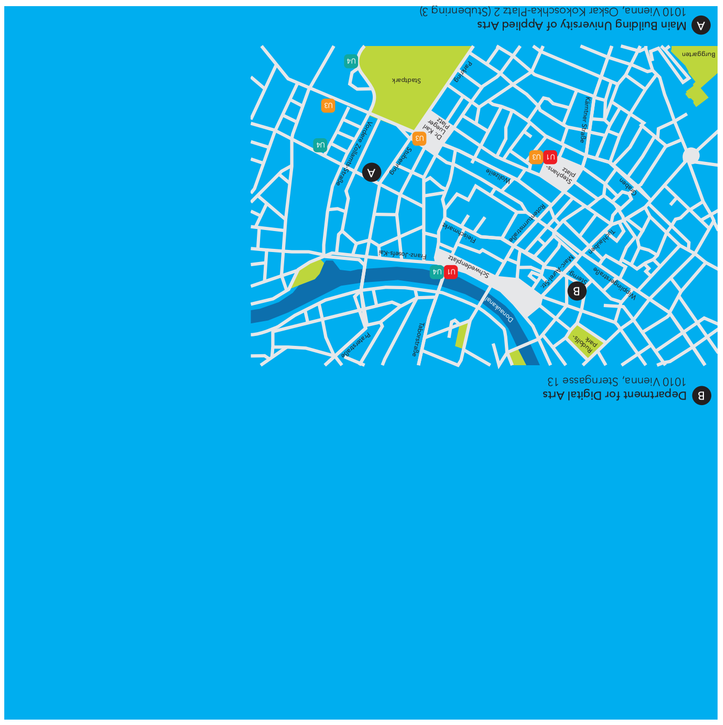
5TH MOBILE MUSIC WORKSHOP

MobileMusicWorkshop

CREATIVE INTERACTIONS – THE MOBILE MUSIC WORKSHOPS 2004 – 2008

5TH INTERNATIONAL MOBILE MUSIC WORKSHOP
MAY 13 – 15, 2008
UNIVERSITY OF APPLIED ARTS, VIENNA
HTTP://WWW.MOBILEMUSICWORKSHOP.ORG



Day 1 – MAY 13

10:00 • Welcome

10:30 • Keynote

12:00 – 13:30 • Lunch

PAPER1

13:30 • Caressing the Skin:
Mobile devices and bodily engagement
F. Schroder

14:00 • MoGMI: Mobile Gesture Music Instrument
A. Dekel / G. Dekel

14:30 – 15:00 • Coffee break

PERFORMANCE1

15:00 • Transit
Spat_Lab

15:30 • Caving
B. Gamcing / G. Haider

INSTALLATIONS

16:00 – 17:00 Digital Claiming
Spat_Lab

Day 2 – MAY 14

POSTER PRESENTATION

10.00 – 12.00

Mobile Tangible Interfaces as Gestural Instruments
F. Kayali / M. Pichlmair / P. Kotik

An Augmented Reality Framework for Wireless Mobile Performance
M. Wozniewski / N. Bouillot / Z. Settel / J.R. Cooperstock

undersound and the Above Ground
A. Bassoli / J. Brewer / K. Martin / I. Carreras / D. Tacconi

soundFishing • C. Midolo

12.00-13.30 • Lunch

PAPER2

13:30 • Some Challenges Related to Music and Movement in Mobile Music Technology
A. R. Jensenius

14:00 • Real-Time Synaesthetic Sonification of Traveling Landscapes
T. Pohle / P. Knees

14:30-15:00 • Coffee break

PERFORMANCE52

15.00 • Framework
A. Haberl / K.Filip / S. Fassler / N. Kristis

15.30 • Tango Intervention Vienna
L. Robert

16.00 • IMPROVe - mobile Phone sound improvisation
R. Wiederberg

16.30 • Collaborative Musical Games with PhonePlay
J. Knowles

19.00 • Community - dinner at Xpedit

Day 3 – MAY 15

HANDS-ON SESSIONS

10.00 – 12.00

R. Wiederberg / Y. Harris / S. Symons

12.00 – 13.30 Lunch

PAPER3

13:30 • Developments and Challenges turning Mobile Phones into Generic music Performance Platforms
G. Essl / G. Wang / M. Rohs

14:00 • A Typology for Listening in Place
P. Rebelo / M. Green / F. Hollerweger

CLOSING SESSION - PANEL DEBATE

15:00 – 17:00

CLOSING PARTY

19:00 – …

CONCERTS

20:00 • sprengfield RVL-003
J. Perchy / R. Matty / M. Wyschka

20:30 • taus
T. Bechtman / K. Filip

21:00 • Institute for transacoustic research
N.Ganstrer/ M.Meinharter/J.Pfringer/E.Reitermayer

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Looking Back at Five Years of the MMW

Frauke Behrendt
Lalya Gaye
Atau T anaka

Introduction

It started with two conferences in 2003. At Ubicomp 2003 in Nottingham, UK, in the same demo room were two music demos: Arianna Bassoli's now legendary TunA, and Atau Tanaka's Malleable Mobile Music. They looked at the implications of ubiquitous computing technology on music consumption and creation. Around the same time in Paris, Lalya Gaye and Ramia Mazé's Sonic City was presented at the UIST conference, looking at ways that the urban environment could become an input to a portable generative music system. A kind of community emerged in email discussion afterwards sharing the idea that the technologies presented in scientific conferences could be harnessed for musical means. This all took place before the commercial introduction of Walkman-branded mobile phones and Apple's iPhone put mobiles and music in the public consciousness. In the midst of rapid commercial and consumer takeup, it is the focus on creativity that makes the Mobile Music Workshop (MMW) special, and gives it continuing relevance.

First MMW - Göteborg

The initial contact made at Ubicomp and UIST led to continued exchange and discussions about potential collaborative projects, culminating in the idea by Lalya's doctoral supervisor, Lars Erik Holmquist, to organize a workshop. The idea was to bring together the research Arianna was conducting at MediaLab Europe, that Atau was doing at Sony CSL Paris, and that Lalya was doing at the Viktoria Institute, and to open things up to the research community at large, and to make ties with industry. Under Lars Erik's initiative, the first Workshop on Mobile Music Technologies took place on the 10th and 11th of June, 2004 in Goteborg, Sweden.

The first workshop was a scoping event, an event to bring together the beginnings of a young community and to define a new research field. It is interesting to note that the date of the first MMW preceded the European launch of Apple's iTunes Music Store by 5 days! Downloadable music was as yet far from being a commercially viable reality. Napster had already been shut down, but Kazaa was still the predominant peer-to-peer file sharing system. It was in this context that the first workshop sought to situate the place of music in the landscape of rapidly developing mobile computing technologies.

From Lalya's notes of the first workshop:
Mobile music is a new media relying on the use of mobile computing. This media is characterised by a tension between place and music creation, listening or sharing. This tension is created by its mobile nature and results from the fact that mobile music devices can be used anywhere but at the same time have an awareness of place. When becoming mobile, the media is displaced from a particular location to the movements of a particular user, providing a soundtrack to her life as the Sony Walkman™ once did, but with additional properties such as networking capabilities (enabling music sharing with strangers in public space), or context-awareness (enabling certain forms of mobile music making).

The first workshop had an open call, and attracted fifteen participants. Aside from the projects already mentioned, notable contributions came from Mattias Östergren in what is to this day the only working car-oriented system presented at the workshops, Chris Salter's contribution on notions of play, and a poster on mobile sound art by Frauke Behrendt who was to go on to organize the 3rd workshop. Summaries from these and other projects appear later in this catalogue.

2nd MMW - Vancouver

The second workshop was organised in May 2005 as part of the NIME 2005 conference in Vancouver, Canada. By now, the community was better defined, and the workshop time was shared between presentations of new projects, demos, in depth-discussions and hands-on brainstorming activities. It attracted 18 external participants.

Presented projects ranged from Solarcoustics, a device that enabled its user to manipulate sounds and create music based on ambient lighting conditions, to a mobile user-interface platform for mobile music making based on a personal area network (PAN), to Location33, a project that transformed music albums into narratives spread across geographical space. Other presentations reflected on artistic approaches to mobile music and socio-cultural impacts of mobility, music consumption and urban culture.

This edition of the workshop included hands-on activities that focused on "bodystorming" of mobile music applications and scenarios. With this method of structured brainstorming, participants explored various mobile music themes, developed simple application ideas, and physically enacted scenarios of use in order to get an embodied understanding of design challenges and opportunities specific to mobile music. Enacting scenarios stimulated discussions on mobile ways of sharing and projecting music in public space, and of social meaning and adequacy.

Siggraph 2005

The Mobile Music community broadened its horizons in August of that year by organizing a panel discussion on Ubiquitous Music at ACM SIGGRAPH in Los Angeles. As the largest international conference on digital media and emerging technologies, the SIGGRAPH panel underscored the pertinence of mobility and musical interaction to a wider field. Presentations included those by participants of the first two workshops, including Gideon D'Arcangelo, a well known American radio journalist.

With the title "ubiquitous music," we sought to maintain the open-ended creativity and research orientation of the community, in a time when the term "mobile music" was being rapidly co-opted by industry to promote use of mobile phones as basic MP3 players. Siggraph was an environment that represented the intersection of conference, festival, and industry trade show, at once creative, academic, and commercial.

3rd MMW - Brighton

The third edition of the workshop took place in March 2006 at the University of Sussex, Brighton, UK. It gathered nearly 30 participants and focused on the locative media aspect of mobile music. The program consisted of a keynote by "Professor iPod" Michael Bull, critical discussions, hands-on activities, and break-out sessions where participants received feedback on their work-in-progress projects. In these sessions, uncompleted yet on-going projects received critical review and support by peers including Atau, Lars Erik, and Maria Håkansson. Projects included mobile music systems and enabling technologies, interface design, art pieces, and philosophical approaches to mobile music. The projects were grouped according to three key themes: Mobile collaborative music making, Soundscapes & mobile music listening, HCI in mobile music and Uses of music in mobile setting.

During a hands-on session, participants got direct experience with cutting-edge mobile music and locative audio technology. The tutorials were followed by bodystorming sessions where participants sketched application ideas for mobile music using the presented technology as well as simple audio devices as props.

NIME 2006

Like it had at Siggraph, the MMW in 2006 reached out beyond the discipline to present a report on the emerging field at the New Interfaces for Musical Expression (NIME) conference. The connection to NIME is particularly relevant to MMW - the notion of real time interaction in music through sensors, networks, and other inputs are a core concern of NIME that MMW draws heavily upon to extend the notion of mobile music beyond the simple download-play metaphor. This was underlined by holding the second workshop during NIME'05 in Vancouver, much in the way that the first NIME took place as a workshop within the ACM conference on Computer Human Interaction (CHI'01). Meanwhile research questions that the MMW was confronting, including issues of creative engagement as implemented and deployed on consumer devices, were increasingly pertinent to NIME as students and researchers increasingly became interested in miniaturized, portable electronics.

4th MMW – Amsterdam

The MMW went to Amsterdam in May 2007, co-organized by STEIM (Studio for Electro-Instrumental Music) and the Waag Society for Old and New Media. Kristina Andersen and Ronald Lenz were the organizers of this edition of the workshop, and represented the collaboration between one of the original studios in experimental electronic music and a newer research and development institute active in the fields of networked art, education and creative industries.

Keynote presentations at the 4th MMW underscored this breadth. American artist Teri Rueb retraced a cultural approach to mapping out a location-sensitive audio work. STEIM's Michel Waisvisz recounted a personal musical history that included dismantling pianos in childhood, to creating analogue live samplers with pedal-controlled Revox open reel recorders, to conceiving one of the first truly mobile musical instruments, the CrackleBox. Finally, Regine Debatty, the indefatigable art blogger, shared her insights on her continuously evolving visions of the creative potential of technological, biological, and cultural forms, and put theory into practice through active coverage of the workshop on her blog, We Make Money Not Art.

Holding the workshop across two locations in the vibrant city of Amsterdam permitted a real engagement with the urban environment. Cathy van Eck's Hearing Sirens led workshop participants like a Pied Piper through the streets and canals of Amsterdam in a sonic walk from Waag to STEIM. With Craving, Bernhard Garnicnig and Gottfried Haider from Spat_Lab used location and orientation sensing to situate a theatre work of Sarah Kane in the plaza outside of Niewmarkt. The Handy Dandy captured the attention of a local newspaper by staging a rock band of air guitars on Bluetooth mobile phones. It was this group of six, spread across two projects and led by Nicolaj Kirisits, that would form the organizing team of this year's MMW.

Conflux 2007

In September 2007, the workshop series was presented to the North American community at the Conflux festival. Conflux is a New York festival of contemporary psychogeography where projects investigate "everyday urban life through emerging artistic, technological and social practice." The urban/public/guerrilla art context proved to be a very fruitful one for mobile music. It was a gathering of the U.S. locative media scene that included local grassroots projects, and presentations by curators at Rhizome and the Whitney Museum of American Art. The psychogeography concept was not unfamiliar to the MMW community, as one of the artists using the banner was Mark Shepard, who had presented Tactical Sound Garden at the 3rd MMW. Frauke made the trip to Brooklyn to give the presentation, make contact with the New York scene, and to raise interest in bringing the MMW back to North America for a future edition.

5th MMW – Vienna

The workshops have drawn an interdisciplinary group of participants including artists, musicians, designers, industry representatives and academics from ubiquitous computing, media studies and social sciences. They have featured a range of activities that go beyond the typical conference set-up, most notably with hands-on, critique, and structured brainstorming sessions. This year's workshop is hosted by the University of Applied Arts Vienna, and extends the creative emphasis of the MMW from the musical focus of STEIM towards the visual arts and design disciplines. The activities of the Spat_Lab, introduced by Nicolaj Kirisits and described in this volume, are consistent with the spirit of the MMW, and created the context for the 2008 partnership.

Creative Mobile Music

Key themes on mobile music that have emerged over the five years of the workshop include creating, sharing and design. Mobile music is concerned with the urban environment as musical interface, for location-aware sound art, audio annotation of physical space, and other creative applications. New form-factors and content formats explore how music and mobility can be addressed in design methods. Wider discussions have addressed relations between the body, space and sound, synchronicity, foreground/background activities, and the social acceptance of new behaviors in public space.

This catalogue summarizes the projects, presentations, and performances from the first five years of the Mobile Music Workshop. In this time we have defined a field of research and artistic practice. A community has formed around this field and the workshop. We hope that this document will serve to inform and inspire future work in the area, and look forward to the next five years of creative mobile music!

Caressing the Skin: Mobile devices and bodily engagement

Franziska Schroeder

ABSTRACT

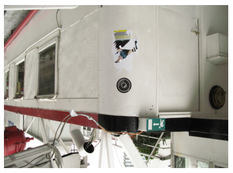
This text examines mobile devices by looking at the tactile interaction of the human body with the technological device. I show that the body is rendered performative by engaging with a device and I draw on a performer's interaction with a musical instrument to support this argument. This tactile interaction also exposes the tension between the bodily intimate, as experienced through the skin, and the more distant, as represented by the technological device. I argue that recent design aesthetics are driven by the urge to bring the device closer to the bodily intimate, closer to the skin.

I show that the complexities of the human touch as fronted by the skin that allow the human body to navigate the world in intricate ways become central to these design aesthetics. For this argument I examine touch by looking closely at the skin and at the ways that the skin has been understood over several centuries. The skin will be examined with view to its essential position to the perception of self, aided by the psycho-analytical interpretation developed by Daniel Anzieu. It will become clear that, historically, the skin was mainly seen as a covering that kept the body together. It was then exposed in the Medieval period as an organ of interchange, more akin to a permeable membrane. With the release of the taboo of cutting the skin in the European Renaissance the perception of the skin alters immensely, and the skin is finally exposed as an active environment, as a meeting place for the other senses.
In this paper I highlight the multi-touch interfaces of recent mobile devices allow for the multiplying functions of the skin to come into being by engaging the body in various gestural moves, by providing conditions for participation, rather than by simply presenting functions of control that are still highly characteristic of many design aesthetics.

BIO

Franziska Schroeder is a performer of saxophone and live-electronic music, an improviser and theorist. She is the founder of the digital media collective *f a u s t* with composer/pianist Pedro Rebelo. Franziska plays in the free improvisation trio "Faint" with percussionist Steve Davis and pianist Pedro Rebelo. The trio has recently released their first recording on the Creative Source Recording label.
In 2006 Franziska was awarded her PhD by the School of Arts, Culture and Environment at the University of Edinburgh, UK. Her current research interests include the intersection of philosophy and performance in technology-informed environments, in particular the role of the body in the age of technological change. Franziska has written for many international journals. She has guest-edited a double issue for the Contemporary Music Review Journal (Routledge) and is on the editorial board for the ARiADA (Advanced Research in Aesthetics in the Digital Arts) online journal, UK.
Franziska performs with improvisers from the UK and Europe in actual and virtual worlds. She leads an avatarist existence in SecondLife.
Since April 2007 Franziska has been based at the Sonic Arts Research Centre in Belfast studying Real-Time Performance in Virtual Worlds. She is funded by the UK's Arts and Humanities Research Council Fellowship scheme.
http://www.lauinet.net









Some Challenges Related to Music and Movement in Mobile Music Technology

Alexander Refsum Jensenius

ABSTRACT

Mobile music technology opens many new opportunities in terms of location-aware systems, social interaction etc., but we should not forget that many challenges faced in "immobile" music technology research are also apparent in mobile computing. This paper presents an overview of some challenges related to the design of action-sound relationships and music-movement correspondences, and suggests how these can be studied and tested in mobile devices.

BIO

Alexander Refsum Jensenius (BA, MA, MSc, PhD) is a music researcher and research musician working in the fields of embodied music cognition and new interfaces for musical expression (NIME) at the University of Oslo and at the Norwegian Academy of Music. He studied physics, informatics, mathematics, musicology, music performance and music technology at the University of Oslo and Chalmers Institute of Technology, and has been a visiting researcher at UC Berkeley and McGill.

A typology for Listening Place

Pedro Rebelo, Matt Green, Florian Hollerweger

ABSTRACT

Sound technologies, particularly mobile and locative media technologies, can provide unique listening experiences within situations that are not themselves exclusive zones for sonic projection, meditation or exploration. This paper seeks to contribute to the understanding of locative sound design by presenting a framework consisting of three spatial archetypes: the Theatre, the Museum and the City. These serve as metaphors through which we can articulate different types of relations between listener, sound and place. The Mobile Music Player has been chosen as an example of a listening condition that both characterises and traverses the Theatre, the Museum and the City listening archetypes.

BIO

Pedro Rebelo is a composer/digital artist working in electroacoustic music, digital media and installation. His approach to music making is informed by the use of improvisation and interdisciplinary structures. He has been involved in several collaborative projects with visual artists and has created a large body of work exploring the relationships between architecture and music in creating interactive performance and installation environments. This includes a series of commissioned pieces for soloists and live-electronics which take as a basis the interpretation of specific acoustic spaces. In the duo laut with saxophonist Franziska Schroeder he investigates the extension of interfaces and control in interactive performance practices. His electroacoustic music is featured in various CD sets (Sonic Circuits IV, Discontact III, Exploratory Music from Portugal, ARiADA).
Pedro conducts research in the field of digital media, interactive sound and composition. His writings reflect his approach to design and composition by articulating creative practice in a wider understanding of cultural theory.
Pedro has been awarded a PhD in composition from the University of Edinburgh and is currently Director of Research at the Sonic Arts Research Centre, Queen's University Belfast.

At present Matt Green is partaking in a PhD Studentship at the Sonic Arts Research Centre (SARC), Queen's University, Belfast, UK. This research represents a partnership between the school and the Hewlett-Packard Media labs, Bristol, UK. The PhD research focuses on the situated sound sensitive systems; that is pervasive technologies positioned in space that sympathize with the surrounding sound field as a means to understand, preserve, develop or distort our sonic experiences within certain places. As part of, or separate to, his studies Matt Green has partaken in several Sound art commissions. These include a permanent interactive sonic entrance space in the Perth Concert Hall, Scotland, UK (2005) and a pervasive networked exploration at the Future Sonic Festival, Manchester, UK (2006) titled 'Bump!'. Very recently his proposal "In hear, Out there" was selected for the Inclusiva.net Locative media workshop (2008) held at the MediaLab-Prado in Madrid, Spain.

Florian Hollerweger was born in 1980 in Linz, Austria. He works as a sound artist, programmer, sound engineer, and performer and has performed his own pieces as well as collaborative works with 'Pd~graz' and others in the United States, Canada, and various countries across Europe. Florian has studied electronic and computer music in Austria, California, and currently at the Sonic Arts Research Centre in Belfast, Northern Ireland, where he is investigating strategies for the design of social listening environments.

Real-Time Synaesthetic Sonification of Traveling Landscapes

Tim Pohle, Peter Knees

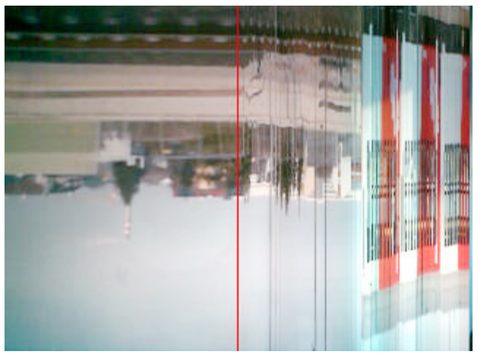
ABSTRACT

When traveling on a train, many people enjoy looking out of the window at the landscape passing by. We present an application that translates the perceived movement of the landscape and other occurring events such as passing trains into music. The continuously changing view outside the window is captured with a camera and translated into midi events that are replayed instantaneously. This allows for a reflection of the visual impression, adding a sound dimension to the visual experience and deepening the state of contemplation. The application can both be run on mobile phones (with built-in camera) and on laptops (with a connected Webcam). Several techniques to transfer the captured images to audio are possible. Most interesting and pleasuring results were achieved by an approach that utilizes a tone-to-color mapping like the one of the "Clavier à lumières" by Russian composer and pianist and self-claimed synaesthete Alexander Nikolajewitsch Skrjabin. Due to a steady capturing rate of seven frames per second, there is a clearly noticeable basic rhythm pattern in the music, which the listener may associate with the steady progression of the train. Depending on the landscape, notes in some bands are played in fast repetition or movements, while in other bands they sound only sporadic. Also, a changing landscape is reflected in the resulting music, while the overall feeling remains the same.
Generating panoramic pictures from the captured landscapes exhibits some interesting effects caused by the movement of the train. Since frame rate and position of the camera are both static, proximity of objects and slope and velocity of the train result in characteristic visual effects. For example, objects that "move" at high speeds are displayed very narrow, whereas objects filmed at low speeds appear stretched.

BIO

Tim Pohle was born in Linz, Germany. He has studied musicology and graduated in computer science. Over the years, he played a number of classical and modern instruments, and was member in various indie-pop bands. Currently, he is writing his Ph.D. thesis in Linz, Austria in the field of Music Information Retrieval.
http://www.cp.jku.at/people/pohle

Peter Knees was born in Vienna, Austria. In January 2005, he graduated in computer science from Vienna University of Technology. Since February 2005 he has been working as a Project Assistant at the Department of Computational Perception at the Johannes Kepler University Linz where he performs research towards a doctoral thesis with a focus on Music Information Retrieval. Other research interests include Multimedia and Artificial Intelligence. Since 2004 he has been studying Psychology at the University of Vienna.
http://www.cp.jku.at/people/knees



MoGMI: Mobile Gestura Music Instrument

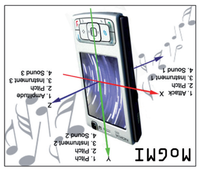
Amnon Dekel, Gilly Dekel

ABSTRACT

The MoGMI project that explores ways of enabling the mobile phone to become a musical instrument for naïve users. Using the 3 dimensional accelerometer on the Nokia N95 users can record musical pieces using physical gestures. We developed an application that allowed them to select one to three musical instruments and create music with them. An additional application lets users play a drum-set. This initial study explores which accelerometer axis mapping model is preferred by users. Do they prefer a model in which each of the motion axes are mapped to a different instrument or one in which the motion affects volume, pitch and attack of a single instrument. Results show that subjects preferred the three axis model in which every axis is mapped to a different dimension of music generation (attack, amplitude, and pitch). This mapping was deemed better by subjects over simpler or more complicated mapping models in three of five dimensions (easier to learn, produces "nicer" music, and in how easy it is to understand the relationship between gestures performed and the music that is subsequently generated).

