one of the largest and most important of it’s kind held in North America to date, attracting over 1,000 attendees from 23 countries, and including a city-wide festival of electronic art shows and performances.

Board member of the Inter-Society of the Electronic Arts, 96-98

Worked closely with the Museum Education Department of the Art Institute of Chicago, the Goethe-Institut Chicago, and the Center for Art and Media (ZKM), Karlsruhe, GERMANY to organize The Total Museum, a conference which examined the role of electronic media in the “museum of the future.”

Member of review panel for Leonardo Digital Reviews, on-line electronic journal published by Leonardo and MIT-Press, 94-present.

Member of 10 year program review panel, Interarts and Technology Program, University of Wisconsin, Madison.

MEDIA RECOGNITION

Interviews and Articles

- "Ki- "Apple Concert", Turku Sonomat, 11/03
- Karla Loring, Chicago Tribune Magazine cover story, 2/25/2001
- Editor's Choice for Paradise Lost? e-commerce and the web, Margaret Littman, Crain’s Chicago Business, 4/2/2001
- "Chicagoans of the Year: Chicago’s Finest, 15 people who have enriched the arts in 1997", Chicago Tribune arts section cover story, 12/97
- "Symposium plugging into electronic art", Bill Stamets, Chicago Sun Times, 9/97
- "International Conference Becomes a Citywide Festival of Electronic Arts", Alan Artner, Chicago Tribune, 9/97
- “ISEA97”, in “Electronic Art Blows into Windy City”, Reena Jana, Wired, 9/97
- “ISEA97”, Mathew Mirapaul, New York Times, arts@large, 9/97
- “Wire Field”, Helsinki Sonomat, 6/97
- “Wire Field”, Abo Underrättelser, 6/97
- “Music from the Well-Fed Abyss”, Helsinki Sonomat, 6/97
- “Wire Field”, Ilona Kangas, Turku Sonomat, 6/97
- “Dancers Trigger Light Sensors”, Beth Anderson-Song, Subnation, 4/94
- “Dance Notes: Motion makes the music”, T. Shen, The Reader, 5/93
- “WFMT and New Music Chicago Receive Broadcast Awards”, New Music Chicago in Print, 9/90
- “Chicago is Alive with sound of new music”, Chicago Sun Times, 4/88
- “Festival Links New Music and Landmark Sites”, Chicago Magazine, 4/88
- “Music Notes: A Celebration of Sites and Sounds”, The Chicago Reader, 4/88
- “Halls are alive with the sound of new music”, The Chicago Tribune, 4/88
- “Computer Composer takes his cues from Mathematics”, concert preview article, Chicago Tribune, 5/86
- “At Northwestern, they're reshaping world of sound,” feature cover article, Chicago Tribune, 4/86
- “Northwestern's Computer Music Studio,” Illinois Entertainer, 2/86
- “NU's Computer Music Studio Takes Sound To The Twilight Zone and Beyond,” Midwest MicroTimes, 1/86
- Performance preview, “Music Notes: local composers expose themselves”, The Reader, 4/85
- “Strike up the Computer”, Cover story, Arts section, Chicago Tribune, 8/83
- Radio interview on the nationwide NPR "USA Ear" new music program, Fall 1985
- Radio interview for the NPR morning news show "Morning Edition", Spring 1984
- Radio interview for WFMT's program, "Music in Chicago", Spring 1984
- Radio interview on the nationwide NPR program "NEW MUSIC FM", Fall 1983

Reviews

- “A Deep Vibration: A Small Migration”, Lizzie Muller, Realtimemusics, 9/04
- “Reinventing the Box”, in “Interactive Art that Leaves the PC Behind”, Matthew Mirapaul, New York Times, arts@large
- “Reinventing the Box”, in “Bytes and Pieces, Viewers are Active Participants in the World of Electronic Art”, Alan Artner, Chicago Tribune.
- “Reinventing the Box”, John Brunetti, Dialogue.
- “ISEA97” in “An Electronic Artist and his Body of Work”, Mathew Mirrapaul, New York Times, arts@large, 9/97
- “ISEA97”, Carol Burbank, Chicago Reader, 9/97
- “Divided Circle: Music for 16 Stirrers”, Fred Camper, Chicago Reader, 9/97
- “Wire Field”, Tuike Alitalo, Helsinki Sonomat, 6/97
- “Divided Circle: Music for 16 Stirrers” in Leonardo Digital Review, Annette Barbier and Paul Hertz, 10/97
- “Truth Spin”, R. Christiansen, Chicago Tribune, 5/93
- “Quartet”, in “Kapture”, D. Perna, EAR Magazine, 4/90
- “My Country”, in “Minimizing Minimalism”, E. Johnson, Chicago Haymarket, 2/86
- “My Country”, in “KAPTURE at Links Hall”, R. Wilding-White, Chicago Musicale, 2/86
- “Nightbreak”, in “Polished Surfaces”, K. Gann, The Reader, 6/84
- “Nightbreak”, in "Democratic Convention”, K. Gann, The Reader, 4/83