BIO

Amnon Dekel thrives at the intersection point of four disciplines: research in novel human computer interaction, information technology, digital media and university level lecturing. The twenty five years since Amnon programmed his first computer (a ZX-80) have been spent by him in studying computer science, being an Air Traffic Controller, getting a BA and an MA degree in cognitive psychology, an MPS degree in Interactive Telecommunications, producing award winning and Pulitzer nominated web sites, designing and developing desktop and web based applications, developing interactive digital art installations, teaching, industry consulting, co-founding an AOL funded internet startup (Earthnoise.com) which was a pioneer in Video Sharing (5 years too early!), and as of 2005, working on his PhD in Computer Science (focusing on merging the physical world with the world of digital information networks).



Developments and Challenges turning Mobile Phones into Generic Music Performance Platforms

Georg Essl, Ge Wang, Michael Rohs

ABSTRACT

There has been an ongoing effort to turn mobile phones into generic platforms or musical expression. By generic we mean useable in a wide range of expressive settings, where the enabling technology has minimal influence on the core artistic expression itself. We describe what has been achieved so far and outline a number of open challenges.

BIO

Georg Essl is a Senior Research Scientist at the Deutsche Telekom Laboratories at the Technical University of Berlin in Germany doing research in human computer interaction (mobile interactions, tangible & physical interactions) and sound synthesis (physical and mathematical models). Before coming to Berlin, he worked as a post-doctoral researcher at MIT's MediaLab Europe with Sile O'Modhrain on tangible interactions. PebbleBox, a tactile interface for sonic performance joint with Sile O'Modhrain and Andy Brady was invited to the Touch Me exhibition at Victoria and Albert Museum, London in 2005. While at Media Lab Europe, he participated in the Enactive European Network of Excellence, which studies the role of action in interaction design. Between 2002-2003 I was Assistant Professor in Computer and Information Science and Engineering at the University of Florida, where he taught signal processing and synthesis of sound and digital production. He got my Ph.D. in Computer Science from Princeton University in 2002 working with Perry Cook on physical simulation of musical instruments. He is a member of the IEEE, the Acoustical Society of America (ASA), the International Computer Music Association (ICMA), and the American Mathematical Society (AMS). He has been technical chair for the International Computer Music Conference in 2004 and 2006. Currently he serve as Research Coordinator of the International Computer Music Association.

Ge Wang received his B.S. in Computer Science in 2000 from Duke University, PhD (soon) in Computer Science (advisor Perry Cook) in 2008 from Princeton University, and is currently an assistant professor at Stanford University in the Center for Computer Research in Music and Acoustics (CCRMA). His research interests include interactive software systems (of all sizes) for computer music, programming languages, sound synthesis and analysis, music information retrieval, new performance ensembles (e.g., laptop orchestra) and paradigms (e.g., live coding), visualization, interfaces for human-computer interaction, interactive audio over networks, and methodologies for education at the intersection of computer science and music. Ge is the chief architect of the ChucK audio programming language and the Audicle environment. He was a founding developer and co-director of the Princeton Laptop Orchestra (PLOrk), the founder and director of the Stanford Laptop Orchestra (SLOrk), and a co-creator of the TAPESTREA sound design environment. Ge composes and performs via various electro-acoustic and computer-mediated means, including with PLOrk/SLOrk, with Perry as a live coding duo, and with Princeton graduate student and comrade Rebecca Fiebrink in a duo exploring new performance paradigms, cool audio software, and great food.

Michael Rohs is a senior research scientist with Deutsche Telekom Laboratories at TU Berlin. His research interests are in mobile and pervasive interaction and comprise interfaces at different scales, ranging from handheld device screens to large public displays, the integration of physical and virtual aspects of the user's environment, and sensor-based mobile interaction. His research currently focuses on small-display interaction, in particular navigation and visualization techniques for spatially aware displays. An example is using camera phones as magic lenses for large-scale paper maps in order to overlay personalized, up-to-date information. As part of his doctoral dissertation he developed camera-based interaction techniques for mobile devices, like optical flow control for large public displays and a marker recognition system for camera phones that uses device orientation as an input parameter. His homepage is available at http://www.deutsche-telekom-laboratories.de/~rohs

soundFishing

Claudio Midolo

ABSTRACT

The soundFishing interface is a portable digital device able to analyze the sonic environment surrounding the user and, based on certain rules, autonomously capture sound snapshots out of it. Thinking about the visual and sonic human sampling activity it is clear that a huge gap exists between the two practices as the first is immensely more popular and inflactionated compared to the second. This situation probably emerges from the sensorial prominence of Sight over Hearing and the first consequence that takes place is a severe loss in the form of sonic memories. The soundFishing project tries to suggest a possible solution to this issue, in the form of a device able to save these sonic fragments from oblivion and present them to the user, stimulating its curiosity towards these ,otherwise lost, perceptions. The proposed user scenario sees the interface being first configured by the user who sets a rule which will control the recording activity. Then the device is carried around by the user for the rest of the day, left alone listening to the aural stream of the user's life. Once back home again the user would listen to the collected sounds which matched the rule set at the beginning. The first, simpliest output would be an unconsciously filled sonic diary, illustrating various aural events which took place during the course of the day. This sound collection would also stimulate curiosity as it captures and shows the richness of variety of possibilities that live within the sonic layer usally is taken for granted. These captured fragments of sound can then be valuable also to other people such as musicians and audio producers, who can use and share them as creative assets. In conclusion the key to really grab the essence of this project is held by the concept of curiosity, a virtue that can turn something usual and useless into something unique and meaningful, a powerful entity that can open the door of knowledge to all of us.

BIO

Education
2007/2008
Graduate MFA Design and Technology student at Parsons, The New School,
New York City.
Academic honor - Graduate Dean's Scholarship.

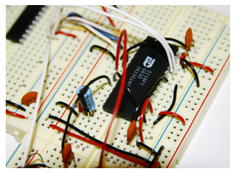
2004/2007
Undergraduate Digital Design student at Istituto Europeo di Design in Milan.
Top marks 100/100 cum laude.
Thesis: wiiwiiwiiwii - audio/visual musical instrument.
Academic honor - Creative Lab Teaching Assistantship.

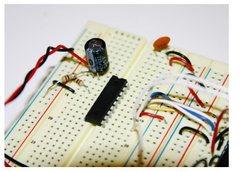
1998/2003
High school diploma in Sciences from Liceo G.B. Grassi in Saronno
Top marks 100/100.

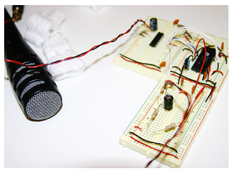
Summer 2006
Summer courses student at New York University Tisch I.T.P.

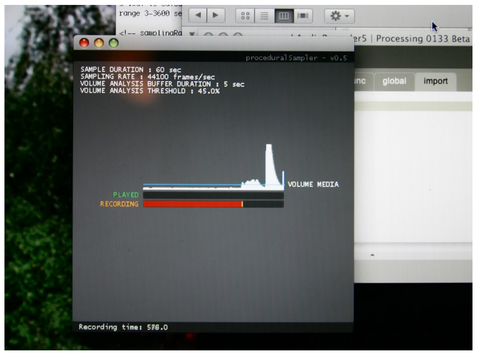
Works
Creative laboratory assistant at Istituto Europeo di Design.
2007
Freelance media design.
2005/2007
Graphic design at Genesio institute in Milan.
2005

Exhibitions
April 2008 Invited and performed at Node08 festival with wiiwiiwiiwii project , Frankfurt.









"rahmenbedingung"- sonification of the poetic act of cycling

klaus filip_nicolaj kirisits_noid_silvia faessler

ABSTRACT

a bicycle equipped with sensors and connected to a sound-computer via wireless device forms the personal musical interface of each performer. the organic data-stream of parameters like direction, speed, acceleration, pedal-speed, pedal rotation etc. is bound to the inner logic of riding a bike - hence we don't want to fall down. the outer logic is the architectural determination of the space, the bicycle path, as well as the position of the audience. these general conditions structure the music, on the other hand we will ride the bike in a musical way which defines our movements in space and evokes a choreography.

http://to.sonance.net/rahmenbedingung

BIO

Klaus Filip
http://lloopp.klingt.org/plone/lloopp/

Almost all of Klaus Filip's art projects have been driven by technological possibilities and the social need to change structures. Among them subVoice (an underground tapemagazine), Sigis Bruder (early electronic songs together with singer Sigi Ecker), Christof Kurzmann's Orchester 33 1/3, Zentrifuge, music for short films, theatre, dance, sound-installations. He is the musical and electro-mechanic father of BigBaby, an outstanding intermedial project around a sculpture build by Red White and brought to life by the movements of Cynthia Schwertsik.
Filip is the inventor and never sleeping developer of the open-source software lloopp (http://lloopp.klingt.org), a musical instrument on the computer to provide open structures for live-improvisation, used by many well-known electronic musicians.

nicolaj kirisits
architect composer digital artist
lives and works in vienna / casablanca
teaches at the university of applied arts vienna

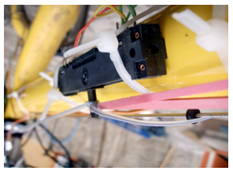
noid /aka Arnold Haberl, *1970, living in Vienna
http://noid.klingt.org/

working as a composer, performer and improvisor in various constellations

with his music he tries to understand the reality of sound we live in. of course this reality is including imaginations, wishes, dreams and acoustical halluzinations as well as the sound of the fan of his laptop or the wolf-tone of his cello.
his sensual approach, once in a while assisted by structural concepts, can have a wide range of contradictory outcome, that is always to be understood as a concentrate (essence), leaving out irrelevant points. It's up to the listener to extract a digestable dose.

Silvia Fässler
http://gnu.klingt.org/03_releases/00_skylla.html

Works as graphic designer/musician in Vienna. In the 1990s, she switched from drums (the rock trio, 8 Finnen) to electronic music. The many festivals and venues she has performed at include Zeitfluss Festival / Salzburg, Unlimited/Wels, Porgy & Bess / Vienna as well as solo or duo performances with "Silly" (Billy Roisz). She has also collaborated with Cordula Bösze, Klaus Filip, Otomo Yoshide, Arnold Haberl, to name a few.



Mobile Tangible Interfaces as Gestural Instruments

Fares Kayali, Martin Pichlmair, Petr Kotik

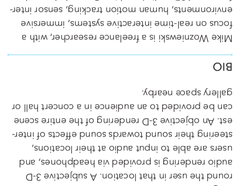
ABSTRACT

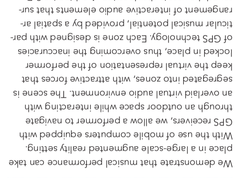
In this paper we describe gestures for the interaction with tangible mobile interfaces. From the strumming of a guitar's strings to the beating of a drum's decks, traditional musical instruments are played by performing gestures shaped by the physical representation of the instrument. Since the musical ouput of digital instruments is not defined by their physical appearance, their interface can be structured more freely. Tangible interfaces put this kind of flexibility into practice.
In order to explore gestures for musical interaction we proceeded exploratively. The described gestures were derived from three prototype instruments featuring distinct musical environments we developed over the last year. They were implemented for the Nintendo DS platform and offer different approaches to gestural interaction with music.
The first prototype is a very simplified guitar. Strumming and grabbing chords are abstracted to a single gesture. The player strums the individual frets of the guitar with the DS' stylus, triggering pre-recorded chords. The second prototype is a synthesiser instrument that is almost solely played with the stylus. The touchscreen is used as playing field. The player plays the instrument by either tapping the screen for individual tones or by sweeping across it to produce continuous sounds. In the third prototype, Thumbtack, the player acts in a playful musical environment. Four moving widgets (sound agents) can be played with using the stylus to hold, drag and throw them around. The widgets obey simple physical rules. Each of them has a unique sonic characteristic. Every collision among the widgets or with the border of the playing field triggers a distinct sound. The player is thereby enticed into playfully creating lasting rhythmical patterns.
Our research resulted in a number of suitable gestures for musical expression with mobile tangible interfaces.

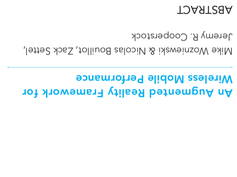
BIO

Fares Kayali is a viennese artist and researcher focusing on game studies and interactivity with music. He used his audio-visual performance software Sonic~Image for various live performances in Austria and abroad. Further projects include interactive media installations and video art. His scientific work as a project associate and Ph.D. student at the Institute of Design and Assessment of Technology at the Vienna University of Technology centers on playful musical interaction in video games.

Martin Pichlmair is a media artist living and working in Vienna, Austria. Since he received his doctoral degree in informatics he works as assistant professor at the Institute of Design and Assessment of Technology at the Vienna University of Technology. His art pieces were shown at various media art festivals and exhibitions. Recent shows including the Ars Electronica Festival, ISEA, Transmediale and the Microwave International Festival for New Media Art. In his research and publications, he focuses on theory and practise of interactive art and design - from game design and physical interfaces to open source development models and community media.







iftaf - institute for transacoustic research
translecture

Nikolaus Gansterer, Matthias Meinharter, Jóri Piringer, Ernst Reitermaier

ABSTRACT

A fastforward sonic/audio/visual crash course into transacoustics by the translinguistic theory jockey, with live mindmapping drawings accompanied by experimental electronic music. The aim is to act within the crossover of linguistic, acoustic and graphic intersections. The transacoustic answer to old-school scientific lectures.

Transacoustic research carries out science by means of art and art by means of science. The antiquated differentiation of these two areas is rejected and methods and settings from both areas are combined to arrive at unique lines of connection and division.

Transacoustic research is concerned with the peripheral effects and tangential areas of acoustics, with their borders to other areas of research. The contours and definitional borders are necessarily blurred and vague. Transacoustics presents something which is basically nothing. It can and should not be defined in the sense of something laid down in writing.

Transacoustics as such, does not exist, there is only transacoustic research, which constantly circles its imaginary core and thereby arrives at the most diverse results and realizations.

The question of the essence of transacoustics is as impossible to answer as the question of art or philosophy's essence. The success, productivity and efficiency of transacoustic research do not depend on finding an answer to this question. The institute for transacoustic research was founded in 1998 in Vienna to define and research transacoustics. Iftaf uses structures which correlate with those of a scientific institute. It is divided into several departments working with various thematic emphases including: auditive phenomenology, social acoustics, vegetable sound research, translinguistics, visual music, experimental instrument skills, bio-acoustics, demography, and klepto-acoustics.

www.iftaf.org
www.transacoustic-research.com

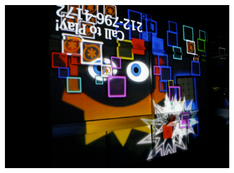
BIO

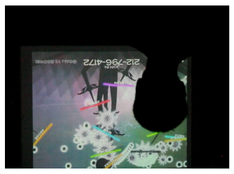
Nikolaus Gansterer
born in 1974, studied experimental media-design at the university of applied arts in vienna. works with various materials, sound-installation, video-productions, installation-art, graphics,...

Matthias Meinharter
born 1971, studied ethnology and design at the university for applied arts in vienna, involved in various projects (including experimental music, design, fashion a.o.)

Jóri Piringer
born in 1974, student at the schule für dichtung in wien (curd duca, sahkho namtchyak, ect). master degree in computer science. radio artist. sound poet. musician.

Ernst Reitermaier
born in 1974. studied philosophy, music and cultural management in vienna. various projects in the field of experimental music and radio art.





IMPROVe

Richard Widerberg, Zeenath Hasan

ABSTRACT

The everyday sounds that we experience are produced outside of our own volition. The capacity to capture sounds, however, was not possible till the invention of electro-magnetic recording devices in the early twentieth century. Since then, the separation of sound from its source, and the capability to play it back, has made it possible to listen to sounds outside of its original context. The mobile phone is also a medium through which sounds are heard outside of their original context. However, the normative definition of the mobile phone as a medium for communication has restricted its potential as a medium for sounds that exist outside of the immediate tele-communication. IMPROVe is a design and research project that explores the potential of the mobile phone as a medium of communication beyond its currently dominant role as a transmitter of sounds. The project proposes the design of the mobile phone as a medium for the exchange of everyday sounds within communities and across socio-cultural contexts by mobilizing the potential of the mobile phone as a tool for the production of everyday sounds. To listen carefully to the environment is something we want to emphasize in our design. We believe that when the possibility to record and work creatively with the sonic environment exists, then a higher awareness of our environment is achieved. Needless to say, the playback of the recorded sonic environment is only a representation of it. But to work consciously with this representation is what, we believe, heightens our awareness of our sonic environment.

The IMPROVe project was initiated as the joint masters thesis work of Richard Widerberg and Zeenath Hasan at the MA New Media programme of the University of Art and Design Helsinki.

http://www.riwid.net/improve/

BIO

Richard Widerberg
http://www.riwid.net

Selected Activities
Dånk! Collective. Göteborg, 2008. Member.
GEIGER (Gothenburg Electro-acoustic Institute for Grants, Events and Research), 2008. Board Member.
Pixelache Festival of Electronic Subcultures, Helsinki, April 2007, Performing.
Ars Electronica Campus Exhibition, Linz, 2006, Exhibiting and performing.
Interferenze New Arts Festival, San Martino Valle Caudina, 2006, Workshop and performance.
Futuresonic Urban Festival for Art, Music and Ideas, Manchester, 2006, Presentation.
Digital Art Weeks Symposium, ETH University, Zurich, July 2006, Performance.
The Nursery, Stockholm, 2000-2004. Board Member.
The Interactive Art of Öyvind Fahlström, Baltic, Gateshead, England. 2002. Exhibiting.
Education & Selected Workshops
Master of Arts in New Media, Medialab, University of Art and Design Helsinki, 2004-2007.
Interaktiva Medier, Dramatiska Institutet, National School for Film, TV and Radio, Stockholm, 2001-2002.
Electroacoustic composition, EMS (Electroacoustic Music in Sweden), Stockholm, 2001.
Teaching
C:Art:Media Master's programme at Valand School of Fine Arts - IT University of Göteborg, 2008. Tutoring and teaching.
Mobile Sound Workshop at Stadia polytechnic school in Helsinki as part of the Hearing Helsinki project, 2007. Organizing and teaching.
Sound and new media courses at University of Art and Design Helsinki, 2006. Teaching.
Publications
"The mobile phone as a medium for heightened sonic perception". Published in ACM International Conference Proceeding Series; Vol. 159: Proceedings of the 8th conference on Human-computer interaction with mobile devices and services

Zeenath Hasan
PhD candidate
http://webzone.k3.mah.se/K3ZEHA

ethnographic studies
Mediating between the technology developer, the working team, domain experts and the technology actor at the research site.
. Audio technologies among rural populations . Nokia Mobile Entry Product . India
. ICT initiatives for rural connectivity . Hewlett Packard e-Inclusion . India
. Smart textiles for urban youth . Philips Research . Finland

productions (select)
Enabling platforms for creativity and cross practice collaboration.
. curator . Netfilmmakers 13th Edition . netgallery for netfilm, netvideoart and netart . Copenhagen . 2008
. co initiator . Mediawala Festival . celebration of technology hack . Doors of
Perception 9 and CKS . 2007
. conceptualiser . Deja Vu . public art project with schoolchildren . Helsinki . 2005
. producer . Doors East 2003 . Doors of Perception . Amsterdam, Bangalore . 2003

qualification
. PhD candidate . Media and Communications . School of Arts and Communication . Malmö . Sweden . 1st semester
. MA New Media . University of Art and Design . Helsinki . Finland . 2007
. MSc Communication . Manipal Insitute of Communication . Manipal . Karnataka . India . 2000

grants
. Wahlgren Foundation Scholarship for Doctoral Studies . 2007 - 2012
. Finnish Arts Council Travel Grant . 2006
. University Grant for Masters Thesis Project . 2005

taus

Klaus Filip, lloopp
Tim Blechmann, nova/Supercollider

ABSTRACT

taus is the duo collaboration between Tim Blechmann and Klaus Filip. Tim's music is based on algorithmically generated

noise textures, which offer an amorphous fundament for Klaus's carefully woven sine waves. Soundscapes are evolving,

which are continuously redefined.

BIO

Tim Blechmann
http://tim.klingt.org

Tim's music is focused on static noise textures, that are digitally generated and spacial projected in realtime. His pieces are very slow paced, having a low volume close to the background ambience. For live performances, his preferred lineup is the duo with another improvising musicians.

In 2004 he founded 'plattform fuer freie music', a concert series for improvised music in stuttgart, currently he is co-organizing the concert series v'elakgala.

After studying physics in Tübingen and Stuttgart, he moved to Vienna in 2005, in order to study computer sciences, digital arts and electroacoustic music (with Wolfgang Musil).

projects:
- duo with Goh Lee Kwang (prepared mixer)
- taus - duo with Klaus Filip (lloopp)
- duo with Manuel Knapp (analog electronics)
- pdt - trio with Daniel Lercher & Peter Lutin (laptops)

compositions:
- sound track for 'La Voix et le phenomene I' by malaysian film-maker lau mun leng (2005)
- vinyl playback, music for vinyl based on a duo improvisation with mattin (2007)
- rr, computer music (2006-2007)
- mattin/malfatti remix, tape music (2007)
- rrrr (2008)

discography:
- solo: s_n, moka bar (2004)
- duo with goh lee kwang: drone, no label (2005)
- solo: M, herbal records (2005)
- solo: re-reading, freesoftwareseries (2007)
- taus: The Organ of Corti, l'innomable (2007)
- solo: rrrr, moka bar (2008)

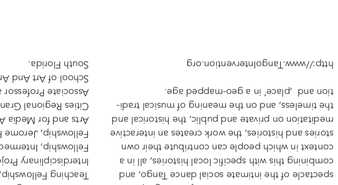
Klaus Filip
http://lloopp.klingt.org/

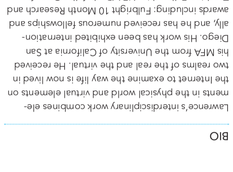
(see also 2008 PERFORMANCES)

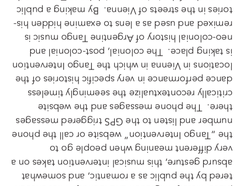
Collaborations with Radu Malfatti, Werner Dafeldecker, Dieb13, Christof Kurzmann, Boris Hauf, Christian Fennesz, Jason Kahn, John Butcher, Sabine Marte, Gilles Aubry, noid, Cordula Bösze, Silvia Faessler, Taku Unami, Taku Sugimoto,Toshimaru Nakamura, Arnold "noid" Haberl, Tim Blechmann, Ivan Palacky.

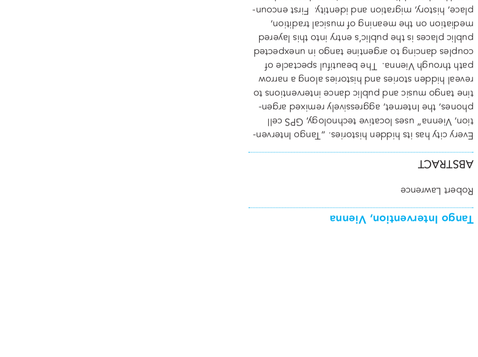
current projects:
~ los glissandinos (with kai fagaschinski)
~ lloopp (open source free- & software for musicians)
~ tripple duo (so far with oblaat, noid, boris hauf)
~ bigbaby (with red white and cynthia schwertsik)
~ ease (with noid)
~ duo with cordula bösze
~ taus (with tim blechmann)
~ solo

recordings:
~ sigis bruder "leftovers" (klaus filip / sigi ecker) trost 1994
~ orchester 33 1/3, plag dich nicht 1996
~ "maschine brennt" orchester 33 1/3, charhizma 1999
~ "building excess" (Klaus Filip / Radu Malfatti / Mattin / Dean Roberts) Grob 651,
~ los glissandinos: stand clear (creative sources, lisboa 06/2005)
~ "aluk" (Klaus Filip / Toshimaru Nakamura): aluk (japanimprov'tokyo/2006)
~ taus: "The Organ of Corti" (l'innomable, ljubljana 2007)









Tango Intervention, Vienna

Robert Lawrence

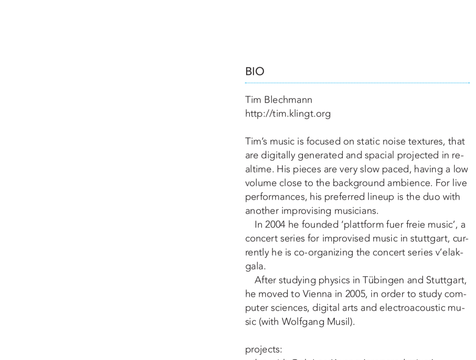
ABSTRACT

Every city has its hidden histories. „Tango Intervention, Vienna" uses locative technology, GPS cell phones, the internet, aggressively remixed argentine tango music and public dance interventions to reveal hidden stories and histories along a narrow path through Vienna. The beautiful spectacle of couples dancing to argentine tango in unexpected public places is the public's entry into this layered place, history, migration and identity. First encountered by the public as a romantic, and somewhat absurd gesture, this musical intervention takes on a very different meaning when people go to the „Tango Intervention" webste or call the phone number and listen to the GPS triggered messages there. The phone messages and the website critically recontextualize the seemingly timeless dance performance in very specific histories of the locations in Vienna in which the Tango Intervention is taking place. The colonial, post-colonial and neo-colonial history of Argentine Tango music is remixed and used as a lens to examine hidden histories in the streets of Vienna. By making a public spectacle of the intimate social dance tango, and combining this with specific local histories, all in a context in which people can contribute their own stories and histories, the work creates an interactive meditation on private and public, the historical and the timeless, and on the meaning of musical translation and „place' in a geo-mapped age.

http://www.TangoIntervention.org

BIO

Lawrence's interdisciplinary work combines elements in the physical world and virtual elements on the Internet to examine the way life is now lived in two realms of the real and the virtual. He received his MFA from the University of California at San Diego. His work has been exhibited internationally, and he has received numerous fellowships and awards including: Fulbright 10 Month Research and Teaching Fellowship, NEA/Rockefeller Grant for Interdisciplinary Projects, Bush Foundation Artists Fellowship, Intermedia Arts McKnight Foundation Fellowship, Jerome Foundation Grants for Book Arts and for Media Arts Installations, and Film in the Cities Regional Grants for Film/Video. Lawrence is Associate Professor and MFA Coordinator in the School of Art And Art History at the University of South Florida.



Spat_Lab

Nicolaj Kirisits

The Mobile Music Workshop's collaboration with the University of Applied Arts began with Spat_Lab's recent projects. Spat_Lab was founded by me at the university's Department of Digital Art. Since then, it has organized research-oriented artistic projects (concepts and ideas: Klaus Filip and Nicolaj Kirisits). The artists developed and implemented their projects by the following two basic guidelines: the use of technological artifacts for purposes foreign to them, and the expansion of the concept of body in architecture. Combining both aspects with sound design is among Spat_Lab's main interests. Technological artifacts are converted into musical interfaces and the characteristics of sounding bodies used to expand the definition of corporeality. What is meant here by sounding body are resonances found in architectural space, that is, spectromorphological content restricted[1] to a volume in the Euclidian system which may not be visible and yet contain all other defining qualities of corporeality ("a body with length, breadth and depth"[2]) in a geometric sense. This definition of the sounding body must be distinguished from that of a vibrating body, or resonator. The resonator is a visible tectonic body in geographical space whose physicality does not owe to sound but to wood, or metal, for instance. In contrast, the sounding body, however, is invisible, its material is sound itself. Although architecture is comprised of bodies, yet each of these bodies is not necessarily an architectural element. Spat_Lab defines architecture as a spatial notation of socially relevant processes. A material body in geographical space, therefore, becomes an architectural element the very moment it assumes social relevance. Sound that is naturally located in space, i.e., already present without any technical aid and is in itself a natural body, is barely effective architecturally, apart from a few exceptions, like church bells. From an aesthetic or formal point of view, natural sound is a precursor (or exceptional case) of Local-Based Services (LBS), which certainly bear the potential of being architectural elements. In the case of these LBS, digital information is placed at selected spots in geographical space with the help of GPS devices. This information is just as invisible and process-based as sounding bodies but, due to its significance in human communication, this very act of placing turns it into architectural bodies. In architecture, in addition to three basic forms of agency, that is, the tectonic body[3], the body of the in-between[4], and architectural space[5], there are the time-based "data bodies," whose materiality comprises in visible digital data.

One of the aims of the Spat_Lab projects is to find new ways of configuring these data bodies with the help of new insights gained from investigating sounding bodies. However, this approach can also be described as a process in which media-related contents are placed in geographic space as sound that is inaudible. This deliberate misinterpretation aims to make the potentials for configuring these new architectural elements better comprehensible.

It can be said that deliberate misinterpretation is the leitmotiv of the lab, especially when working with technical equipment. Sound is once again the common denominator in all projects realized thus far. Interfaces for making music were created by intentional wrong usage. In the course of their investigations, the participants removed devices from their social context and placed them in different contexts after making the smallest possible changes to them. This opened a vast potential for new meanings that would either remain totally invisible or become only partially visible should the devices be used as intended by the manufacturers.

Currently, these two guiding principles of Spat_Lab are interdigitated because we are mainly concerned with the ubiquitous computer and tracking technologies (GPS) as well as with diverse sensory interfaces (mobile telephones, Wii remote controllers, etc). Our long-term aim, however, is to gain enduring insights. Spontaneous absurdities and conscious attempts at getting things wrong serve us to probe limits, whereas sound (in the sense of *musique concrete*), electronic music and configurating new forms in geographic space, or in architecture, can always be seen as contractors for the individual projects.

The above mentioned approaches have led to artistic projects dealing with sound and mobile technologies, albeit the emphasis is not so much on their societal, sociological aspects, nor with new fields of activity concerned with the reception of music but rather on the time- and process-based aspects of the corporeality and architecture that thus emerge. To us this appears to be a major outcome of mobility. Mobility in technology is the logical consequence of a development in which more and more functions are packed into ever-tinier bodies, which people can carry about on them.

A decisive impulse for this development toward architecture came from the breakdown of the virtual, or rather from the failure of the virtuality hype to attain its main aim of replacing geographic space as the sphere of social activity. Mobility, as the consequence of miniaturization, only makes sense when geographic space is intentionally seen as not merely an abstract Euclidian space but also as a field of social activity. Mobility is therefore to be clearly distinguished from virtuality—even when the geospatial network of mobile end user devices lets a form of mixed reality emerge.

Our own body has always been a part of geographic space. Virtuality has not succeeded in dissolving the significance of this space for human action. Music that employs mobile technologies automatically turns the focus on human body design and, consequently, also on the geographic space in which the human being exists. Digital art can no longer deny the ubiquitariness of technological developments and is becoming "body art" in geographic space. The performative character of geographic space must therefore always remain part of the artistic code. Also, and especially, digital art takes mobile technology seriously as a marginal condition of human achievement. Such technological limits influence production and reception, both of which have always been part of an expanded definition of art. The recipient who always carries music around with him, who deposits it in certain places, collects it or passes it on, becomes an agent, and designer in this case, not merely of the musical context with all its "mobile" aspects such as spontaneous network music, music distribution, etc. as investigated in the MMW series, but also—and this seems to be the direction from which Spat_Lab approaches these theme—of the architectural body in geographic space. Mobility is that technology which allows virtuality to be understood as the materiality of a new architectural body.

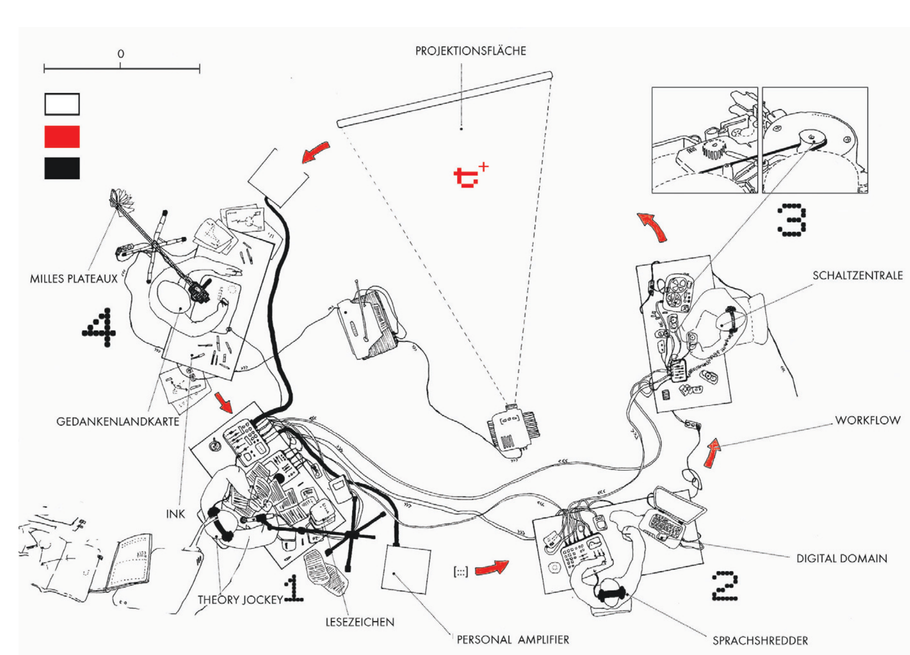
[1] Davis Smalley, *Spectomorphology: Explaining Sound-Shapes in Organised Sound 2 (2)*, Cambridge: Cambridge University Press, 1997, 107

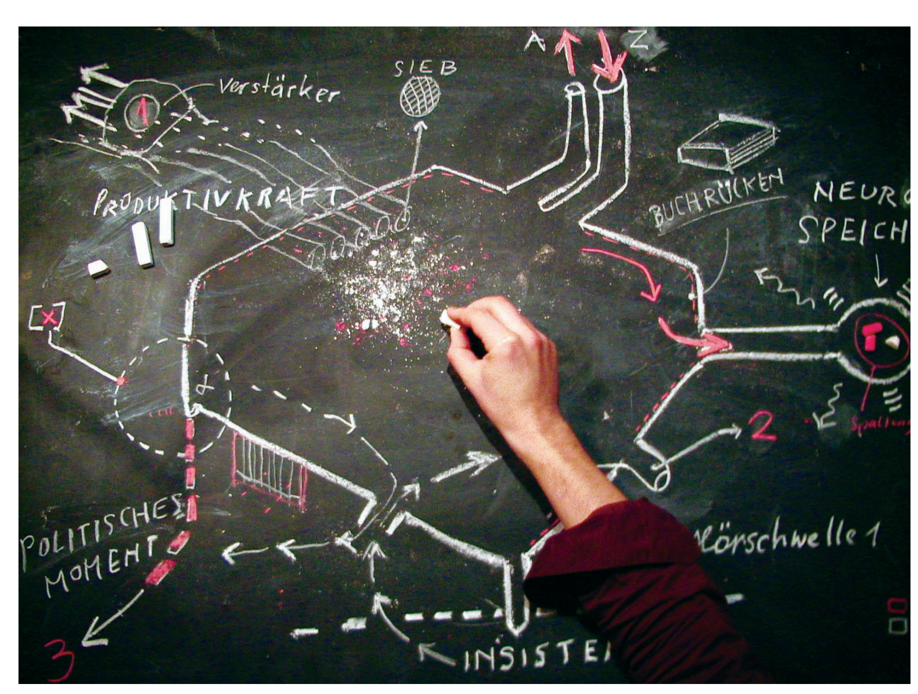
[2] Euclid quoted in *Ostwalds Klassiker der Exakten Wissenschaften, Band 235—Die Elemente*, Verlag Harri Deutsch, 2005, XI, 314

[3] Vitruvius, transl. Fensterbusch in Dr. Curt, *Zehn Bücher über Architektur,* Wissenschaftliche Buchgesellschaft Darmstadt, 1976

[4] Gottfried Semper, *Der Stil in den technischen und tektonischen Künste*, 1860, reprinted in Fritz Neumeyer, *Quellentexte zur Architekturtheorie*, Prestel 2002

[5] August Schmarsow, Das Wesen der architektonischen Schöpfung, in Fritz Neumeyer *Quellentexte zur Architekturtheorie*, Prestel 2002.





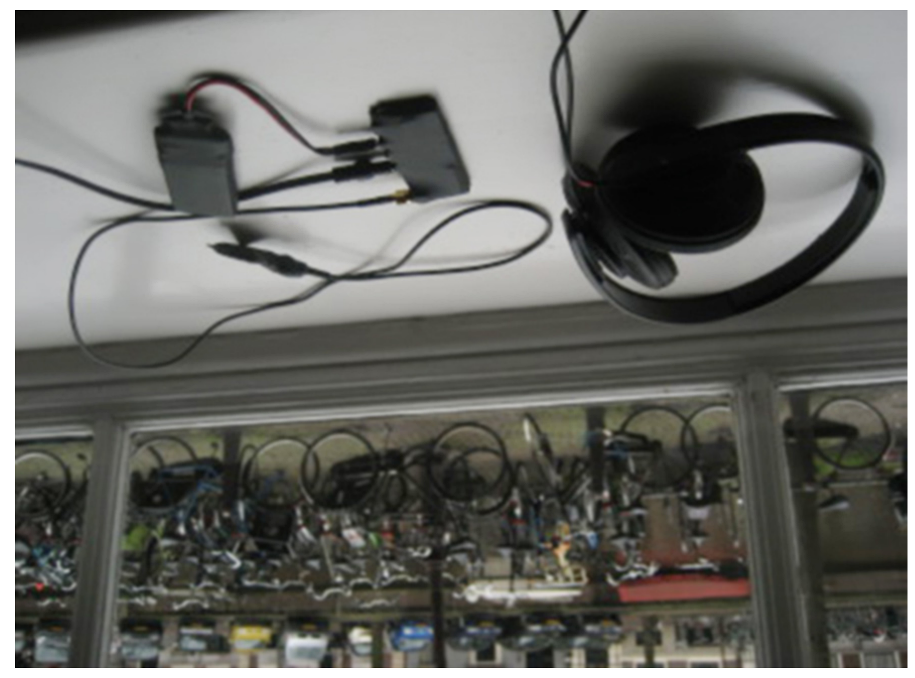
Sun Run Sun

Yolande Harris

ABSTRACT

Sun Run Sun' charts a path between environmental awareness and technological development, using sound as the medium to enhance both. The project investigates the split between the embodied experience of location and the calculated data of position, exploring the individual experience of current location technologies through a personal experience of sound. It seeks to (re)establish a sense of connectedness to one's environment, and to (re)negotiate this through an investigation into old, new, future and animal navigation using sound.

This project consists of two different parts, a sound installation and a series of portable instruments to take on a walk through the city. In the installation 'Dead Reckoning' Yolande Harris reveals the patterns of orbiting satellites coming in and out of range and inconsistencies in how GPS technology locates the self in a longitude/latitude grid. The mobile 'Satellite Sounders' transform the live satellite data directly into a sonic composition listened to on headphones as one walks through the city. Live signals from satellites in orbit, together with the performer's coordinates on earth, generate a continuously transforming electronic soundscape. Yolande Harris's soundscape questions what is inside and what is outside, what it means to be located and what it means to be lost.



Controlling audio applications using Python for Series 60

Richard Widerberg

ABSTRACT

For the hands-on session Richard Widerberg will show how to use a mobile phone to control real-time audio applications on a computer using Bluetooth and Internet connection. For the purpose he will use Python for Series 60 mobile phones that connects to Pure Data and Max/Msp on a computer.

http://www.riwid.net/mmw

SPAT_LAB: MMW'08 HOSTS

muio interface

Steve Symons

ABSTRACT

Beyond the mouse: pain free alternative computer interfaces

Many artists and musicians want to explore alternatives to the mouse/keyboard paradigm.

Alternatives include sensors that detect light, heat or distance; or even the accelerometer popularised by the Wii.

There are a growing number of tools available for interfacing computers to the real world, especially at the open-source, low technological level end of the spectrum and despite the efforts of the groups involved the aspiring interface hacker must learn an added layer of electronics and programming in addition to the media and conceptual skills required.

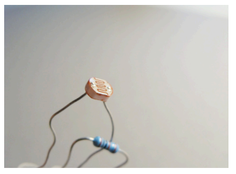
The muio interface offers a radical alternative. The muio's basic minimal parts (one chip, three components, a usb cable and, if you really have to have the security of knowing the interface is drawing power from the USB port then, a LED) are all readily buyable online and do not need programming, just plugging together.

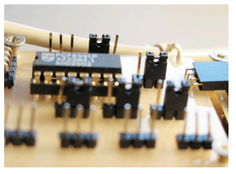
By removing the pain from creating alternative interfaces the muio seeks to focus attention away from the technology of building, to the important issue of how does an interface relate to the user's experience?

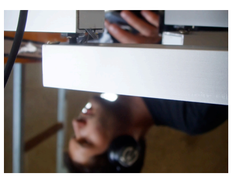
This hands-on session will
- explore a range of sensors, how they work and what action they afford.
- demonstrate (in a practical way) how to build and customise a muio interface
- discuss (in a practical way) software that artists and musicians might like to use the muio with (such as MAX/MSP, processing, SuperCollider (raw code, ixiQuarks) and c++/openframeworks)
- allow participants to explore their creative sides, possibly ending in an improvised sonic experience (equipment and participants allowing!)

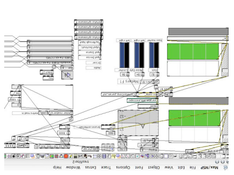
Workshop leader: Steve Symons
http://muio.org

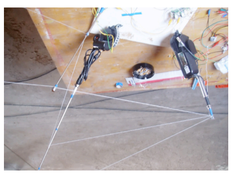
As well as being an experienced workshop leader, Steve Symons is an artist exploring sound and technologically mediated interaction. As an active Owl Project member (http://www.owlproject.com) he also performs, does his own programming, soldering and woodwork.

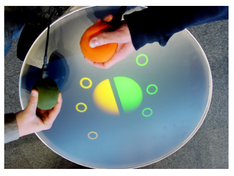


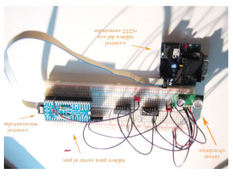












The Springfield RVL-003

Jan Persky, Robert Mathy, Merlin Wyschka

ABSTRACT

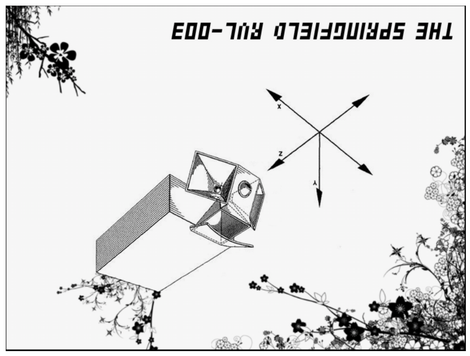
The *Springfield RVL-003* is a band founded in the year 2007, based on a soundinstrument named „breath control" by Jan Persky.

This instrument, consisting of a Wii-Remote, that is placed in front of a speaker, mounted with springs. Everything put on a microphone tripod and up it goes.

By hitting, shifting, and vaning the position of the remote the bandmember can modify the for him individual sound. This played sound will be played back of the resonance body, the speaker.

The tripod will be used as a mounting, the joints are a simulated coordinate system in the real environment, and so the position of the remote and the position of the speaker and out of this the „field of sound" can be manipulated. So the player can win the room and fill it with sound.

Every member chooses his own soundsample.



Transit

Klaus Filip, Nicolaj Kirisits
Bernhard Bauch, Philipp Lammer

ABSTRACT

Transit[8] was an attempt at creating a sculpture with nothing but the bodies of data previously described. *Transit* employs strategies for the speedy settlement of new land used since the days of Hippodamus von Milet; this settlement of geographic space with bodies of data can be compared with the development of new land. A basic element (a cube measuring 1m x 1m x 1m) was used to create a 20m long, 20 m wide and 20 m high grid. There was, however, no master plan; only the construction rules were predefined —the sculpture was based on these rules, the volume available and the content produced by the settlers. Each settler was given eight cubes and had the freedom to select a site for them. Twenty percent of the volume could be filled communally or altered as desired by the settler. The rest of the volume had to remain free; the aim was to leave 60% of the area undeveloped. Each cube could be filled with text, sound, video material or simply program codes. Neighboring cubes could network with each other, exchange data or forward it. Filling the cubes worked as follows: each digital artist, equipped with a computer and a GPS device, could go to the site of the cube and "load" his / her content into it. In this way, the artists worked on their digital concepts in geographic space the way a sculptor would. Recipients could experience these digital sculptures produced with the help of GPS devices in the course of settlement; their playback devices were filled with digital content at one of the many points where the content had been previously positioned. In contrast to the settlers, the recipients were not permitted to alter the sculpture.

The project was made possible through the financial support of Podspot (Prof. Tom Fürstner).

Presentation of the project at the Mobile Music Workshop 2008.

The following artists were invited as settlers:
Alev Özdemir
Andreas Haider
Bernhard Bauch
Bernhard Lutz
Bernhard Garnicnig
Daniel Kauer
Ella Krampl
Georg Novotny
Gordan Savicic
Gottfried Haider
Julian Palacz
Julia Staudach
Kathrin Dörfler
Leo Peschta
Lucas Czjzek
Luc Gross
Mario Fischer
Mischan Gholizadeh Toosarani
Milos Paripovic
Nina Kataeva
Perktold Martin
Peter Scharmüller
Peter Tilg
Philipp Lammer
Sophie Wagner

[8] *Transit*, Kleylehof, 2006 (Klaus Filip & Nicolaj Kirisits).




Gottfried Haider
Im Nebelmeer über Plocica / Sea of Fog over Plocica

Starting point for the investigation was the striking absence of the island we were about to set foot on, from Google Earth satellite imaginary. This deficiency was initially met by flying a camera-equipped helium balloon over this remote isle.
The balloon, attached by a string to the artist, formed a prosthetic extension of his body in a physical as well as sensory sense, as the camera images were also instantly transmitted to the ground. Walking a preconceived path this way, the tiny strip of land gained an unexpected orbital dimension. But also the joining with the balloon itself, the rhythm of its tumbling motion and inert shift of gaze developed a surprising dynamics in the course of the performance.
Back on land, the video footage obtained this way is being used to claim land by means of a projection device. This is archived by translating the images into a spherical coordinate system, thus connecting back to the logic of Google Earth.
1: - - -
2: - - -

Claudia Larcher
472 (Fig. B, C, D)
Temporary installation
White balloons

The number 472, also the title of the installation reflects the number of balloons used by the artist as material for her intervention in the landscape. The artist filled the balloons with either air or water and carefully placed them in the crevices and holes in the rocks. In order to ensure that every gap was filled she had to treat each balloon differently so that it fitted perfectly.
This seamless lining of cracks and crevices in the rocks with balloons formed a white line, like a fine drawing in the landscape that was reminiscent of the contours or traces of an unknown, unidentifiable creature.
1: N 43.02835° - E 16.82132°
2: N 43.02845° - E 16.82133°
3: N 43.02842° - E 16.82143°
4: N 43.02837° - E 16.82138°

Robert Mathy
PLING! (Fig. A)

A found stone/picked up on the shore/ was dropped every 20 meters from the same height above sea level. This procedure was repeated until the area was covered completely. The grid of sound samples resulting from the acoustic recordings made during each step of the process served as a positioning map for a motor-operated loudspeaker, which reflected each sound at its respective position.
The terrain's topology led to variations in the length of the recordings while acoustic differences were caused by the surface of the ground. The aim was to inspire the recipient to imagine the conditions at the recording site.
1: N 43.02954° - E 16.81932°
2: N 43.02957° - E 16.81931°
3: N 43.02958° - E 16.81922°
4: N 43.02952° - E 16.81920°

Jan Perschy
random walk

Interpreting the structure and characteristics of the ground through one's own environment inspired me to press this record. The piece of wood swirling through the stones and thereby altering the ground of the claim is a basic measure; it is also the unit of measure in my survey. The record of a moment in time made in this manner was reinterpreted and given form through my own subjective impressions.
The ground as data medium is stored on disc with the help of a personal codec.
Values inscribed on the record, layered over the sound produced by it, allow it to interpret itself.
1: N 43.02948° - E 16.81839°
2: N 43.02944° - E 16.81842°
3: N 43.02948° - E 16.81851°
4: N 43.02950° - E 16.81852°
M : N 43.02945° - E 16.81842°

Leo Peschta
Wavesynth 1.0 (Fig. A, B, C)

The coastal area is a constantly changing environment. Every moment is the arrangement of stones and water in it differently, never the same. By the force of the impact of water on the banks a wide set of different sounds is generated.

For the installation "Wavesynth" relevant areas of the bay (optical: where is water when; acoustical: where does the it sound interesting) have been equipped with sensors. In the water there was a small current initiated (5V, 20mA). Every time it got in touch with one of the sensors, the current level of the sensors output was changed. As sensors tense resistance wires have been used, which produce different values depending on the position in which they get in contact with electrical charged water.

A computer continuously measured this values and routed this data to an audio application, which used it to reinterpreted the real time sound of the bay. The transformed Sounds have been played back on-site vis speakers and therefore mixed for the listener with the ambient sound of the island.
1: N 43.03156° - E 16.81580°
2: N 43.03163° - E 16.81582°

Peter Scharmüller
plocica – grenzgang//uferdiskussion [walking the line//shore discussion]

This representational video by the media artist Peter Scharmüller raises the omnipresent question about the switch between media. Try to imagine the masses of water and rocks incessantly crashing against each other. Each wave is a reason for removing every rock that protrudes from the water.
The solidity of the rock is the antithesis, corrosion being the manifestation of synthesis.
When the gaze switches from one medium to the other, the mass of air solidifies into a quicksilver mirror that hurls the spindrift back into the water.
1: N 43.03061° - E 16.81645°
2: N 43.02772° - missing

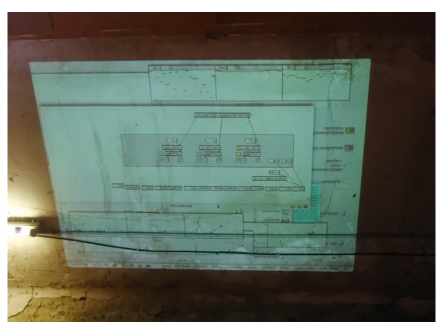
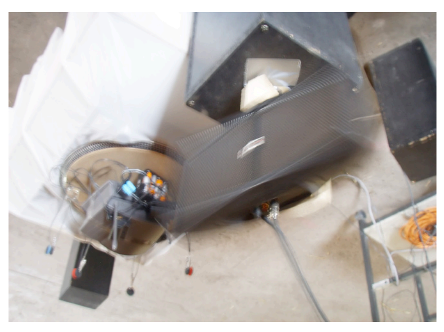


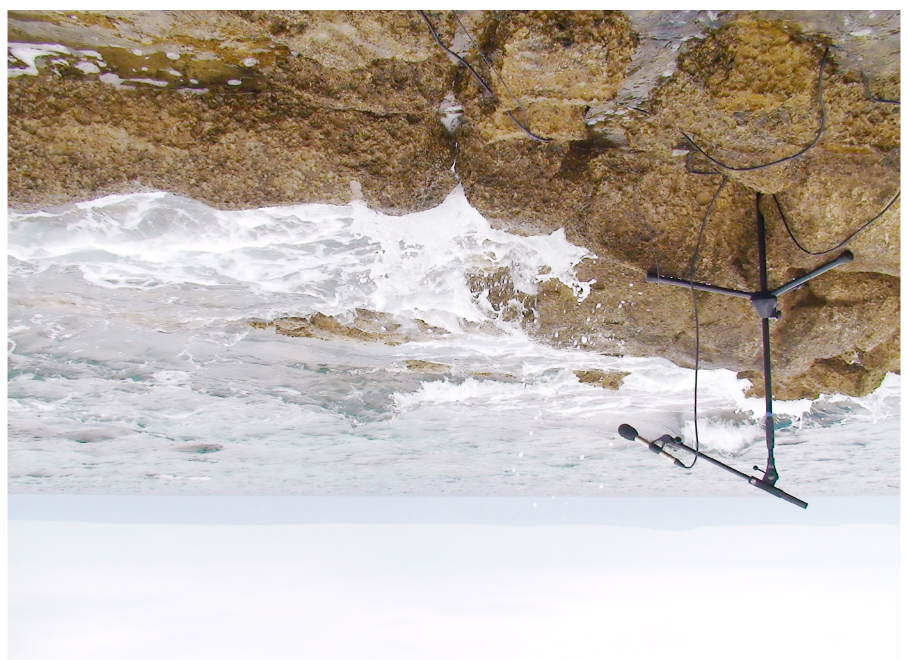










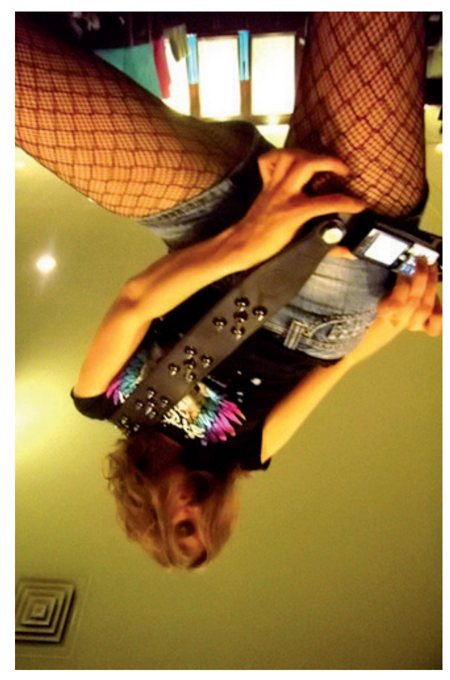
B

A

The Handydandy

The bluetooth rock 'n' roll band *The Handydandy* (B. Bauch, L. J. Gross, N. Kirisits, G. Savcis, J. Staudach, F. Waldner), founded in 2005[8], is an example for the way this principle was applied. Here, their starting point for artistic action was to use mobile phones as musical instruments. The mobile phone was reinvented as interface for a music performance whereby its bare technical structure (Bluetooth, keys, etc) and not the sound generation options implied by the producers were used. Questions about application, which were never raised originally, now surfaced. A new genre of art, Bluetooth Rock 'n' Roll, was born, triggering a debate about wireless music interfaces, the social significance of mobile telephones, and forms of performance. *The Handydandy* was part of NIME 06 (Ircam, paris) and MMW 2007 (Steim), amongst others.

[8] Speakers, Kleylehof, 2005 (Klaus Filip & Nicolaj Kirisits).



Digital Claiming

Media rush in 20 geo-tagged claims on Plocica Island (Croatia)

Digital Claiming[9] is Spat_Lab's most recent project. The Croatian isle of Plocica, with no other building on it but a lighthouse, was rented for the project for a week. Twenty artists were invited to mark their Claims on the island with the help of GPS devices. "A Mining Claim is the claim of the right to extract minerals from a tract of public land. In the United States, the practice began with the California gold rush of 1849. In the absence of effective government, the miners in each new mining camp made up their own rules, and chose to essentially adopt Mexican mining law then in effect in California. The Mexican law gave the right to mine to the first one to discover the mineral deposit and begin mining it. The area that could be claimed by one person was limited to that which could be mined by a single individual or a small group."[10]

The material found in each Claim (acoustic, visual, haptic, body-time, etc) served as raw material for linear/non-linear and/or algorithmic compositions. Pieces composed with audio, codes, or film material were "tagged" with the site. In these Claims the task was not about digging for tangible spatial bodies in the sense of gold or other metals but rather for objects that become corporeal because they represent a site (length, breadth, height).

What emerged in the process was a geography of transformations, land surveyed by producing its time-based representatives. The perception of space based on data collected by precisely measuring and recording within the Cartesian system is hence replaced by a typology of interpretations.

The map of the island drawn out in the course of this project comprised a series of individual installations and unveils the discrepancy between a seeming objectivity and the unquestionable supremacy of earth survey via mobile Global Positioning Systems (GPS), and process and time-based entities of body and space.

The works will be presented at the Mobile Music Workshop 2008.

[9] *Digital Claiming*, Plocica, Croatia 2007 (Klaus Filip & Nicolaj Kirisits).

[10] Wikipedia, HYPERLINK "http://en.wikipedia.org/wiki/Land_claims" http://en.wikipedia.org/wiki/Land_claims

Tim Blechmann
Untitled

The primary source material for my Claim was the rushing sound of water, which I recorded at different places and at different times. These field recordings were made to undergo several transformations in order to dissolve temporal structures.

This altered material is the basis for a three-channel video installation with a sounding floor. An acoustic environment was to be created via indirect sound, which resembled the shores of my Claim on Plocica. This piece is an acoustic sketch of the installation.

1: N 43.03067° - E 16.81772°
2: N 43.03065° - E 16.81765°
3: N 43.03102° - E 16.81710°
4: N 43.03105° - E 16.81713°

Kathrin Dörfler
Untitled (Fig. A)

"The composer becomes a cartographer if he lets himself be guided. If one wants to allow tones and stillness time then the task of the composer no longer lies in searching for their expression but rather in allowing them "to be" what they are […] This is why I mean that stillness is a state that is free of intentions." (Daniel Charles on John Cage)

A taut cord runs along the interstices between the blocks of stone at the shores of Plocica. The crevices form various resonance spaces in which binoral microphones are placed at several points for recording the sounds.

The different resonance spaces correspond with the different filtered sounds. The soundscapes in these in-between spaces ultimately become sounding bodies, which produce a multi-perspectival projection of the incessantly breaking waves.

1: N 43.03098° - E 16.81578°
2: N 43.03099° - E 16.81589°

Klaus Filip
Sonoplocica

impressions of the stony surface on a/my "claim" on plocica, a couple of plants, a couple of animals, some water. the photos were arranged in the chronological order of the time when they were taken. the analysis of the image produces the sound emerges, whereby the mappings of the frequencies of a sinus bank are encoded over the image matrix. the volume of each partial tone is defined by the brightness of a pixel; play at medium volume.

1: N 43.02962° - E 16.81925°
2: N 43.02970° - E 16.81951°
3: N 43.03002° - E 16.81868°
4: N 43.02992° - E 16.81852°

Andreas Haider
Klangbild [Sound Pattern] (Fig. B)

Klangbild is the attempt at depicting sounding bodies visually. In acoustic space, it is only possible to hear bodies that either produce sound or reflect it. Sound is the prerequisite for acoustic perception just as light is for visual perception.

When sound is absent, no acoustic image or sound pattern of a space can emerge. The fact that we describe even acoustic experiences in images proves how visually dominated our perception is, a phenomenon that Klangbild examines and questions. If visual perception is absent and we can only perceive our world acoustically, the mind conjures corresponding homogeneous images of sound, body and space. These are visual representations of acoustic perception.

The sound patterns of waves on a stony shore are examined with the help of an audiovisual composition for which hydrophones were installed on rocks at the key points of wave refraction and recorded synchronously with the image. In the composition, the levels of the recorded sounds determine the level of visibility of each sound image (waves, rocks). The higher the sound energy produced by a sound object, the more concrete and clear its visual representation.

The visual part of the work is a composition and interpretation of the visual data.

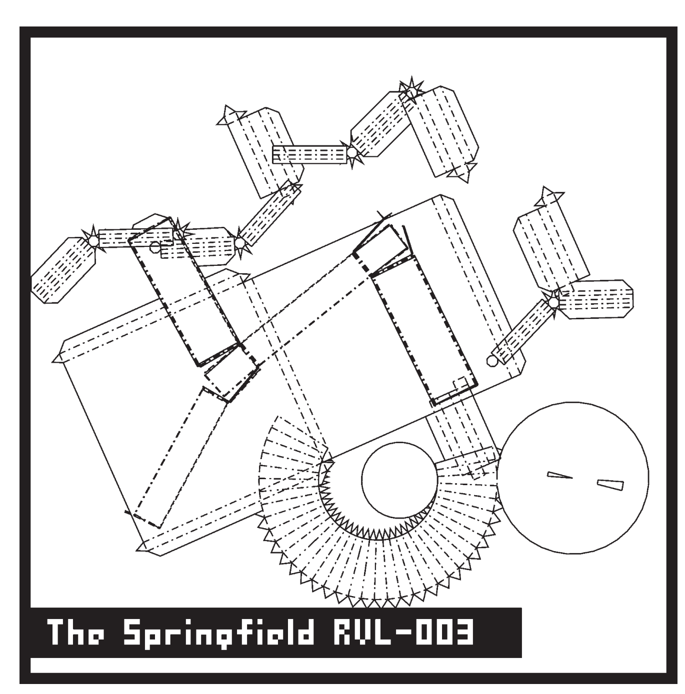
The perceivable acoustic space is variable and dependent on the user, who can "sound surf" in via self-navigated positioning. This can be done by selecting various sound tracks —three positions are possible within the setting and three outside it.

1: N 43.03221° - E 16.81570°
2: N 43.03184° - E 16.81573°
3: N 43.03199° - E 16.81602°

The Springfield RVL-003

Yet another example of Spat_Lab's activity is the band *Springfield RVL-003*, founded in the course of a workshop in 2007[7]. Jan Perschy developed an instrument with a Wii remote controller during the workshop and later evolved a musical concept for it with Robert Mathy and Merlin Wyschka. *Springfield RVL-003* will be part of this year's MMW 2008 concert program.

[7] *Ferngesteuert* [Remotecontrolled], Kleylehof, 2007 (Klaus Filip & Nicolaj Kirisits).



Keynote Address 07 May

Michel Waisvisz

Excerpts from Régine Debatty's blog entry on http://www.we-make-money-not-art.com

One of the directors of STEIM, co-host of MMW 2007, Michel Waisvisz is a composer/performer of live electronic music, who has invented new ways to achieve physical touch with electronic music instruments, for example by literally touching the electricity inside the instruments...

He illustrated his quest to find and develop physical relationships with electronic musical instruments by performing a short improvisation on The Hands, an interface he conceived in the early 1980s...

In the '60s, when he was a teenager he would do musical experiments with his brother: putting a piano upside down and playing the instrument just by touching his strings...

He showed us a fantastic picture of him becoming literally a tape reading machine using "The TapePuller" instrument (image on the right). He was live sampling, scratching 2 tape heads using footpedals. He'd pull one forward with a foot to create music while rewinding the other tape with the other foot, unheard of the public.

He discussed his fascination for the VC3, a synthesizer that can be used without a keyboard. He bought a VC3, opened its back and put his fingers inside. He thus used the body to extend the circuitry and modified the sound in ways he found interesting. The manipulations gave him the feeling that the sound was floating in the room and that he could grab it. He decided that instead of opening the instrument back he should better customize it. This was the inspiration for what later became the CrackleBox. He was fascinated by the idea of a human being who is turned into a variable electrical conductor/resistor, and a thinking [wet] element of the musical instrument.

In 1973, Waisvisz arrived at STEIM and worked on the Cracklebox, a handheld instrument based on the same principle of body conductivity...

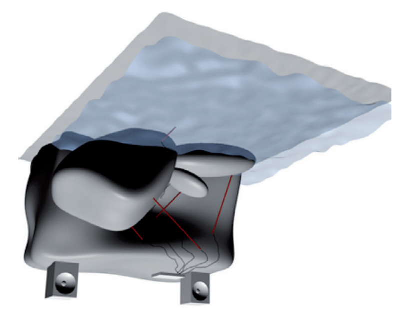
All sorts of Crackle objects could be manipulated by children... Among the artefacts (some of which are re-invented by young interaction designers and shown today at events such as the Milan Furniture fair) shown were phones that distort your voice according to the strength you use to squeeze the receiver; a musical bike where the generator was connected to speakers instead of a headlight; a series of connected CrackleBoxes that makes melodies when you pour some tea in the cups; a cuckoo clock producing scratchy sounds, etc.

Another of Waisvisz's famous projects is the Web where each thread in the spiderweb-like instrument is a sensor. People can play it and manipulate the timbre in a very intuitive way by grabbing the strings.

He mentioned several projects that investigate this (still under-developed) physical relationship with musical instruments: Jon Rose's Hyperstring bow, Nicolas Collins' Trombone-Propelled Electronics, and the Lady's Glove by Laetitia Sonami.

A last work he mentioned is Kristina Andersen's ensemble, a suitcase full of sounds and clothes. Sensors are fitted on the garments in such a way that the function of the sensor is conceptually supported by the form-factor of the garment.


B

C

A

D

D

C

B

Craving

Bernhard Garnicnig, Gottfried Haider

Craving[1] is in fact a special case because it was not made during the Spat_Lab workshop (but at the Department of Digital Art, University of Applied Arts Vienna), but it must be seen as a part of it because of the theme it addressed.

The final version of *Craving* can be heard at its original site at MMW 2008.

INTRODUCTION

In *Craving* Bernhard Garnicnig and Gottfried Haider aurally stage a text inspired by the late Sarah Kane's play *Crave* in public space. It unfolds while members of the audience individually wander a high-rise area, wearing headphones and a mobile computing device.

PROCESS

The audience is escorted from the Mobile Music Workshop venue in Vienna's city center to the site of the production. Once arrived, they have the opportunity to explore the location two at a time. Equipped with a Wearable Computer and headphones the recipient is immersed in sound surroundings he can physically navigate. The path they chose is in no way - auditory or visually - predetermined, thereby allowing the audience to let themselves be guided by aspects of the place itself such as its architecture while experiencing the production.

TEXT

The text used in *Craving* draws on *Crave*, a play by British dramatist Sarah Kane (1971 - 1999). In it, four sparsely drawn characters weave a tapestry made up of quotations and fragments, the cloth of which are their individual traumas, loves, grieves and resignations. Plot and signs indicating temporal developments are reduced to a minimum. It is in repetition and the final defeat of communication of internal landscapes that we come full circle to the *urbane Wüste* (the urban desert) in between the towers of the Donaustadt.

Kane's text, which is filled with elements of subjective meditations on urban surroundings, but devoid of stage directions has been rearranged and expanded using pieces of everyday conversations to work with individual clusters according to the demands of certain places.

METHOD

The selection and spatial and temporal distribution of sound elements require a detailed study of text and conditions of the space such as architecture, flow of movements and rhythms. The technology (GPS, etc.) framing the production obviously plays another, very important role.

As environmental influences such as weather or social interaction surrounding the participants or their personal movement patterns cannot be foreseen, the sound design is not geared towards constructing a linear narrative. It aims, rather, to create individual, but loosely-connected scenes. To archive this, acoustic elements are placed on street corners, on wide, open spaces or in lively passage ways as they relate to a sensation and meaning created by their architecture or the human beings inhabiting it. In order to do this the artists have developed a software, which enables a composition of temporally and spatially dynamic acoustic scenes.

Sound fragments such as spoken language or music are grouped together, following an internal temporal logic. These groups are distributed all over the area and linked through the recipient's perception as he moves through the space.

Applying their other senses and their feeling for the specific place the participants then put the perceived sensations into a larger context. This ability to freely associate intentional design elements through reflection accepts the spectator in the temporal and spatial complexity of his cognition.

TECHNOLOGY

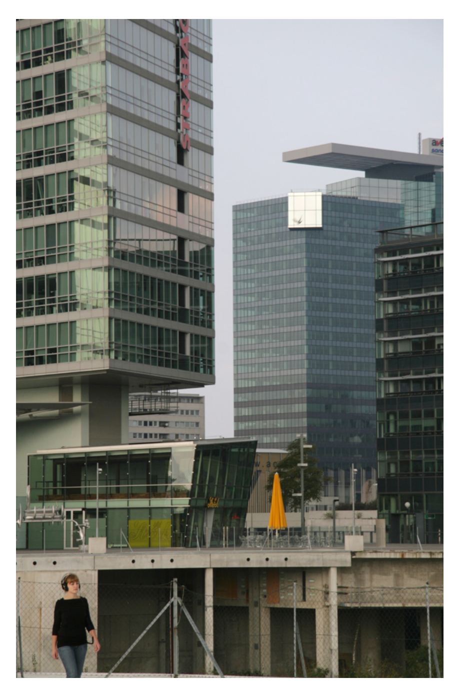
The participant is equipped with a wearable computer and headphones. Custom software determines his position via GPS, tracks his head- and body movements through a magnetometer. Based on their results the computer renders the audio composition in real-time. Through a simulation of binaural hearing, sounds previously affiliated to certain places now become audible from their specific direction.

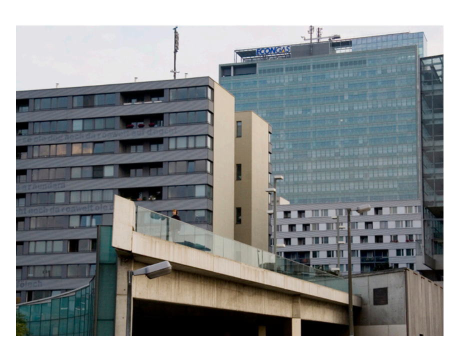
The software incorporates a real-time virtual acoustic environment rendering engine. It is based on head-related transfer function (HRTF), describing how a given sound input (parameterized as frequency and source location) is filtered by the diffraction and reflection properties of the torso, head and pinna before reaching the eardrum and inner ear. These location-specific filter effects provide the human neural system with enough cues to properly locate a sound's source. Through the realistic simulation of these effects it is now possible to place sound emitting "props" into the listener's environment.

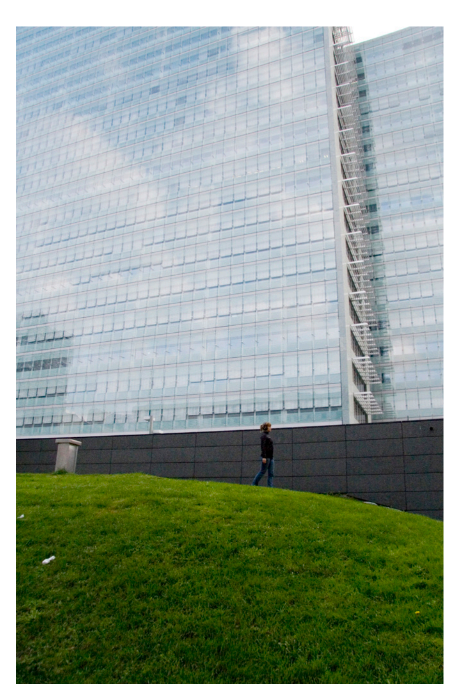
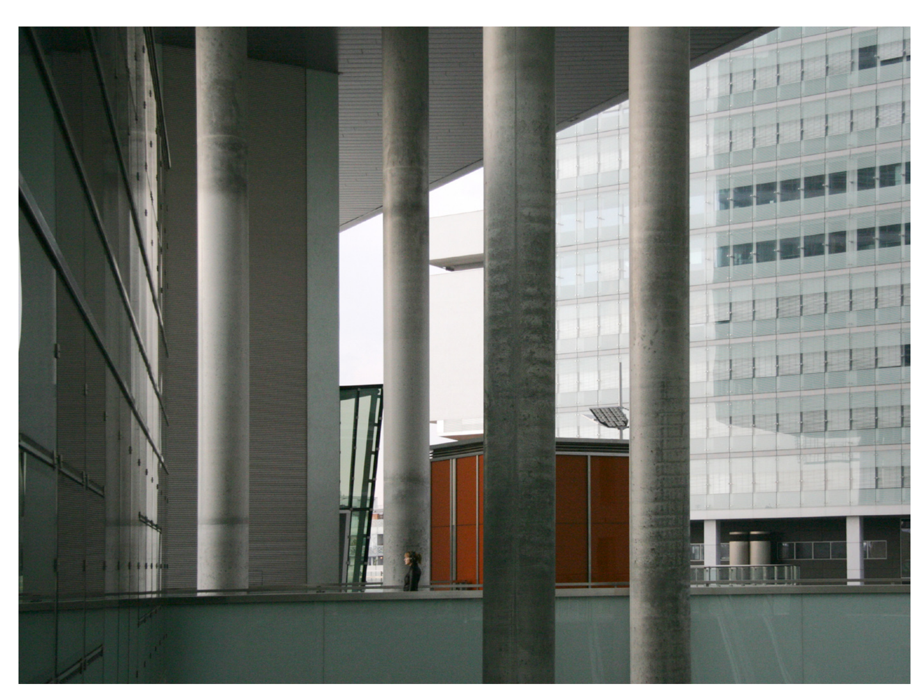
SITE

Craving was envisioned for production in Vienna DC, a modern complex of commercial and residential buildings in the city's Donaustadt district. This most preeminent area is defined by a branch of the river Danube in the south and the United Nations building in the north. Vienna DC was conceived entirely on the drawing board after plans for a World Fair in this location had been vetoed in a referendum in that same year of 1991. Nevertheless, ten years after its opening, the area is still *urbanity in progress*, as various vacant lots create a layered surface, whose heaps of dirt contrast with the spotless facades otherwise dominating the view. Vienna DC houses numerous multinational corporations and information technology firms in office skyscrapers, but there are also vivid residential zones in between. One can literally walk around a corner to see the number of suits diminished and people leading their lives in a slower and more informal way. There is a bizarre city within, whose 4.000 inhabitants have adopted to the given system of open spaces and the spatial logic of the complex. For them the architects envisioned a church, a museum exhibiting works of an Austrian sculptor, a bilingual school and kindergarten, a supermarket, a number of cafés located in the lobbies of skyscrapers, and a restaurant. Other unique architectural features also strongly influence the way in which the space is perceived: a wide flight of stairs leading up to nothing, surveillance cameras places at eye level, deserted children's playgrounds, a vast empty space whose floor is covered in glaring white paint. This microcosm allows the artists to use the space's emotional tectonics and possible associations while breaking with the normal patterns of movement, perception and interaction with the environment and other people.

[1] *Craving*, Bernhard Garnicnig & Gottfried Haider





Laura Skocek
Dusk Dawn / Island Maps (Fig. A, B, C)
Series of photographs
Movements on 3 plateaus on Plocica were observed and snap-shots of the island were recomposed into a sequence.

The series Island-Maps was taken from three different positions. These photographs were pieced together into three maps, the photographer being the center. A "false" image of Plocica's geography thus emerges from the subjective representations of the brief visitor on the island and her arbitrary division of zones.

Nina Tommasi
Imaginary fusion of acoustic location
(Fig. D, E, F)

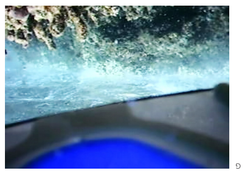
The main idea was to make a site comprehensible as a dynamic network of sound objects. (The definition of this fusion between interdependent corporealities can only be comprehended as process-based; it defies a priori total representation because of its complexity.
The survey, the time of day when this is carried out and the process itself of surveying are used for deliberately reducing and manipulating the site's complexity. In this way, the conditions of the site are reorganized in order to perceive the whole site in a different light altogether.
This reduction aimed at producing added compositional value, which would make the site perceivable by means of audiovisual impressions of it and processual changes to it and thereby generate new possibilities of representation.
The survey procedure is not be seen as the record of geographic-tectonic data in a precise Cartesian system of coordinates but rather as a kind of "nestling" against the form, so to speak.
While cords marked the rocks and produced new architectural spaces/points of reference for the sound recordings, this geometric expansion of the site and its subjective sensory perception lent the site an immanently changeable individuality.
The tectonic, visible body, along with all its peculiarities, was variously linked with other surrounding "bodies" which, analogous to the cords, "nestled" against it, formed and defined it and its in-between spaces.
Important constants that lent the site its individuality and generated the possibilities of recognizing it, such as sounding bodies or "wind bodies," originated from places outside the staked out claim.
This body/site/object can only be seen in the context of its geographic surroundings and the point at which each respective body is linked with the other.
Sound recordings were made along the fixed line, representing the "points of reference" for the other "corporealities" surrounding the rocks.
Although the content of these sound files served as reference to the geometric space and for the moment in time when it was surveyed, the morphing spectrum of sound turned the site into a constantly changing "setting."
1: N 43.03097° - E 16.81576°
2: N 43.03094° - E 16.81590°

Sophie Wagner
brzina hodanja (Fig. G)

equipped with my actioncam i moved along the borders of my claim, capturing images and sounds above and under the water.
the rhythm of the images was determined by the conditions of the claim, such as the movements of my float or of a stunt kite.
each sequence is an instrument for the music band for which the visitor can compose new pieces of music using the sounds i gathered on my walks along borders.
1: N 43.03118° - E 16.81582°
2: N 43.03106° - E 16.81579°
3: N 43.03112° - E 16.81570°
4: N 43.03117° - E 16.81570°

Florian Waldner
Wave Lands

The stones on the Plocica island show patterns that are formed by the tide over a long period of time. Photographs of these patterns are reduced to two-dimensional graphical lines. Audio recordings taken at the same place are analyzed concerning their spectral composition. The data resulting from that analysis is used to animate the graphical lines in three dimensional space. Such that movement of the abstracted patterns is dependent on the sound of the sea.
1: N 43.03093° - E 16.81575°
2: N 43.03094° - E 16.81591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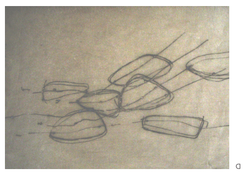
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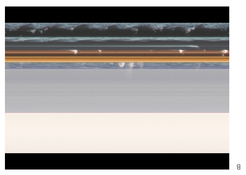
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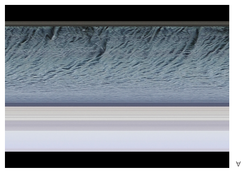
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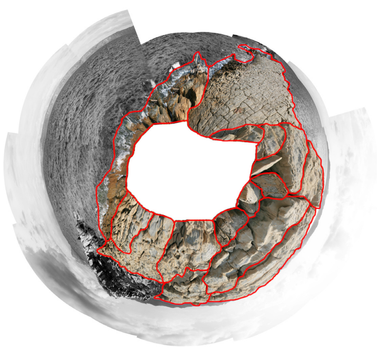
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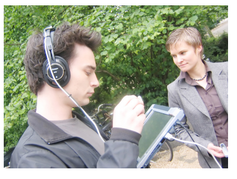
4TH MOBILE MUSIC WORKSHOP









The Handydandy

„ In French it is called le portable. In Arabic it is sometimes called sayaar or makhmul. In Thailand it is a moto. But here in Nickelsdorf there's only one reference, which is no other than "the handydandy".....
.....a handy is a hendi is a handy"
Ing. Zapfl, Nickelsdorf 2006

ABSTRACT

The Handydandy were a bluetooth-rock and noise group from Vienna, Austria / Los Angeles, California. They are one of the most commercially successful and critically acclaimed bands in the history of popular music. The band's principal members were Bernhard Bauch, Luc Gross, Nicolaj Kirisits, Gordan Savicic, Florian Waldner and Tschuli Staudach-Jefferson.

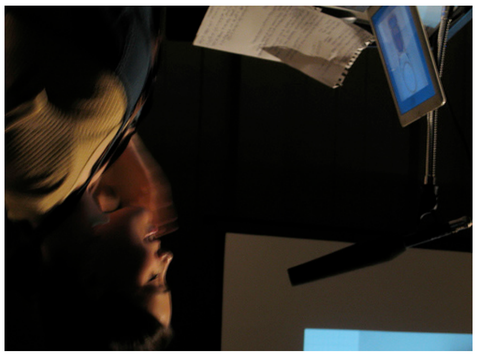
In Austria, The Handydandy released more than 40 different singles, albums, and EPs that reached number one. This commercial success was repeated in many other countries; their record company, EMI, estimated that by 20055 they had sold over one billion records worldwide. The Handydandy are the best-selling musical act of all time in the United States, according to the Recording Industry Association of America.

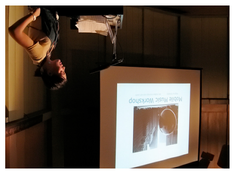
In 2006, Rolling Stone magazine ranked The Handydandy #1 on its list of 100 Greatest Artists of All Time. According to that same magazine, their innovative music and cultural impact helped define the 2000s and their influence on pop culture is still evident today.

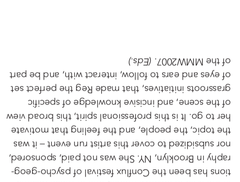
The Handydandy led the mid-2000s musical "Bluetooth Invasion" into the United States and worldwide. Although their initial musical style was rooted in 1950s rock and roll and homegrown skiffle, the group explored genres ranging from Johnny Cage to psychedelic bluetooth-rock. Their clothes, styles, and statements made them trend-setters, while their growing social awareness saw their influence extend into the social and cultural revolutions of the 1990s.

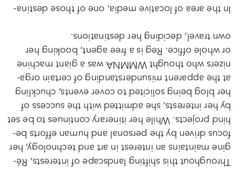
The HandyDandy is a wireless rhizom. A real-time rock axiom based on asymmetrical network music synthesis. "the handydandy" are first of all stars within an upcoming and never emerging music scene, namely the bluetooth rock'n'roll. their body performance implies powerful and energetic electro-acoustic computer music. each of their concerts are site-specific artworks themselves. the main concept is an human-opposed computer network based on real-time patches. the group itself performs on misused hybrid-media artefacts, also known as mobile phones in the latter 20th century. Cardboard Flying-Vs, pimped violins and sonified GTI-trubadors are just brief examples of their never-ending musical interface repertoire. the handydandy is a slap in your face, after which you still wanna smile. they live and work in miami/US.

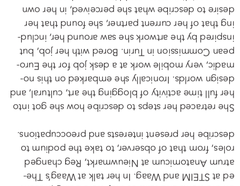
http://thehandydandy.yugo.at/

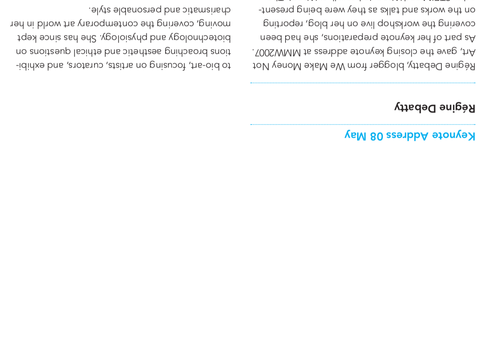












Keynote Address 08 May

Regine Debatty

Regine Debatty, blogger from We Make Money Not Art, gave the closing keynote address at MMW2007. As part of her keynote preparations, she had been covering the workshop live on her blog, reporting on the works and talks as they were being presented at STEIM and Waag. In her talk at Waag's Theatrum Anatomicum at Nieuwmarkt, Reg changed roles, from that of observer, to take the podium to describe her present interests and preoccupations.

She retraced her steps to describe how she got into her full time activity of blogging the art, cultural, and design worlds. Ironically she embarked on this nomadic, very mobile work at a desk job for the European Commission in Turin. Bored with her job, but inspired by the artwork she saw around her, including that of her current partner, she found that her desire to describe what she perceived, in her own non-specialist terms, could interest others.

This approach of following one's nose, being guided by one's own interests, and writing in an disarming, accessible way was a perfect match for the blog as medium. Initially interested by the area of media art – works tackling questions of technology and culture, she went on to cover design events worldwide. Her interests at the time of the keynote had shifted to bio-art, focusing on artists, curators, and exhibitions broaching aesthetic and ethical questions on biotechnology and physiology. She has since kept moving, covering the contemporary art world in her charismatic and personable style.

Throughout this shifting landscape of interests, Regine maintains an interest in art and technology, her focus driven by the personal and human efforts behind projects. While her itinerary continues to be set by her interests, she admitted with the success of her blog being solicited to cover events, chuckling at the apparent misunderstanding of certain organizers who thought WMMNA was a giant machine or whole office. Reg is a free agent, booking her own travel, deciding her destinations.

In the area of locative media, one of those destinations has been the Conflux festival of psycho-geography in Brooklyn, NY. She was not paid, sponsored, nor subsidized to cover this artist run event – it was the topic, the people, and the feeling that motivate her to go. It is this professional spirit, this broad view grassroots initiatives, that made Reg the perfect set of eyes and ears to follow, interact with, and be part of the MMW2007. (Eds.)

Network Landscapes: Landscape, Public Space & Mobile Music… Molecules?

Teri Rueb

When I arrived for the workshop yesterday the neighborhood was filled with the sounds of a public outdoor concert. Meanwhile, indoors my acoustic landscape shifted from Buddy Holly to Roy Orbison to Johnny Cash as a beautifully preserved 1950s jukebox pulsed with the last nostalgic selection made by a stranger. Regardless of my musical preference, these moments held meaning for me on a deeper level as they signaled something important about sound and public space. The message was in the medium, not just the content of the sounds. The act of social gathering for shared listening, individuals suspended in the connective tissue of sound–whether individually or collectively programmed–serves as a powerful catalyst in the formation of political identity and the claiming of public space. A public live performance offered as a free concert constitutes a mobile location-based networked technology quite different from the mobile sound platforms that have become the default technology referred to and used in artistic practice and cultural studies in mobile sound.

Where does this shared public space go when we adopt the personalized space of mobile music interfaces to the city? What are the consequences of the spread of mobile music devices that would inscribe us within personalized bubbles of sound? Is this kind of sharing a form of personal or collective expression, or are we merely conforming to a system of social interaction and exchange that has become an even more intensified interiorization of control space? What is the space of compromise and negotiation of meaning akin to "public space" in this moment of dual movement between global homogenization and expanded cosmopolitanism? Have we abandoned the constantly shifting landscape that would take us outside or beyond the comfort zone of our factionalized cohort? As cultural producers, critics and consumers – as citizens - we have an obligation to question "off the shelf" technologies that appear as "natural" or "liberating".

If we brush against the grain of mobile media forms, what might we discover as the underside of this condition and how will we respond? As a society we have become atomized, but the question remains "Can we form molecules?"1, and what might they look like?

As individuals linked through mobile technologies we have become mobile nodes in a complex network in flux. Beyond the classical figure in a landscape, we have become the very material from which this "network landscape"2 emerges as the interaction of natural, social, technological and biological networks.

J.B. Jackson, the great historian of the vernacular landscape, argued that we must see landscape ultimately as a "shared three-dimensional reality" and therefore a question of public space. This appeal must also be made in light of how we understand the "network landscape" of mobile network society. As actors in this landscape, how can we resist being framed as passive consumers or controlled and surveilled subjects, and instead embrace our agency as creators and participants in the shaping of this new public sphere?

Rather than choosing to create network landscapes that foster escape or deferral of this challenge, we must seek to create evermore charged spaces of socially, technologically and ecologically mediated encounter. The various works I will share in this talk trace a ten-year exploration around the question of landscape, public space, identity and network– in particular, the cybernetic landscape as produced through and framed by sound.

1 John R. Stilgoe posed the question "Can we make molecules?" in reference to the atomization of the public sphere in the context of his seminar "Modernization of the North American Built Environment" taught at Harvard University in Spring 2007.

2 Since 2006 I have advanced the term "network landscapes" to indicate the extended landscape of natural, social and technological networks that combine to form the ground of a new landscape condition that I argue is peculiar to mobile network society. This conception builds on J.B. Jackson's etymology of the word "landscape" as linked to the medieval German landschaft, from which he proposes the definition "man-made systems overlaid upon the land" (Discovering the Vernacular Landscape, 1986). Accordingly, I argue that wireless networks constitute a component of the magnetosphere that is shaped by man as a system overlaid upon the land.

BIO

Rueb's large-scale responsive spaces and location-aware installations explore issues of architecture and urbanism, landscape and the body, and sonic and acoustic space. In 1999 she pioneered gps-based interactive sound walks with "Trace", set along a network of hiking trails in the Canadian Rockies (funded by the Banff Centre for the Arts).

She lectures and exhibits world wide at venues including Transmediale (Berlin, 2004), SIGGRAPH (San Antonio, 2002), The International Symposium on Electronic Arts (Nagoya, 2002; Paris, 2000; Helsinki, 2004), Consciousness Reframed (Perth, 2002), The New Museum of Contemporary Art (New York), the Corcoran Gallery of Art (Washington D.C.), The Banff Centre for the Arts (Banff), Bell Laboratories (Holmdel), Interval Research Corporation (Palo Alto), and The Fraunhoefer Institute/GMD (IRCAM, Paris, 2002; Glasgow, 2001).

She has received grants and commissions from the ICA Boston / Vita Brevis, LEF Foundation, Artslink, Turbulence, and various state arts councils. Rueb's work has been featured and reviewed in diverse publications including "Second Person: Storytelling and Games in Playable Media" (edited by Pat Harrigan and Noah Wardrip-Fuin, MIT Press, 2006) and "Information Arts: Intersections of Art, Science and Technology", (edited by Stephen Wilson, MIT Press, 2001). She holds a B.F.A. in Art and Literary and Cultural Studies from Carnegie Mellon University and a master's degree in Interactive Telecommunications from the Tisch School of the Arts, New York University. Rueb is an associate professor in the Graduate Department of Digital Media at the Rhode Island School of Design. Rueb is also pursuing doctoral research at Harvard Graduate School of Design and is founder and principal of Open Air Studio, Cambridge, Massachusetts.

FIGURE

Teri Rueb's "Core Sample", part of the exhibition "Art on the Harbor Islands" with the Boston Institute of Contemporary Art, 2007

Hearing Sirens
A performance for mp3 players and portable hornloudspeakers

Cathy van Eck

ABSTRACT

Reversing the Philosophy of Headphones
A usual fashion to hear music nowadays is through headphones. The mp3-player made more music transportable than ever before and public spaces are crowded nowadays with people, living in their own acoustic world. My project is about reversing this situation. I am walking around the city, playing music from an mp3-player, this time not for creating private music, but for diffusing it out of two big yellow hornloudspeakers, radiating the sound to the environment.

The Acoustic and Visual Design: Greek Siren and Emergency Siren
The siren is both a mythological woman, having the body of a bird and the head of a woman as a noise maker, used to warn in emergency cases. The sirens as bird-women were known in Antiquity for their beautyful singing. It was unable to resist them and most of the men who heard them did not survive. The emergency siren is a noisemaker and can be seen as a survival tool. I used both as an acoustic, visual and conceptual starting-point for the project Hearing Sirens.
Construction
The portable hornloudspeakers consist of a small mp3 player, a box with an amplifier and battery, and two loudspeakers in two big yellow horns. The construction is made to be worn on the back of the performer.

Acoustical Characteristics
The specific construction of the horns and the fact that they are portable give them special acoustic possibilities. Due to the big horns, the sound is diffused very directional. Therefore the audience can often hear the early reflections before the direct sound. In this way, the hornloudspeakers reveals the acoustical characteristics of the environment. By a small movement of the performer, the pattern of the reflections can change enormously. The sounds diffused by the sirens are made with physical models of sirens.

BIO

Cathy van Eck (1979 The Netherlands/Belgium) is a composer and sound artist. Her work includes compositions for instruments and live- electronics as well as performances with (self)made) sound objects.
Besides working at her different artistic projects and collaborations, she is currently teaching at the Misc and Media Art Faculty in Bern.

http://www.cathyvaneck.net/

Audio Bombing: Magnetic Cassette Tape Graffiti

Mike Fleming, Kang Cheng , Kyle Millns

ABSTRACT

Audio Bombing is an alternative form of graffiti that uses magnetic audiotape as its medium. Drawing from hip hop and graffiti culture Audio Bombing starts with a basic cassette tape. Using a tape recorder you can record any information you want on to a cassette (music, poems, philosophy, subversive literature, etc.). After recording you remove the tape and cut out the segments that you want to use. Then take your tape segments and go tag whatever you want (buildings, benches, posters, buses, etc.). Using the augmented playhead spray can you can listen to the tags by running the playhead over the tape.

The intention of this project was to create a new form of underground expression from a medium that is falling out of use; Reinventing graffiti with cassette tapes which have a long history in hip hop culture. It is open to anyone who has a cassette tape to "audiobomb", it just takes recording what you want on cassette, cutting the tape up and then tagging it up. Manifesting audio samples into a physical and more visible form while allowing for manipulation of its playback echoes some of the re-appropriation of funk or disco beats seen in productions by DJs in early Hip Hop. It does not require any skill in drawing or traditional graffiti and functions under the radar of most suspicious authorities.

Since this medium is less visually obtrusive, being only a thin black line, it has an undercover versatility which normal graffiti does not. This specifically allows it to infiltrate spaces traditional graffiti can not, such as office buildings, under tables, in elevators, coffee shops, schools, and tight spaces.

The need to physically run a playhead over the magnetic tape in order to hear the audio tag makes the scenario of reading someone's tag mirror the act of writing that tag. This project questions the role of the reader when taking part in subversive communication. In reading an audiobomb tag the reader is put in the same position as a traditional graffiti writer instead of a traditional (passive) audience. The reader needs to actively engage with the content to receive the content of the tag.

BIO

Mike Fleming is based at the School of Art + Design at the University of Illinois at Urbana-Champaign, USA.

Kang Cheng is based at the Department of Natural Resources and Environmental Sciences at the University of Illinois at Urbana-Champaign, USA

Kyle Millns is based at the Department of Computer Science at the University of Illinois at Urbana-Champaign, USA

http://audiobombing.blogspot.com/

Mosomuso: Mobile Social Music Software

Atau Tanaka, Guillaume Valadon, Alex Kummerman

ABSTRACT

MOSOMUSO (Mobile Social Music Software) was a collaborative research project funded by the French Ministry of Research. It brought together mobile startup, Clicmobile, with research partners Sony Computer Science Laboratory Paris, and the LIP6 network lab at Université de Paris 6. The presentation at MMW'07 covered two aspects of Mosomuso, "Social Mobile Music Navigation Using The Compass" and the locative media work, "Net_Dérive", realized on the Mosomuso infrastructure.

There is an increasing tendency to converge functions of several consumer electronics devices (a personal music player, mobile phone, satellite navigation, digital camera) o into a single device. The Compass uses mass-market mobile phones in an integrated location-aware, networked musical navigation and exchange application. The Compass is a tool to study and experiment mobile music navigation. We use a single interaction metaphor, that of a compass, to guide the user to search, find, and navigate closer to friends, styles of music, or places of interest. Using the location information retrieved from the server with the phone's data link, users once in proxmitiy are able to bootstrap ad-hoc networks to allow spontaneous music exchange.

Net_Dérive was premiered at the Maison Rouge in Paris in 2006. To perform the work, participants wear scarf containing two mobile phones and a GPS unit to explore the neighborhood surrounding the gallery. One phones takes pictures every 20 seconds uploading geotagged images and upstreams audio to the server. The other phone serves as display receiving audio/visual streams from the gallery space. This creates an interplay of sound and image, an exchange between participants in the streets, and the creation of an abstract narrative from sonification and visualization of locative information. The abstract visuals and soundscapes seen in the gallery and streamed to the mobile users recreate a Situationist derive using mobile technology, a city-as-instrument.

Floating Fabulousness: Representation, Performativity and Identity in Musical Ringtones

Isabella van Elferen, Imar de Vries

ABSTRACT

In this paper, we consider musical ringtones of mobile phones to act as virtual, communicative and cultural performances. They appear unpredictably, they communicate signs which are interpreted by a variegated and dynamic audience, and establish stages upon which cultural meanings are portrayed. We will argue that the musical ringtone functions as a musical madeleine in Marcel Proust's sense, an involuntary mnemonic trigger of a complex web of individual and collective memories. Having this quality, the ringtone lends itself perfectly for the performative manifestation and display of (sub)cultural identities in the public sphere.
As virtual, communicative and cultural performances, musical ringtones have the inherent capacity to function as publicly disseminated madeleines, which suddenly announce themselves and disrupt everyday social situations. For this reason, ringtones can be seen as a means to actively display and communicate a loyalty to floating subcultures, as well as triggers for cultural performances within the spatial sphere of the ringtone's carrier. The flaunting character of these performances lends itself perfectly for the display of fabulousness: hearing a ringtone will induce mnemonic reflections. Our findings concern musical ringtones primarily. Sound effects or recorded speech can equally invoke communicative and cultural performances, but we consider the vast array of individual and shared musical memories to be more powerful in invoking 'madeleine trails' and in manifesting (sub) cultural identities. This does not mean that we think that the functioning of ringtones as communicative and cultural performances is only established when complete songs are played; even the smallest musical unit such as, say, a bass line or a vocal timbre can open up a whole archive of other songs—and unpack their (sub)cultural libraries.

BIO

Isabella van Elferen is a researcher in the area of Media Studies and Musicology at the University of Utrecht. Her current research focusses on cyber-gothic subcultures and the gothic aspects of cyberspace.

Imar de Vries is part of the Institute of Media & Re/presentation at Utrecht University, Netherlands.

TokTek

Tom Verbruggen

ABSTRACT

TokTek (Tom Verbruggen) structures the unbridled clicks and cuts of his circuit bend gadgets to a fragile disturbance. Sampling with a joystick Tom creates unlogic dynamic compositions.

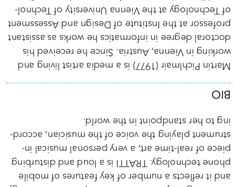
Tom's work is about the communication and non-communication between electronic devices and humans, focusing particularly on his relationship with such devices. Drawing on his fine art background, his work explores the relationships between, human touch, memory and everyday electronic objects. For example his work "Moederkoek", which literally translated is mother-cake but refers in English to the placebo, Tom performs with his mother and she bakes a cake, like she used to when he was a young boy. In the contemporary version, in a self-assembled kitchen, Tom performers with his mother, sampling her baking and the sounds its produces in realtime. These sounds are arranged and manipulated on the fly and form an ongoing, improvised composition. The performance ends, with the cake going into the oven and the smell of baking filling the room. Once it is baked, the cake is served to the audience.

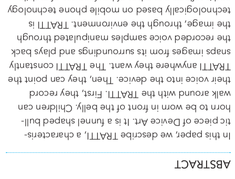
Tom's latest invention is the Crackle-Canvas. Using STEIM crackle box hardware, Tom has created paintings that produce sound. Each painting can produce sound by itself but when connected with other paintings forms a 'painting orchestra'. By connecting cables between the paintings, the sound changes, while the cables length, colour and form, form a drawing on the wall or in the space the paintings are hanging.

http://www.sonidogris.com/ http://www.lomechanik.com

BIO

Tom's work is about the communication and non-communication between electronic devices and humans, focusing particularly on his relationship with such devices. Drawing on his fine art background, his work explores the relationships between, human touch, memory and everyday electronic objects. Tom Verbruggen is part of the New Interfaces for Performances programme.





Egotone | generative ringtone engine.

Irad Lee

ABSTRACT

Egotone is a Generative Ringtone Engine software currently in development, that is designed to generate interactive music compositions using mobile device data. Egotone transforms statistical data retrieved from a mobile device into digital sound and arranges it into a musical composition to be used as a ringtone.

The application is based on an algorithm that converts statistical information from a mobile device into musical parameters, resulting in an automatic generation of a custom-made, copyright-free, personalized ringtone with
a unique musical form and sound.

The concept of Egotone is based on the assumption that similar people, as users of information storage devices, tend to share similar contents, in which interesting patterns of behaviors can be revealed, such as the mobile device's owner identity and users' usage patterns. Egotone is able to give an audible representation to these relations, and to somewhat function as an audible mirror of the mobile device's owner, a group of people, or a social cross-section.

BIO

Irad Lee is a Tel Aviv born, Amsterdam-based cross-media designer working with mobile audio systems and experimental media design.

http://iradlee.net

TRATTI - A Noise Maker for Children

Martin Pichlmair, Laura Beloff

ABSTRACT

In this paper, we describe TRATTI, a characteristic piece of Device Art. It is a funnel shaped bullhorn to be worn in front of the belly. Children can their voice into the device. Then, they can point the TRATTI anywhere they want. The TRATTI constantly snaps images from its surroundings and plays back the recorded voice samples manipulated through the image, through the environment. TRATTI is technologically based on mobile phone technology and it reflects a number of key features of mobile phone technology. TRATTI is a loud and disturbing piece of real-time art, a very personal musical instrument playing the voice of the musician, according to her standpoint in the world.

BIO

Martin Pichlmair (1977) is a media artist living and working in Vienna, Austria. Since he received his doctoral degree in informatics he works as assistant professor at the Institute of Design and Assessment of Technology at the Vienna University of Technology. His art pieces were shown at various media art festivals and exhibitions. Recent shows including and the Ars Electronica Festival, ISEA, Transmediale and the Microwave International Festival for New Media Art. In his research and publications, he focuses on theory and praxis of interactive art and design - from game design and physical interfaces to open source developmentmodels and community media.

Laura Beloff's (1964) interests deal with individuals in the global society adapting to highly complex technologically enhanced world. Her mobile, wearable objects are exhibited internationally in museums, galleries, and major media-festivals. She is frequently lecturing about her research and practice in universities and conferences.
1999: visiting Professor, Linz Art University, Austria.
2002-2006: Professor for media arts, Art Academy of Oslo, Norway. 2007-2011: 5-year Artist-grant by the Finnish state. 2007-: lecturing at The University of Art and Design Helsinki, Finland

http://www.joelamb.net

http://sunrunsun.nimk.nl

robotcowboy
A Human-Computer Performance System

Dan Wilcox

ABSTRACT

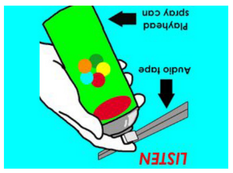
This article presents the human-computer mobile performance project entitled "robotcowboy". robotcowboy consists of a "one-man band" wearable computer system dubbed "unit" composed of a mobile computer and various input devices such as midi controllers, game controllers, and environmental sensors.

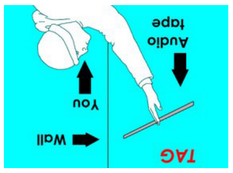
robotcowboy is a performance project centered around using the power of the computer for active, mobile expression. The main goal of the project is mobility : performers can use the system as an instrument - an extension of themselves. They are free to roam the stage, the street, and the world performing computer-based music, becoming "more then an exrta" to the machine. In the vein of Terre Thiemlitz smashing a laptop on stage, it is an attempt to challenge the nature of live computer music performance.

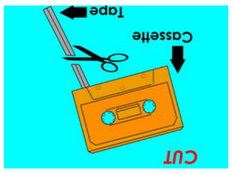
robotcowboy aims to be a human-computer performance system allowing the user to produce a dynamic audio-visual experience for the audience. There is a history of one-man band acts and performance troupes producing music in the course of the exhibitions, why not attempt to combine both using wearable computer technology?

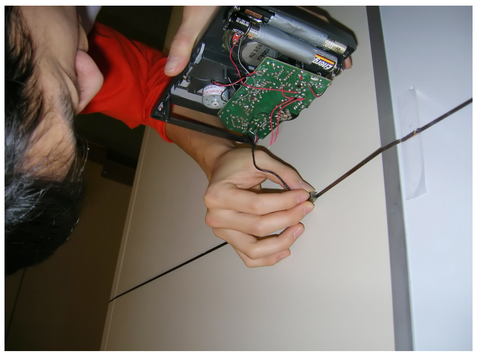
BIO

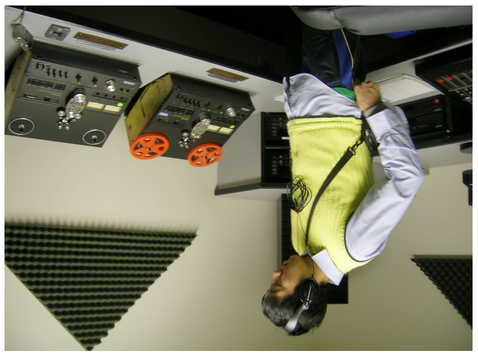
Dan Wilcox holds a B.S. in Computer Engineering from Iowa State University USA and an M.S. Art & Technology from the IT University / Chalmers, Göteborg Sweden, where he also worked on the "Interactive Installations Course" and as Teaching Assistant. In October 2007 he did a 2 Week Artistic Residency at the Studio for Electo-instrumental Music (STEIM) , Amsterdam, NL.











Creative Uses of Virtual Sticky Notes in Art - A Critical Interrogation of The "Bio-tracking" Smart Phone Based Exhibition

Anna Dumitriu

ABSTRACT

Anna Dumitriu, lead Artist on the Bio-tracking project was introduced to the possibilities of using Socialight during a presentation at the 2006 Mobile Music Workshop. Socialight is a leading-edge smart phone software, which enables users to post and access location specific 'virtual sticky notes' in the form of picture, sound or text files.

In September 2006 visitors to the International Brighton Photo Biennial Fringe were invited to download Socialight and view "Bio-tracking" an exhibition of digital photographs, sound works and text messages at noted cultural locations around the city. Anna Dumitriu sampled and cultured microbes from the locations, revealing an incredible, unseen and sublime world to us through a series of enhanced digital micrographs. Luciana Haill, Ian Helliwell and Juliet Kac created a series of sound works in response to the images, scientific data and locations. Microbiologist Dr John Paul wrote a series of text messages to describe the microbes scientifically.

The photographic images created a dialectic, fusing the pure emotion of the sound responses and the scientific analytical texts. The philosopher Schopenhauer wrote about music's ability to capture and express emotion "as an immediate objectification and copy of the whole will as the world itself". By juxtaposing these responses the project sought to create a synthesis between art and science.

The use of GPS, in mapping the locations where the microbiological samples were taken, fuses the microscopic and the macroscopic, drawing a thread between satellites orbiting the earth and the bacteria at our feet.

'Virtual sticky notes' are a powerful means of disseminating sonic and visual artworks. The Bio-tracking exhibition is a demonstration of the creative uses of the medium and successfully engaged artistically, conceptually and philosophically with the technology.

An Interactive Musical Installation through Spatial Sensing

Takuya Yamauchi and Toru Iwatake

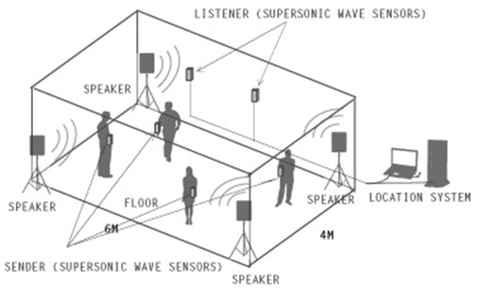
ABSTRACT

This paper describes a sound installation work supported by spatial sensing system with a Personal Area Network (PAN), which may be applicable for such areas as dance performances and mobile music. The introduction section surveys some of spatial technologies that track moving objects and identify these agents. The system design section describes the architecture that makes use of MAX/MSP application. The actual installation is supported by the system. When we consider emerging human behaviors in a new audiovisual space with PAN or WAN, it becomes important to consider the social contexts. In the "Sound Jewelry" installation, people with "senders" walked around the floor in a location system zone and they recognized the changes of sounds according to the relative distance between them. The actual "Sound Jewelry" turned out to be an environment that consists of two layers of sounds. In the foreground, "melodies" are dynamically generated by measuring the distances between the participants. In the background, ambient sounds are automatically generated using the distance data. When many people move in a 4X6 m2 space, the sound only changes based on the nearest relative distance. However, as the number of people increases, the sound changes become more complex. Sound complexity was used as part of the installation. Users recognized sound changes as they moved in real time in the space.

BIO

Takuya Yamauchi is part of the "Media Design Program" at the "Graduate School of Media and Governance" at Keio University SFC, Japan.

Toru Iwatake is Professor at the "Media Design Program" at the "Graduate School of Media and Governance" at Keio University SFC, Japan.



Extended Enviro-Guitar

Colin Black

ABSTRACT

In this paper, I explore the initial research and development regarding my mobile experimental "Extended Enviro-Guitar" (XEG) instrument/s as a type of resonating acoustic profiling device. It also explores the possibilities of using multiple XEGs within site specific physically spatialised multi-instrument installations and the deconstruction of this abstract sonic terrain via emerging mobile technologies.

BIO

Composer/sound artist Colin Black has been internationally recognized with the prestigious Prix Italia Award (2003) in the category 'Best Music Radio - Composed Work' for composing and producing his major work 'The Ears Outside My Listening Room'. BBC radio 3 has described this winning work as "a haunting evocation of Australia" while the National Radio Company of Ukraine invited Black to help adapt this work for a Ukrainian audience in 2004.

Colin Black's credits include the Australia Council for the Arts New Media arts Residency with 'The Listening Room', ABC Radio in 2002, Musical Director for live TV variety shows, soundtracks for feature and short films, video, TV and digital media presentations and further industry awards for Best Experimental Song and Best Instrumental Composition.

As a Composer, he has been featured on Deutschlandradio's Kultur's 'Klangkunst' program, ABC radio (Australia), YLE Radio (Finland) and his works have been selected for performance at events including 'En Red O 2000' music festival Barcelona Spain, the Festival Synthese Bourges France, Rencontres Musiques Nouvelles, Lunel France, 60x60 Pacific Basin Regional Concert Los Angeles USA, Zeppelin 2004-Festival de Arte Sonoro Barcelona, Spain, Hipersonica 2004 in Sao Paulo, Brazil, The Literature Sound Barrier 2002 in Wien, Austria, Sydney University's Live Wires concerts '97, '98 and Melbourne's Extatic Concert for the Next Wave festival '98.

Black's sound installations include the 'Butter Churn' Sound sculpture in Lismore's Heritage Park, the Parramatta Heritage Centre's 'Parramatta: People & Place' exhibition which is to run for seven years. In 2002 Black created a dynamic multi-site soundscape and the Starcourt Theatre Space sound installation "Floodscape" for the NORPA production of 'The Flood'. A finalist in the Australian National Digital Arts Awards '98, his experimental composition "118, 120 122" was exhibited at Brisbane's Institute of Modern Art.

He has presented research papers on radio art and sound art practice at RMIT University's, School of Creative Media (Melbourne, Australia) and the 4th International Mobile Music Workshop hosted by STEIM (the Studio for Electro-Instrumental Music) and Waag Society in Amsterdam, The Netherlands. Black has also been invited to talk about radio arts and his work on London's Resonance 104.4FM, at the Sibelius Academy in Helsinki, Technische Universität Berlin and the Victoria University of Wellington.

Black's work has been selected for broadcast and podcast on stations including Deutschlandradio Kultur, the BBC, YLE Radio, Sweden's Sveriges Radio as well as many other European stations and in South Africa, New Zealand and numerous times across Australia.

For more information see http://users.tpg.com.au/users/cydonian/c_black.html

Pocket Gamelan: swinging phones and ad hoc standards

Greg Schiemer, Mark Havryliv

ABSTRACT

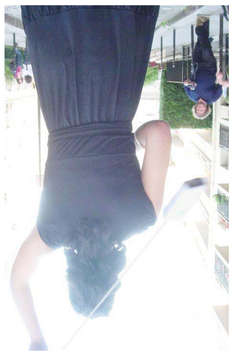
In this paper, we discuss how mobile phones have been used as devices for active music making, how mobility affects sound and how communication between phones has been integrated into the fabric of a new genre of interactive performance by groups of musicians. We identify some of the issues that stood in the way of developing two new musical applications for mobile phones, discuss aspects of performance works developed so far using this technology and point the way to future development.

Computer music has had two persistent technological legacies. One is its dependence on performance interfaces designed around 12 equal divisions of the octave. The second is the desktop computing environment where musical resources are concentrated in the hands of a single user. As technological development shifts away from this towards mobile computing, new computer performance paradigms have begun to emerge. The Pocket Gamelan project is motivated by a desire to explore the features of microtonal intervals found in many non-Western musical traditions and seeks to develop applications that allow microtonal music to be composed and performed using mobile phone technology. The combination of flying sound sources and remote controlled sound using hand-held technology has resulted in a new kind of interactive performance genre in which microtonal instruments are easy to play, quick to learn and readily accessible to large numbers of people. Musical interaction involves using sound sources that are physically relocatable and wireless communication that allows moving sound sources to be controlled using hand-held devices.

In performance Bluetooth-enabled mobile phones attached to a cord are swung in a circular fashion to produce Doppler shift. Phones are used either as a flying sound source or as wireless hand-held controller to alter the behaviour of other sound sources. By appropriating mobile phone technology as a medium for interactive musical performance we hope to allow communities of non-expert performers to experience the richness and diversity of microtonal music.

BIO

Greg Schiemer is Associate Professor at the Faculty of Fine Arts, University of Wollongong. Much of his work is associated with musical applications of new technology since the early 1970s. Graag studied composition with Peter Sculthorpe gaduating from Sydney University with Bachelor of Music in 1972. After a period working for Digital Equipment Australia, he lectured in electronic composition at the Canberra School of Music (1983-85) and the Sydney Conservatorium of Music (1986-2002).



Mobile Music Creation using PDAs and Smartphones

Ashley Elsdon

ABSTRACT

This paper reviews the current state of available mobile music creating application software for PDAs and Smartphones. The paper explores developer's motivations and thoughts on the future of mobile music, and the responses of a few users to questions about how they use mobile music technology, and draws conclusions regarding the future of mobile music making.

Palm Sounds (http://the-palm-sound.blogspot.com/) is a blog devoted to all forms of mobile music making and technology. This paper is the first attempt at understanding user and developer views and suggesting possible futures in the mobile music space. The field of mobile music making on PDAs and smartphones is still relatively small. There are only a handful of applications available in a market for PDA software that is comparatively very large. Although the desktop market for music software is huge the handheld market has never experienced the same level of interest. This paper explores some of the current issues.

Virtually all of the applications discussed in this paper have their root functionality in desktop origins. They are in effect a translation of desktop technologies into a handheld environment. However, if you take the emergence of applications like SpinPad and AxisPad as proof that there musical uses that could be unique to the handheld environment, then where does this naturally lead to? Has handheld hardware technology got to the point where input devices can be used in new ways to enable the device to become much more of an instrument rather than just a translation of a desktop application?

The iPhone's sensor technology could lead to the use of sensors in music handheld music technology to provide a more directly manipulated and sensitive interface with the possibility of gesture control and recognition. It is perhaps a device of this nature which could extend the usage of mobile music technologies and encourage more users to explore the field.

Sonic Graffiti: Spraying and Remixing Music on the Street

Cha-Ying Lee

ABSTRACT

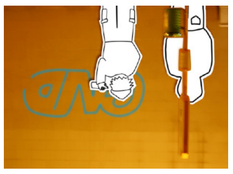
Sonic Graffiti is a concept for people to spray and remix music on the street. It contains a system of devices for creators, including the sound cap, the controller and the boom box. The sound cap is designed to be put on the real spray can, and makes the sound sample spray out with the paint. The controller and the boom box serve as assist devices during the creating process. Music is composed by overlaying paints. Hence the graffiti is the visualization of the music, and the music is the soundtrack of the graffiti. Passengers can listen to the music with a software player installed in their mobile devices. Music is streamed to the device when the passenger come close to the graffiti.

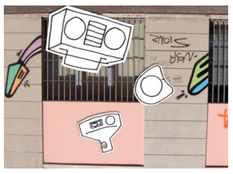
Graffiti is an urban phenomenon with is own prominent subculture. With the rising of locative media, the invisible audio is able to be tagged in the physical space. Here tagging technically means geo-tagging, as a process of depositing digital content in a physical location. This project explores a concept of enabling people spray music on the street and make graffiti with both visual and audio elements. A system of physical devices is designed for artists to create and tag music in the urban space with real spray cans. For general viewers/audiences Sonic Graffiti provides a listening experience giving a sense of connection with the environment.

Music is abstract to express visually. Some graffiti artists distort letters, design patterns to make abstract work; others go picturesque pieces. I am interested in investigating what new form of expression would evolve from the blending of music and graffiti. The current design of Sonic Graffiti leaves much freedom to artists for developing their own formation and visual languages of music. They can adopt a more improvisational attitude or sketch out their work before painting. The results may be short sound signatures or epic compositions.

BIO

Cha-Ying Lee
chaying.lee@gmail.com





Sound Moves, iPod Culture and Urban Experience

Michael Bull

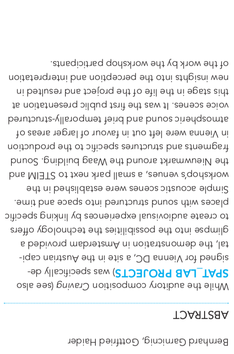
In this lecture I present work on the social nature and meaning of iPod use. The material derives from a large scale international survey of users conducted in 2004.

The iPod is used as a prism through which to understand the nature of the public world in which we live. Sound plays a central role in how the urban citizen becomes rooted in mobile urban space, of how they acquire their 'being in the world' through the creation of privatized sound atmospheres. iPod culture possesses its own processes of auditory gating and filtering that embodies the urban world that most of us inhabit. I argue that the role of sound based technologies require investigation in order for us to reach an understanding of how we come to share social space with others in urban culture.

iPod users appear to live in a world of mediated we-ness in which sound provides both the dreams and the chains for the urban subject. Mediated aural proximity constituted states of 'we-ness' whereby 'direct' experience is either substituted or transformed by a mediated, technological form of aural experience. A dialectical analysis of iPod use points to a disjunction between the objective and the subjective moment of culture in which iPod users attempt to transcend the social precisely by immersing themselves in it. It is a world in which the auditory self of iPod culture perceives the world increasingly as inhabited acoustic space. Users both move to sound and are simultaneously moved by sound. Sound itself is normative, mediating and reflecting the cultural predispositions of the listener who 'gates' experience. The manner of this auditory screening is not merely dependent upon the values of the subject, but also upon the technologies themselves. Not only do we get the technologies that we deserve, we also get the ones we desire.

BIO

Michael Bull is a Reader in Media and Film at the University of Sussex and has written widely on sound, music and technology. He is the author of Sounding Out the City. Personal Stereos and the Management of Everyday Life (Berg 2000), Sound Moves:iPod Culture and Urban Experience (Routledge 2007) and is co-editor of The Auditory Culture Reader (Berg 2003). He is also the founding editor of The Senses and Society Journal published by Berg. He was until recently a consultant to Portalplayer, California and is a core member of New Trends Forum, a European Thinktank funded by Bankinter, Spain.



Create with miniMIXA

Tim Cole

ABSTRACT

BAFTA-winning miniMIXA was a powerful mobile music mixing and performance application developed by Tim and Pete Cole (now founders of intermorphic.com, developer of tools for nurturing ideas).

The presentation discussed the wider market opportunities for mobile creativity applications, on-device created social media (user generated content) and how record companies needed to be open in considering new opportunities. Tim outlined his firm belief that mobile devices have an important future as creative tools, hence presenting the concept musiKfone as "the mobile phone is the next electric guitar". He presaged a time when many more highly capable mobile phones would be capable of running advanced creativity applications such as miniMIXA.

12-track miniMIXA V2 was demonstrated, showing how easy it was for a DJ-like performance to be created and given from a mobile device. In this case, the phone we being used more like an stereo instrument where live studio-like FX settings such as reverb, chorus, delay, filter and EQ etc could all be selected and changed in real time on a per-track or global basis. This was in addition to being able to on-the-fly select and add in multi-bar audio loops (including user's own), MIDI riffs, user microphone recordings etc.

miniMIXA also contained a powerful modular software synthesiser with a host of capabilities, and it was shown how sounds generated from this could also be worked into the mix. Both miniMIXA creation modes were shown and explained, the simpler mode being where key-presses (or screen-tap on touch screen devices) could e.g turn loops on/off and the other "cell mix" mode where there were 4 difference mix sections.

Following the presentation delegates were provided with devices where they could try out miniMIXA for themselves.

BIO

intermorphic Ltd, established in 2007, is the latest company from multimedia artist and songwriter Tim Cole (aka colartz) and his brother Pete Cole, with whom he has worked for over 18 years on developing generative music systems and products and technologies for mobile music making. intermorphic creates tools for nurturing ideas, such as the trans-generative music system, hyper-instrument and fluxer "/noatikl/", and cut-up lyric generator "/liptikl/".

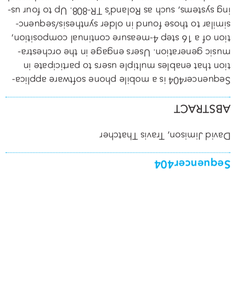
In 1990 the Coles founded SSEYO to develop the generative music system, "Koan", which went on to be used by Brian Eno in 1995/6 to create "Generative Music 1". By 1996 Koan had become the first European developed plugin for Netscape and in 1998 Tim created the first online collaborative virtual generative composition, Koan^oasis, and gave a keynote speech at ISEA. SSEYO raised several rounds of funding and went on to win a BAFTA for Technical Innovation in 2001.

By 2002 SSEYO had become a wholly owned subsidiary of Tao Group, where the Coles developed the 2005 BAFTA-winning mobile music making application "miniMIXA".

In 2007, and prior to the imminent release of miniMIXA v3, the Coles parted with Tao Group and founded intermorphic, where they are using their many years of experience to develop new, fun and interesting creativity tools for desktop and mobile.

See: http://www.intermorphic.com <http://www.intermorphic.com/> and http://www.colartz.com <http://www.colartz.com/>

Live mix made with miniMIXA V3: http://youtube.com/watch?v=uBP97NwG4nU <http://uk.youtube.com/watch?v=uBP97NwG4nU> <http://youtube.com/watch?v=vxtREMURO8U>
SYPC Mobile Mashup with miniMIXA: http://youtube.com/watch?v=q-nqTef3j30



Sequencer4D4

David Jimison, Travis Thatcher

ABSTRACT

Sequencer4D4 is a mobile phone software application that enables multiple users to participate in music generation. Users engage in the orchestration of a 16 step 4-measure continual composition, similar to those found in older synthesis/sequencing systems, such as Roland's TR-808. Up to four users select instruments (percussion, piano, orchestral hit, etc.) which determine the samples available. Connections between phones are made either via central server, or, in 2 person mode, through Bluetooth.

Once connections are established, users trigger sound samples by pressing the numeric key pad on their phone. Keys '1-9' trigger either notes in the C^m scale, or different timber percussion. Users replace existing notes, or erase them by pressing the '0' key. Pressing the '*' and '#' keys toggle octaves in the instrumentation.

Key presses are registered by the central server, which combines the data into a notational structure containing all users' music, which in turn, is read by each mobile device. This structure enables individual users to be out of sequence with each other, while facilitating a near real-time collaboration. Every 16 steps, the new notational structure is loaded from the server, and used to trigger the appropriate sounds on the phone. New notes are added upon their event to the server rotation, reabling them to be heard by other users during the next measure. As a repetitive musical structure, users can anticipate the variations from the other users.

BIO

David Jimison is a PhD candidate in the Digital Media program at Georgia Institute of Technology. His research interests are in urban computing. He is currently a Fellow at Eyebeam Art & Technology Center.

Travis Thatcher has been involved in research in human computer interaction for live performance and interactive sonification.He has performed as an electronic composer and musician for the last seven years and as a saxophonist for the last twelve years. Thatcher received a Bachelors in Computer Science from Georgia Tech in Spring 2005, and a Masters-T degree in Science, with concentration in music technology in May 2007.

Work In Progress Demonstration of Craving: A Spatial Audio Narrative

Bernhard Garncnig, Gottfried Haider

ABSTRACT

While the auditory composition *Craving* (see also **SPAT_LAB PROJECTS**) was specifically designed for Vienna DC, a site in the Austrian capital, the demonstration in Amsterdam provided a glimpse into the possibilities the technology offers to create audiovisual experiences by linking specific places with sound structured into space and time. Simple acoustic scenes were established in the workshop's venues, a small park next to STEIM and the Nieumarkt around the Waag building. Sound fragments and structures specific to the production in Vienna were left out in favour of larger areas of atmospheric sound and brief temporally-structured voice scenes. It was the first public presentation at this stage in the life of the project and resulted in new insights into the perception and interpretation of the work by the workshop participants.

BIO

Gottfried Haider, born 1985 in Vienna, is interested in urban sound scape theory and currently research-ing on the interdependencies of the algorithmic acquisition of space, its coexistent manipulation and numerology. He lives and works in Vienna and Rotterdam.

Exhibitions (Selection):
2008 Participation transmediale08, Berlin / DE
2007 Exhibition (mis)used Media, Vienna / AT
2007 Exhibition etc17, Vienna / AT
2007 Participation Mobile Music Workshop, Amsterdam / NL
2004 Award of Distinction Prix Ars Electronica - u19, Linz / AT

Bernhard Garncnig, born 1983 in Bregenz, Austria, studies Digital Arts at the University for Applied Arts in Vienna, Austria. He is a founding member of the Atelier c17 offspace in Vienna and active in the field of improvised turntable detournement.

Selected Exhibitions and Performances
2008 albert bernhard - das mysterieux project, c17, Vienna / AT
2008 Exhibition Kunstraum Engländerbau, Vaduz / LI
2007 Exhibition (mis)used Media, Vienna / AT
2007 Participation Mobile Music Workshop, Amsterdam / NL
2005 Performance 22 Kasseler Dokumentar-, Film- und Videofest, Kassel / DE

Socialight

Michael Sharon

Socialight is a content platform that lets any publisher or person create and discover media and information placed in physical locations such as schools, shops, and parks around the world. Anyone can find the content, whether on their mobile phone when nearby or by browsing a map on the web. With Socialight, we've created an entirely new media channel that's place-based.
The Sticky Note
The basic building block of Socialight is the Sticky Note- similar to a yellow Post-it note that you find at the office, except that it can contain text, images, audio and even video! Sticky Notes can be stuck to any location in the world and you can choose who can see yours...
Socialight Mobile
The best part about Socialight is using it on your cell phone. This lets you discover all kinds of things that are actually near to you! You can also make comments and rate the things you find as well as stick your own notes. We can also notify you about the things that interest you so you never walk past something cool again!
What you see is relevant to:

* where you are
* who your friends are
* the channels you subscribe to

It's like having a guidebook written by your friends and the people you trust. You can also rate, tag and leave comments on the things you find. You never get SPAM because we only notify you about the things you want. You can set your notification preferences here.
We provide a WAP version that works on almost every phone as well as a JAVA version that works on certain handsets and has cool features like GPS integration and a slicker interface.

Socialight Online
You can explore Socialight with nice big maps and broadband juiciness not possible on mobile phones. So we encourage you to look around, join some channels, make friends and create some Sticky Notes! Then check your mobile preferences are set up correctly and start enjoying the same great stuff on your phone!

BIO

Michael is a media artist, writer and programmer whose work runs the gamut from mobile social software to gestural music interfaces to big games and everything in between. He is the co-founder and CTO of Socialight, a New York-based company developing social media tools for mobile devices. He is an Adjunct Assistant Professor at Columbia University's GSAPP co-teaching a class in Big Urban Games. He is an Adjunct Professor at New York University's Interactive Telecommunications Program, teaching a class called Mobile Application Design.

3RD MOBILE MUSIC WORKSHOP




IMPROVe

Richard Widerberg, Zeenath Hasan

ABSTRACT

(see also p. 40)

The everyday sounds that we experience are produced outside of our own volition. The capacity to capture sounds, however, was not possible till the invention of electro-magnetic recording devices in the early Twentieth century. Since then, the separation of sound from its source, and the capability to play it back, has made it possible to listen to sounds outside of its original context. The mobile phone is also a medium through which sounds are heard outside of their original context. However, the normative definition of the mobile phone as a medium for communication has restricted its potential as a medium for sounds that exist outside of the immediate tele-communication. IMPROVe is a design and research project that explores the potential of the mobile phone as a medium of communication beyond its currently dominant role as a transmitter of sounds. The project proposes the exchange of everyday sounds within communities and across socio-cultural contexts by mobilizing the potential of the mobile phone as a tool for the production of everyday sounds. To listen carefully to the environment is something we want to emphasize in our design. We believe that when the possibility to record and work creatively with the sonic environment exists, then a higher awareness of our environment is achieved. Needless to say, the playback of the recorded sonic environment is only a representation of it. But to work consciously with this representation is what, we believe, heightens our awareness of our sonic environment.

http://www.riwid.net/improve/

SonicPulse – exploring a shared music space

Akseli Anttila

ABSTRACT

In this paper we present a design for a social music application for mobile devices. The design allows users to passively monitor a shared music space, or actively look for other users of the system. The user can furthermore engage in shared music use. The proposed design can be used to investigate the question of user willingness to engage in playful music sharing, and methods which allow both local and remote experience sharing.

In this paper we present a design for a social music application for mobile devices. The design allows users to passively monitor a shared music space, or actively look for other users of the system. The user can furthermore engage in shared music use. The proposed design can be used to investigate the question of user willingness to engage in playful music sharing, and methods which allow both local and remote experience sharing.

In active scanning the user can send out a ping, a personal audio snippet. The ping is reflected from other users as an echo, a sound describing the nature of the discovered user. The users can send specific music files or distinct sounds to others, denoting e.g. a willingness to start a shared session. Thus abstract dialogue can lead to musical sharing, colistening and taking turns as DJs. The proposed system and the results of a field evaluation will provide insight to the value of a musical communication system in a mobile context. The main research questions concern the musical and social aspects of the design. A third question concerns the feasibility of the design for prototyping and implementation.

BIO

Akseli Anttila is a doctoral student (music meets mediated communication) and a designer at Nokia, working mostly with media applications. He works at the Nokia Research Centre in Finland. He started at UIAH film department (cinematography), moved to pre-medialab IMI (3D animation and CGI), and holds a MA from Media Lab Helsinki (online communities).

CELLPHONIA: In The News

Steve Bull, Scot Gresham-Lancaster & Tim Perkis

ABSTRACT

Cellphonia: In The News is an open source cell phone karaoke opera with a mixed final performance delivered to the participant as a podcast and online as a web based mp3. The ever-changing current state of the opera will be continuously available as an online stream-cast.

Cellphonia: In The News is an open source location-based karaoke cell phone opera that uses a libretto generated from RSS news feeds. The music is both pre-composed and algorithmically generated by news feeds. The full opera is comprised of many callers' voices mixed with audioenhancement tools and delivered by continuous Internet audio stream-cast. The fresh addition of new caller voices and evolving music creates a never-repeated streaming 24/7 opera. Individual songs from the opera are available as mp3 files that can be downloaded or retrieved as a podcast. With Cellphonia, a potential worldwide group of users is provided with a means of unique social interaction that refers to a centuries old tradition, opera, in a new context that leverages the broadening wireless technological base in a simple, familiar, and accessible manner. In Cellphonia, the artist is both coder and composer, while the caller is both performer and audience.

http://cellphone.el.net/NIME/
http://cellphone.el.net/listen/

BIO

Steve Bull offers a portfolio of assets from his last seven years as founder of Cutlass, a company which specializes in mobile locative media and art with applications running on 02, Verizon Wireless, TELUS Mobility, and Orange. In 2006 his Hot-n-Cold was a NAVTEQ Lbs Challenge finalist, he launched his New-York Historical Society Slavery Tour on vodcast, podcast and VOIP, and the NY Times reviewed the premiere of his Cellphonia: San Jose, an opera at ISEA ZeroOne Festival. After completing NYU's Interactive Telecommunications Program, he worked as a senior information architect and prototype designer/developer for Interval Research. He also won many awards for his media productions both national and international and is a member of the Directors Guild of America.

China Gates
A Digital Art Weeks Mobile Music Project

Art Clay

ABSTRACT

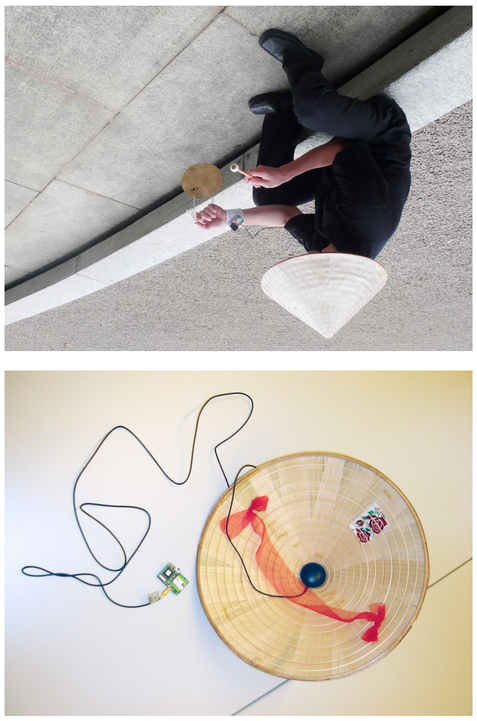
The work China Gates is technically based on possibilities of synchronizing a group of performers using the clock pulse emitted from GPS satellites. Aesthetically, China Gates is rooted in works for open public space and belongs to a genre of works, which celebrate the use of innovative mobile technologies to explore public space and public audience. The performance takes place in a limited city area such as a city square, a park and open courtyard.

A series of tuned gongs is used. The number of gongs is greater than the number of performers participating. Tuned to an Eastern musical scale, these gongs give the piece a touch of the orient on the horizontal, melodic side and a western type dissonance on the vertical, chord structure side. The gongs are circulated amongst the players by an exchange process so that an on going change in harmonies can be achieved.

Each of the players wanders through the performance space freely. A custom built GPS interface on the wrist registers the player's position and determines to geographical coordinates when to play the gong. By using a delay between the satellite clock pulse and the LED that indicates when to strike the gong, a harmolodic effect is obtained as the players gradually shift from a chordal to a melodic structure dependent on geographical coordinates. In general, each player tries to move when another is not, so that a "choreographic counterpoint" results that allows for a rhythmic-melodic coloring caused by the vertical to horizontal unfolding of the struck gong chord. The performance ends for each player at the return to the start point. The interface therefore acts as a "conductor", indicating when the gongs are to be hit and how the music as a whole will sound in the end.

BIO

Sound Artist Art Clay (born in New York, lives in Basel, Switzerland) has worked in Music, Video & performance. He is a specialist in the performance of self created works with the use of intermedia. Appearances at international festivals, on radio and television in Europe, USA and Japan. Extensive compositions for acoustic and electronic mediums in many genre including dance, performance and theater. Art Clay also directs the 'Digital Art Weeks' Program held yearly at the ETH in Zurich. Recently, his work has focused on large-scale performative music-theater works and public art spectacles using mobile devices. He has won awards for music composition, performance, and new media art. He teaches at various art institutes in Europe including the Zurich University of the Arts.



Composing the soundscape:
Re-engaging with place

Anthony Phillips

ABSTRACT

How does sound shape the everyday experience of our environment? Before audio technology and the now ubiquitous use of mobile devices that incorporate sound our natural or acoustic soundscape provided us with meaningful interaction. Sounds held both personal and collective meanings, articulating a sense of community, place and aesthetic value to the individual. Acoustic ecology has shown how soundscapes have changed over time, from the well defined acoustic profiles of the rural environment to the mechanical and media rich environments of the modern day city. In the city significant sounds are increasingly hidden in a homogeneous soundscape of mediated sound and urban noise in which meaningful interaction with the auditory environment is replaced by a 'tuning out'. Mobile audio technologies further perpetuate this sense of detachment through the creation of multiple spaces both virtual and physical that the user has to occupy and negotiate. These technologies encourage a type of distracted listening that I refer to as 'mobile mediated listening'.

Drawing on 20th century compositional practises and in particular soundscape composition and acousmatic music my research extends existing work on meaning and representation in musical composition. Within audiotory design there has been a preoccupation with 'sound as information' rather than sound as 'an aesthetic experience'. Music provides an alternative in which aesthetic response determines the personal significance of our experience. Going forward in my research two questions are key: what affect do different types of sounds have on the isignificance of our experience. Is it possible to categorize aesthetic response based on different types of sounds? The latter question raises an issue that I would like to discuss at the workshop i.e. methods of measuring aesthetic response to sound in contexts that are both transitory and public.

BIO

At the time of this research, Anthony Phillips was working as part of the Equator project at the Interact Lab, University of Sussex, Brighton, UK. Anthony is interested in an interdisciplinary approach to 'mediated space' with particular reference to coexistent interactions. Prior to starting his DPhil Anthony's background was in Music and Multimedia Systems.

BluetunA

Arianna Bassoli

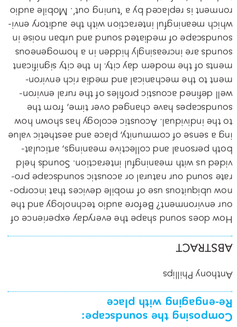
ABSTRACT

BluetunA is an application running on Bluetooth-enabled mobile phones that allows users to share information about their favourite music with others nearby. With BluetunA people first create a list of favourite artists or songs, which can be done manually or automatically based on the MP3s already uploaded on their mobile phone. Then they are able to see who else in proximity has similar taste in general, or they can search for people who share a common interest in a specific artist. This search can automatically be repeated periodically if users preselect a keyword search list, or custom searches can be made at any time a user likes. When a user encounters someone with similar taste, they are able to exchange messages with each other over Bluetooth. Further, BluetunA is integrated with Last.fm, allowing users to automatically download their Last.fm profile to the BluetunA system, and obtain additional music recommendations. To further enrich the BluetunA experience, people can interact with each other through their mobile phones while sitting in cafes by accessing BluetunA hotspots which provide a wider range of music sharing options. With BluetunA we have investigated the opportunity to create a lightweight application for existing and commonly used technologies (e.g. mobile phones and Bluetooth) able to provide an awareness of the surrounding population and a fun way to get music recommendations.

BIO

Arianna Bassoli holds an MSc in Communication Sciences from the University of Siena, Italy, where she specialized in mass media. She then worked as a research fellow at Media Lab Europe for three years, mainly focusing on the application side of mobile peer-to-peer and ad-hoc networks. She is currently a PhD candidate at the London School of Economics and Political Science, UK, in the Department of Information Systems and Innovation Group. She is interested in interaction design, urban computing, and the design of mobile proximity-based applications, technologies that support communication and data sharing among co-located peaople. Arianna is also a research assistant at the LSE, working on the EU-funded project BIONETS, which looks into the future of wireless networks.

http://www.karmanet-design.com/



From calling a cloud to finding the missing track: Artistic approaches to mobile music

Frauke Behrendt

ABSTRACT

This paper is challenging the common understanding of mobile music as 'ringtones and i-pods' by analyzing artistic approaches to it and by offering new categories to contextualize these projects in a move towards a taxonomy of mobile music. Eight artworks from the rapidly expanding field of Mobile Art will be described and set into context. Most projects do not label themselves as mobile music, but analysing these artworks as mobile music provides a fruitful context for discussing these works. "Sky Ear", "Track-The-Trackers", "BubL Space", "Telenono", "Schminky", "Simpletext", "Surface patterns" and "Urban tapestries" illustrate the variety of sounds in mobile music: spoken text messages, missing tracks that need to be identified on a mobile platform, the crackers and whistlers of the electromagnetic sphere, knocking sounds 'attached' to surveillance cameras, other peoples favourite songs fixed to a specific urban place – and on the far other end of possibilities: silence produced by a radiation-proof box or by jamming phone signals in close proximity.

The analyzed artworks are presented in two categories: The first part of this paper focuses on the social context of mobile music exploring new forms of audience participation and collaborative mobile music. In the second part the focus shifts to the technological context of mobile music by "Listening to the invisible". Overall, the artist offer a new and unexpected view of the urban space where peoples' movements and the collaborative soundtrack they choose or produce for their urban journeys represent the city in as much as physical buildings or the grid of the streets. Analysing these examples by focussing on the relationship of geographical, social and technological context of mobility might prove a helpful framework for understanding the artworks, a first move towards a taxonomy of mobile art and music.

BIO

Frauke Behrendt conducts research into the experience of urban space via mobile media; focussing on interactive art, music and sound projects that experiment with this experience. She is currently finalising her PhD (DAAD funded) at the Department of Media and Film Studies at the University of Sussex, (UK), is on the steering committee of the International Mobile Music Workshop and German delegate for the European Action on Sonic Interaction Design (SID). Her book "Handymusik. Klangkunst und 'mobile devices'" ("Mobile Phone Music. Sound Art and Mobile Devices") has been published in 2004. Frauke's research is published in English and German, and has been presented at various international conferences such as NIME and ISEA. She is a member of the "Centre for Material Digital Culture" and of Richard Sennett's "NYLON Culture and Society" Seminar.

Minimal Attention Navigation via Adapted Music

Rachael Hunt, Mark Apperley, Sally Jo Cunningham, Bill Rogers & Matt Jones

ABSTRACT

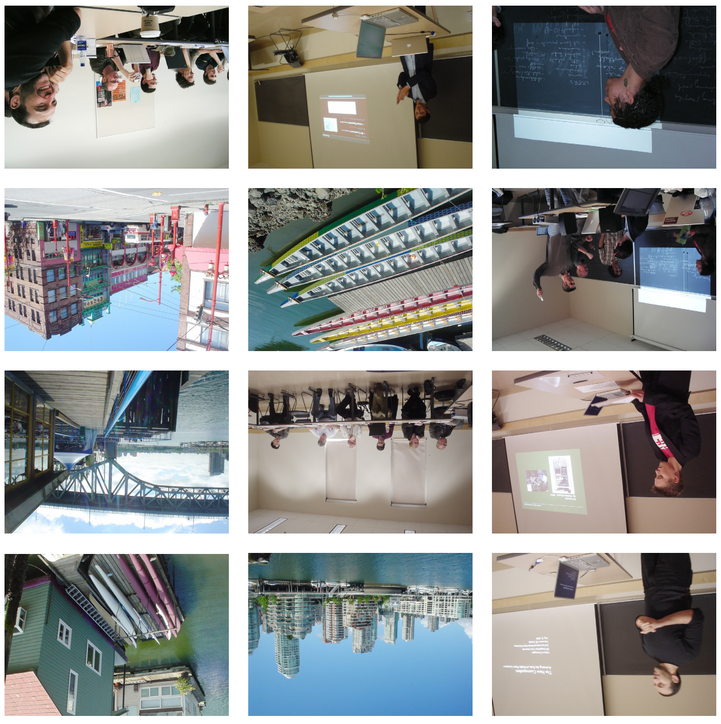
Navigating using subtle cues from the audio track you are listening to may make your journey as enjoyable as the destination. In this project, we are investigating enjoyable ways of providing pedestrians with navigation support, specifically by allowing them to navigate to music.

Many of the navigation aides available to pedestrians require their full attention; for example, to use a map you must stop and study it closely, reducing engagement with the surroundings. Walking with a guide is much better — you pay almost no attention to the task of navigation, but are still directed to your destination. Audio-based interfaces have some of these advantages; specifically, they leave the visual sense unimpaired.

Currently, systems have been developed using three audio approaches: spoken cues, audio icons (non-speech cues), and adapted stereo signals. Our work focuses on further investigating minimal attention audio user interfaces. There are a range of alternatives for adapting music. How much alteration (of favored music) will listeners allow? Does the type of navigation cue affect the user's mental load? Will this type of subtle navigation system be as effective as other more traditional navigation aides? What type of direction do users prefer, and which is the most efficient? Do the user's objectives alter the style of guidance that they require?
An initial experiment was carried out to measure the cognitive burden of different cue types. We compared speech cues, audio icons, and adapted stereo against walking with a friend. Users listened to a spoken audio track while navigating, engaging them and leaving navigation as a secondary (low attention) activity. Cognitive burden was measured by evaluating users' memory of the audio track, and through questionnaires. The next step is to further investigate adapted music navigation cues. When listening to a music track of choice, what types of cues are noticeable, and do they affect the listening experience?

BIO

Rachael Hunt works at the HCI Group at the University of Waikato, New Zealand. Rachael is investigating low cognitive weight navigation systems. Specifically, she is examining how auditory changes in music may be used to guide both tourists and locals to places of particular interest. The two main goals of this research are assessing whether music can be used for navigation, and whether this is a lightweight, fun way to navigate.



2ND MOBILE MUSIC WORKSHOP

Music Mood Wheel – Ear-based Interfaces for Mobile Music Devices

Andreja Andric, Pierre-Louis Xech

ABSTRACT

When we browse our music collection on any mobile device, we actually move inside a tree of textual options that refer to the musical metadata. We search music by title, author, genre, artist, year, etc. But what if we cannot recall the name of the song that exactly matches that particular melancholic mood we are in today? What if, additionally, we have wrong or incomplete metadata, which happens often in private music collections? With thousands of songs on our iPod or iPhone, music search becomes a real challenge. In addition, many everyday situations in which mobile music devices are used, for example driving a car, or working out, do not permit wasting too much time and attention on choosing music.

In our approach, we shift from the "tree of options" paradigm to a "search by ear" browsing experience, inspired by the frequency wheel on old-fashioned radios. A series of prototypes, based on many low level features automatically extracted from the audio, was implemented and tested outdoors with a group of 40 participants. The interfaces performed well compared to two "off the shelf" references: Apple iPod and Samsung Portable Media Center.

Our first prototype was without display and the song selection was controlled by a trackball. The final prototype was developed on Windows Mobile 5.0 powered Smartphone, and exhibited a 2D map of songs.

In the workshop we exposed the lessons learned from our first experimental study and confronted our "search by ear only" design pattern and related research issues with other participant experiences and contributions.

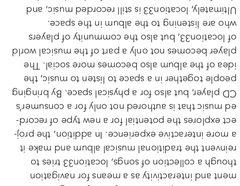
The Music Mood Wheel project evolved from mid 2005 until the end of 2006. It was a collaboration project between the State University of Milan, Computer Science and Communications department, and Microsoft Research Cambridge, External Research Office, Intelligent Environments Group.

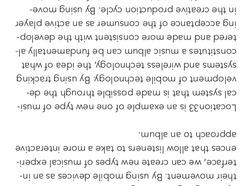
BIO

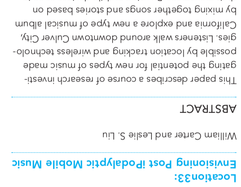
Andreja Andric
Born in Zajecar, Serbia in 1973. He obtained a B.Sc in Electrical Engineering and M.Sc. in AI applications in education from the School of Electrical Engineering, Belgrade University, Serbia (former Yugoslavia). By the end of 2002 he won a PhD scholarship from Milan State University in Italy, and subsequently he moved there. He obtained a PhD in computer music applications in 2006 and continued to work as a research assistant on the same University. His research project Music Mood Wheel has won a research grant from Microsoft Research Cambridge, on their open concourse "Create, Play and Learn" for research in computer applications with social and cultural value. From 2007 onwards, he is employed as software engineer in Parvis, where he works on computer-vision systems for automatic inspection of banknote print and security features.

His research interests chiefly lie with interaction design, user evaluation methodologies for multimedia applications, and psychology of music preferences. Lives in Milan, Italy.

Pierre-Louis Xech
Joined Microsoft in 1997 as a Project Management Consultant, and moved to Microsoft Research Cambridge in 2002 as a Research Program Manager in the External Research Office group. Since then, he has been involved in various collaborative and interdisciplinary research projects with universities across Europe in the area of Ambient Intelligence. In 2007 he moved to Microsoft France in Paris where he heads the research partnerships programme. Pierre-Louis Xech has a special interest in investigating the ways in which the research in Intelligent Environments can stimulate the human intelligence in unleashing one's own creative potential and skills. In particular, he is interested in exploring how the recent advances in computing and audio, ubiquitous computing, vision and machine learning and mobile technology can provide the basic bricks and blocks for building the new "sound machines" of our everyday life.







Location33: Envisioning Post iPodalyptic Mobile Music

William Carter and Leslie S. Liu

ABSTRACT

This paper describes a course of research investigating the potential for new types of music made possible by location tracking and wireless technologies. Listeners walk around downtown Culver City, California and explore a new type of musical album by mixing together songs and stories based on their movement. By using mobile devices as an interface, we can create new types of musical experiences that allow listeners to take a more interactive approach to an album.

Location33 is an example of one new type of musical system that is made possible through the development of mobile technology. By using tracking systems and wireless technology, the idea of what constitutes a music album can be fundamentally altered and made more consistent with the developing acceptance of the consumer as an active player in the creative production cycle. By using movement and interactivity as a means for navigation through a collection of songs, location33 tries to reinvent the traditional musical album and make it a more interactive experience. In addition, the project explores the potential for a new type of recorded music that is authored not only for a consumer's CD player, but also for a physical space. By bringing people together in a space to listen to music, the idea of the album also becomes more social. The player becomes not only a part of the musical world of location33, but also the community of players who are listening to the album in the space.
Ultimately, location33 is still recorded music, and therefore the creation process for the player differs from the real-time compositional quality of research projects such as Sonic City where users develop literally new music as they interact with an environment. However, location33 approaches the idea of music production from the emerging sampling and DJ culture, respecting the idea that assembling discrete musical fragments can produce novel and engaging music.

BIO

At the time of developing Location33, William Carter was part of the „Interactive Media Division" at the School of Cinema Television, University of Southern California. Leslie S. Liu was part of the „Integrated Media Systems Center" at the University of Southern California.

FIGURES

1 – Narrator Nodes in Space
2 – The GPS PDA Explorer
3 – The Map
4 – a Mobile Code Embedded in Physical space
5 – A Web Checklist for mp3 Artifacts
6 – A Song Authoring Map
7 – PDA Explorer Components

Mobile User-Interface For Music

Takuya Yamauchi,Toru Iwatake

ABSTRACT

The present study considers the interface design for music and graphical content in ubiquitous space. Herein, we present a mobile user-interface system for music and visual collaboration in a personal area network (PAN). The system, which is connected to a local area network (LAN; IEEE802.11b), is composed of an agent on a mobile device controller (PDA), a sound engine, and a graphical language environment. We considered the middleware agent that processes the context awareness in media art and game development. The prototype system "Sound Pad" demonstrated here is a musical instrument and the graphical controller of a mobile user-interface.

Ubiquitous space consists of numerous micro machines and host computers that are connected by sensors and other devices to electric household appliances and wearable computers. The ubiquitous space in a PAN contains context information from other agents. Thus, the user-interface of this context data must present information without confusing the user. A considerable number of papers have been published regarding this technology. "Sound Pad" is a handheld controller for producing score files and graphical content. The user is able to move through ubiquitous space while controlling the Sound Pad and enjoying the artwork made by media artists.
We propose here the Sound Pad mobile device user-interface as a mobile device (PDA) interface, a sound instrument and a visual interface. The Sound Pad user is able to manipulate sounds using the sound engine (Pure Data) as well as the visual contents of the graphical language (Processing) and use sound composers and graphic designers in ubiquitous space.
Composers and artists are able to produce sound designs by creating score files in Pure Data. Interface designers can also develop new user-interfaces using this mobile interface. In addition, graphic designers can produce graphic content in Processing. The system enables the collaboration of these contents and makes it possible to design context for networked sensors and agents in ubiquitous space.

BIO

Takuya Yamauchi is part of the "Media Design Program" at the "Graduate School of Media and Governance" at Keio University SFC, Japan.

Toru Iwatake is Professor at the "Media Design Program" at the "Graduate School of Media and Governance" at Keio University SFC, Japan.

2005 INTERACTIVE POSTER 105

Mobile User-Interface For Music

Takuya Yamauchi,Toru Iwatake

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Toru Iwatake is Professor at the "Media Design Program" at the "Graduate School of Media and Governance" at Keio University SFC, Japan.

Solarcoustics:CONNECT

Morgan Barnard

ABSTRACT

Solarcoustics:CONNECT is a solar-powered personal electronic device. CONNECT maps light energy to audio oscillations using a solar panel and basic audio circuitry. CONNECT is responsive to light either from the sun, or artificial light sources. By utilizing photovoltaic energy, CONNECT needs no batteries to operate. It harvests and stores light energy from the environment and converts the energy to audio oscillations. By using a large capacitor to store light energy as electricity, CONNECT can be charged over time store the harvested energy.

The user of Soalracuostics:CONNECT can create changes in the audio oscillations by altering the position of the solar panel to the sun, or by using their hands to control the amount of light hitting the solar panel. As the amount of light on the panel changes, the corresponding audio oscillations change in real time. The amount of light is in a proportional relationship to the voltage being generated, as more voltage is is applied to the circuit the oscillations reduces in frequency. This process of manipulation the amount of light hitting the panel creates a gestural mode of sonic exploration. Rhythm and change in pitch can be controlled by performing repetitive movements with CONNECT in and out of light and shadow. By connecting several devices together, analog collaborative networked audio environments are created. CONNECT gives the user a new awareness of their surroundings and allows them to "jam" with their environment.

BIO

EDUCATION

Interactive Telecommunications Program NYU, New York, NY - MPS, 2005
California College of the Arts, Oakland, CA - Film/Video/Performance BFA, 1996

SHOWS AND AWARDS

2007
Wellington Urban Design Week. IntensCity. INSite: Sentimental Plastics

2005
Awarded the Production Fellowship at Eyebeam NYC. 2005
December-Still Here in the Bright and Shining group show at Safe-T Gallery. DUMBO NYC
November-December The Queensbridge Wind Power Project in Mind in Matter
Open Source Art. Champaign, IL
October Disappear/Reappear in Cinematheque's Promiscuous Cinema series,
Evidence is Everywhere. San Francisco, CA
June-August The Queensbridge Wind Power Project at The Wavehill Public Garden
and Cultural Center. Bronx, NY
April-May The Queensbridge Wind Power Project at Chicago Contemporary and Classic: Redefining the 21st Century Art Fair at Navy Pier. Chicago, IL
MFA Thesis Exhibition, ITP Tisch School of the Arts NYU

2004
September The Queensbridge Wind Power Project in ASCI's Digital 2004, TOMORROW, The New York Hall of Science, New York, NY
Ask The Robot: Floatpotion. Premiere live audio and video performance.

2003
Sonnet Subterfuge. Networked performance, NYC, Amsterdam.

CURRENT POSITION

Lecturer: Victoria University of Wellington School of Design
Digital Media Design
+Coordinating Student project for the Digital Broadcasting Conference at Te Papa

http://morganbarnard.com

106 2005 INTERACTIVE POSTER

Solarcoustics:CONNECT

Morgan Barnard

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http://morganbarnard.com

tunA

Arianna Bassoli

ABSTRACT

At the Mobile Music Workshop I have presented a series of projects exploring the theme of mobile music sharing. The first project, tunA, is an application that allows users to share their music locally through handheld devices. Users can "tune in" to other nearby tunA music players and experience, simultaneously, what other people are listening to. Developed on PDAs and connected via WiFi in ad-hoc mode, the application displays a list of people in proximity who are using tunA, gives access to their profiles and playlist information, and enables synchronized peer-to-peer audio streaming. The second project, an extension of this previous work, BluetunA, is an application for Bluetooth-enabled mobile phones that allows users to connect to other BluetunA users in range and share music recommendations. With this application, we sought to use technologies that already have a mass penetration (Bluetooth enables mobile phones) to develop a lightweight version of tunA, able to make users aware of the musical interests of people nearby and to thereby foster a subtle form of proximal social interaction. The third project, *undersound*, is an example of situated design, attempting to address three different aspects of life in the London Underground: situated understanding of the space, localized interpersonal interactions, and emergent large-scale flows which people constitute and participate in. In order to achieve a unique way by which people can use music to interact with one another and the space around them, *undersound* uses three distinct, but deeply interrelated, technological pieces; Bluetooth transfer points located in each Underground station are to be used for uploading and downloading music in the *undersound* network, while Bluetooth-enabled mobile phones are meant to be used for storing, playback and exchange of music and finally situated visualizations providing a station-specific overview of activity within the *undersound* network are to be located at each station.

BIO

Arianna Bassoli holds an MSc in Communication Sciences from the University of Siena, Italy, where she specialized in mass media. She then worked as a research fellow at Media Lab Europe for three years, mainly focusing on the application side of mobile peer-to-peer and ad-hoc networks. She is currently a PhD candidate at the London School of Economics and Political Science, UK, in the Department of Information Systems and Innovation Group. She is interested in interaction design, urban computing, and the design of mobile proximity-based applications, technologies that support communication and data sharing among co-located people. Arianna is also a research assistant at the LSE, working on the EU-funded project BIONETS, which looks into the future of wireless networks.

Walkman Busting

Gideon D'Arcangelo

ABSTRACT

"Walkman Busting" is a radio documentary series created by Gideon D'Arcangelo. The idea of the program is to puncture the private bubble of the personal listening device and engage listeners in a social experience. Interviews are conducted with people who respond to the question: "Can I listen to what you are listening to?"

A surprisingly high percentage of people asked agree to be interviewed. Music is essentially social, and when we listen to music, even in headphones, it seems we are predisposed to social interaction. For millennia, music has been by its nature a communal experience, a way of gluing people together in a shared moment. The advent of portable private listening devices has interrupted the communal function of music in ways we are just beginning to comprehend. Walkman Busting re-wires the social function of music - hijacking a one-way communication and making it two-way again.

The portable listening device enables people of diverse cultural backgrounds to coexist in tight quarters. Modern people go about in public, each tuned into their own cultural frequency, each connecting to a group in another place. They share the same space but are not really being in the same space together. Walkman Busting uncovers the cultural juxtapositions that are hidden beneath the surface - in the headphones and earbuds of the listening public. The CD played at the first MMW contained the following four sample episodes:

1) AIRDATE: November 23, 2002 - Union Square, New York City
These busts include a man deeply involved in his "Disney Greatest Hits" compilations who is especially adept at interpreting the lyrics from "The Little Mermaid." Another self-described "dinosaur" listens to the likes of Bing Crosby and the Andrew Sisters. He calls Rosemary Clooney's "Mambo Italiano" rock and roll. Lastly, a man into Tony, Tone, Toni and Earth, Wind and Fire reminisces about the days when the city streets were filled with the sounds of boomboxes.

2) AIRDATE: February 22, 2003 - Metro North Hudson River commuter train
Busts on the train include Sister with her nephew and niece, who were returning from Sing-Sing Prison where they visited Sister's son in jail. She is listening to Jaheim's "Keep your H-E-A-D U-P." Also, Elijah, a college radio DJ listening to "emo" punk, who tells tales of the mosh pit. Finally, a man who has just unleashed his 70s LP collection from its slumber and transferred it to his MP3 player contends with all the memories.

3) AIRDATE: October 4, 2003 - Union Square, New York City
In this episode, we first encounter a young woman listening to the one-stringed berimbao of capoeira music. She is an avid practitioner of the Brazilian martial art dance. Fifty feet away, we meet a couple of rocker girls in high-school who complain about the "weird cult-like music" of the Brazilian capoeristas. They revere Korn and System of a Down. We also here from a bonafide groupie of Frank Zappa, who introduced him to the found sound of John Cage and Edgar Varese while in a dressing room on the road.

4) AIRDATE: January 9, 2004 - Union Square, New York City
These busts include some goth-rave kids still out from the night before, still in party gear. Morgana interprets the tough and bleak lyrics of R&B singer Jo, while the ever-upbeat "Seven" hips us to some harsh underground music that hasn't "surfaced" yet. Fifty feet away from this scene, a jazz musician born in the same month and city as altoist Stan Getz pays tribute to his household god.

BIO

Gideon D'Arcangelo is an interactive media designer with a special focus on the impact of new technology on musical experience. He currently produces the Weekend America series, "Listening In" (http://listeningin.org), which explores the changing ways people use recorded music in their day to day lives. He created the "Walkman Busting" radio documentary series on Public Radio International's "The Next Big Thing" which ran from 2002-2005. Since the first "New Interfaces for Musical Expression" workshop in 2001, he has remained an active member of the NIME community. He is Director of Creative Strategy at ESI Design and teaches at the Interactive Telecommunications Program in the Tisch School of the Arts at New York University.

TGarden: Wearable Instruments, Embodied Interaction and Augmented Physicality

Chris Salter, Joel Ryan

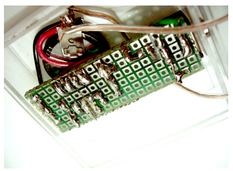
ABSTRACT

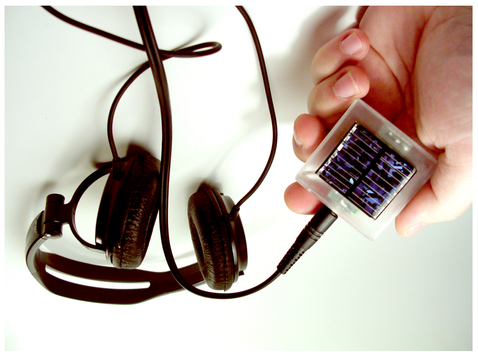
We report on work done for TGarden, an experimental responsive media environment where small groups of participants from the general public can control and play with real time generated sound and image through improvised movement and gesture. Development on Phase1 of the project took place during 2000-2001 with support from the Daniel Langlois Foundation and was shown as a work in progress at the Ars Electronica Festival and at V2/Las Palmas in Rotterdam for the European Cultural Capital of the Year in the fall of 2001. The focus of this presentation lies on issues arising in the process of designing a physically responsive mobile musical system activated by the motion and gestures of non-experts, where no predetermined, a priori representation of gesture can be said to exist. While so-called "audience participation" installations are beginning to take these issues into account, there has still been little work to date, at either the conceptual or technical- implementation levels on how to build a responsive system that is physically engaging and learnable within a short period of time while being musically rich and coherent for the casual, non-expert participant.

While literature in the field of gesture-activated musical interaction is well established and, most of this work has focused on systems designed for trained and expert performers, dancers and musicians, where issues of musical (and movement) nuance, control and expression are assumed from the start. Furthermore, much of this literature assumes traditional performer/spectator relationships, where the behavior of an interactive system is experienced passively by a viewer/listener at a distance. The work described from TGarden focuses less on the specifics of the hardware and software layers in but rather suggests a novel approach to the total design of a responsive musical system. This system is architected to create a coherent and felt resonance between multiple layers: a participants improvised movement, sensor input, software and the resulting musical response.

BIO

Christopher Salter received his PhD in the areas of theater and computer-generated sound at Stanford University. He has been visiting professor in music, graduate studies and digital media at Brown University and the Rhode Island School of Design (RISD) and is currently Assistant Professor in the Department of Design and Computation Arts at Concordia University where he also is a researcher in the Interactive Performance and Sound axis of the Hexagram Institute for Research/Creation in the Media Arts. His research and artistic practice investigates the role of real time sound, image and technologies of interaction within the context of responsive environments and new forms of theatrical performance and he is widely acknowledged as one of the experts in this growing field. He was awarded the Fulbright and Alexander von Humboldt Chancellor grants for research/work in Germany between 1993-1995. After collaborating with Peter Sellars and William Forsythe/Ballett Frankfurt, he co-founded the art and research organization Sponge. Salter's work has been shown internationally at venues such as Ars Electronica (Linz), Venice Biennale (Architecture), Villette Numerique (Paris), Transmediale (Berlin), EXIT Festival (Maison des Arts, Creteil-Paris), Place des Arts (Montreal), Electra (Montreal), Shanghai Dance Festival (Shanghai), Yerba Buena Center for the Arts (San Francisco), the Banff Center (Banff), Dance Theater Workshop (New York), V2 (Rotterdam), SIGGRAPH 2001 (New Orleans), Mediaterra (Athens) and the Experimentum (San Francisco), and has been featured in publications such as The New York Times, El and Leonardo magazines. He is currently completing Enhanced Technology and the Transformation of Performance to be published by MIT Press in 2009.





SONIC CITY

Lalya Gaye

ABSTRACT

Nocturnal dub ambiances, pollution as echo chambers, drumming traffic noises, singing street lights… Scratching tramway bells by approaching walls, grabbing metallic railing as guitar strings, turning corners towards a chorus... With Sonic City, the urban environment became a musical interface. At the crossroad between urban exploration and experimental music making, Sonic City enabled its user to create live electronic music by simply walking through a city and interacting with their everyday urban environments.

Sonic City was a wearable system that gathered sensor-based information about the user's actions and her environment, and mapped it to the sound processing of live urban sounds collected by a microphone. The resulting music was output through headphones in real time and in context, as you were walking, which created a tight link between the user and the city, and emphasised their interplay.

Sonic City was tested by a variety of people in their own everyday environments. When wearing this system, they engaged into a musical duet with the city: urban atmospheres, random encounters and everyday activities all participated in creating new live music. Sonic City turned paths into musical compositions and mobility through the shifting contexts of the city into a large-scale musical gesture. By presenting this project, this talk showed how mobile and ubiquitous computing can enable the emergence of new forms of music that interface with everyday settings and practices. It meant to illustrate the potential and opportunities of mobile music making, in terms of creative act embedded in the everyday.

The Sonic City project was realised in 2002-04, as a collaboration between the Viktoria Institute and the Interactive Institute. More information are available at http://www.viktoria.se/fal/projects/soniccity/

BIO

Lalya Gaye is a Swedish-Senegalese HCI researcher based in Göteborg, Sweden, who works in multidisciplinary projects at the convergence of art, technology, and design. Her prototyping-based research explores potentials of ubiquitous computing for everyday life aesthetic activities, and focuses in particular on locative media and mobile music technology. She also works in various art projects centred on urban public space and audio experimentations, as well as organises sound-oriented workshops and small festivals. She received a B.Sc. in Physics at the University of Geneva, a M.Sc.Eng. in Electroacoustics at KTH in Stockholm, worked several years at the Future Applications Lab, Viktoria Institute, and is currently finishing a Ph.D. thesis in Applied Information Technology at the University of Göteborg. Besides being a permanent member of the steering committee for the international workshop series on Mobile Music Technology, she is a member of the PLAN network for pervasive and locative arts and is actively involved in the NIME research community. She has presented her work at various international conferences, festivals and journals and regularly gives talks, workshops and lectures at universities, institutions and events worldwide.

1ST MOBILE MUSIC WORKSHOP

Mobile phone music. Sound Art and 'mobile devices'

Frauke Behrendt

ABSTRACT

There has been quite a lot of research on the mobile phone recently but the visual paradigm has been all dominant once again: there has been no sound-based research. Which sound-based effect does this device have on every day life, on the urban soundscape, the personal auditory lifestyle? And how do artists and musicians use this new medium in their works of sound art?

For a research project in 2002/2003, I found more than 100 artistic projects using the mobile phone – but only about a tenth of these projects worked with sound or music. From these, I chose four examples for a more detailed analysis: "Dialtones. A Telesymphony" by Golan Levin Levin, "Wählt die Signale!" ("Dial the Signals!", 2003) by the artist group Ligna, "Kadoum" by Wagenaar (2000), "Text-FM" (2001) by Fuller and Harwood, and "Nanoloop i-mode" (2002) by Wittchow. I focus on the sound of each project, and also ask which social changes within society are reflected in the pieces. With the increasing popularity of the mobile phone, private conversations (calls) are more and more made in a public environment, for example. This indicates the blurring of the boundaries between public and private spheres. Levin's "Telesymphony" plays with this social change, as private ringtones are orchestrated in a public concert hall. In addition to the social change, I also discuss the technology of the mobile phone itself, with its four key features: it is mobile, always switched on, potentially always connected and digital. The spreading of the mobile phone changes the production and distribution of music, from the desktop to the streets. Finally, mobile phone music is discussed as Sound Art, by looking at aspects such as intermediality, interactivity and space; considering how mobile phone music is linking and superimposing real and virtual spaces in new ways.

BIO

Frauke Behrendt conducts research into the experience of urban space via mobile media; focussing on interactive art, music and sound projects that experiment with this experience. She is currently finalising her PhD (DAAD funded) at the Department of Media and Film Studies at the University of Sussex, (UK), is on the steering committee of the International Mobile Music Workshop and German delegate for the European Action on Sonic Interaction Design (SID). Her book "Handymusik. Klangkunst und 'mobile devices'" ("Mobile Phone Music. Sound Art and Mobile Devices") has been published in 2004. Frauke's research is published in English and German, and has been presented at various international conferences such as NIME and ISEA. She is a member of the "Centre for Material Digital Culture" and of Richard Sennett's "NYLON Culture and Society" Seminar.

FIGURE

"Wählt die Signale!" ("Dial the Signals!") by Ligna, at Hamburger Kunsthalle, 2003.

The international steering committee and this years's local organizers would like to thank all contributors to and participants of this edition of the Mobile Music Workshop and past NMWs. We extend our appreciation to the reviewers and those who have helped behind the scenes, especially the people who have been involved with the event over the years. We express our gratitude to the institutions that have supported and hosted the workshop, namely the Viktoria institute, NIME'05, University of Sussex, Futuresonic, STEIM, Waag and the Unversity of Applied Arts Vienna.

Graphic design by Bernhard Faiss. http://www.isebuki.com/

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Malleable Mobile Music

Atau Tanaka

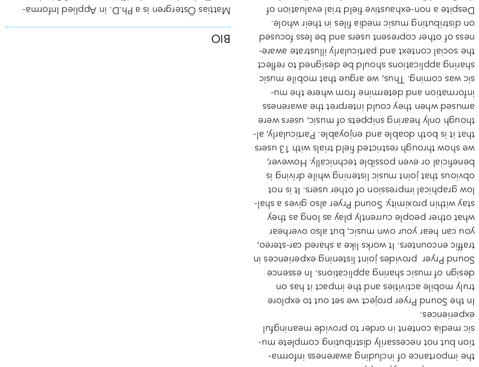
ABSTRACT

Malleable Mobile Music takes mobility as input to an audio re-mix engine enabling listeners to experience familiar music in new ways. This transforms music from a fixed entertainment medium into a malleable content form that enables shared experiences.

A group of listeners distributed about town listen collectively to well known pop song by Bjork. Each listener selects a part in the music to be his *musical avatar*. One person might become the drums, another the synths, another the voice of Bjork. Location data drives a continuing, evolving live re-mix – as people become closer, their parts are heard more clearly. This creates a *social re-mix*.

Users interact with the music through subconscious actions. Rather asking the consumer to become creator, the act of listening is captured by a responsive system. A sensor subsystem on the mobile terminal captures the user's reaction while listening. This includes intensity of gripping the device, as well as tapping a rhythm in time with the music. A localization algorithm simulates geographic data as the listeners move about in urban space. These two types of data, *personal bodily gesture* and *community geographic distribution*, drive the evolution of a familiar song.

The music engine takes data from the listener group and creates a single live audio stream. Time domain re-sequencing allows structural reorganization of the music from the high level of song form to the low level of rhythm and melody. Frequency domain signal processing allows time stretching at pitch, allowing the song tempo to follow the tempo of tapped rhythm. The source is a familiar hit song, that is no longer a fixed length and structure, but can be molded to fit the length of a train ride, or can be shaped to respond to the movement of friends about town.



BIO

Atau Tanaka holds degrees from Harvard University, and Stanford University's CCRMA. He came to Europe in 1992, first to IRCAM, then to be Artistic Ambassador for Apple France. From 1997-2001 he taught Media Art at Keio University and Chukyo University. In 2001, he became researcher at Sony CSL Paris. His work has been shown internationally and has been awarded by Ars Electronica, Fondation Langlois, and Fraunhofer Institute. Since 2007 he is Chair of Digital Media at Culture Lab Newcastle.

To Listen to China for One Month Without Speaking

Davide Di Saro, Kristy Trinier

ABSTRACT

The psychoacoustics performance of the artists Kristy Trinier and Davide Di Saro', consisting of aforementioned performers listening for one entire month of the sonic environment in China, without speaking, as to perceive the surrounding sound without the sonic pollution of the voice; to advocate the use of conceptual immaterial processing systems.

The technological innovations in the field of wearable sound and new acoustic digital networks, generated in the last 20 years, have developed new ways to understand and interpret the sonic environment based on the contribution of external artificial tools. As reaction, it is proposed with the performance of listening without speaking, to re-examine the definitions of technology: [Greek *tekhnologi, teks + -logi, -logy: systematic treatment of an art or craft : tekhn, skill; Logos, the word or form which expresses a thought, also, the thought.*][1], within its original roots, to systematically process using skills for which would form a thought, and address the concept of the thought itself.

To listen without speaking permits for the absorption of noise in an objective and pure form of natural sound dynamics mediated by psychoacoustics. The ear is a form of technology that mediates the flow of sound waves into nerve impulses which are translated into thoughts of sound: "while other people hear a person's voice carried through vibrations in the air, the person speaking also hears their own voice as it is conducted from the throat and mouth through bone to the inner regions of the ear. Thus, the voice in its production in various regions of the body is propelled through the body, its resonance is sensed intracranially. A fuller sense of presence is experienced as the body becomes attached to thought as much as the generation of speech is attached to thought."[2]

In a temporal context, the performance allowed one to direct the process of listening to long-term sound sources uninterrupted by producing a mind status whereby the combining or focused isolation of a natural sound stimulus was achieved.

The method for systematically treating the listening of noise as art, was to select one type of noise, that of environmental noise, and eliminate another type of noise, that of the voice. By eradicating noise of the voice, [composition], resulted in the byproduct of participants using alternative methods of communication, namely that of writing text to those who wished to engage in conversation, and also gesture, eye contact, and other non-verbal types of communication. The primary use of written speech for social purposes did not interrupt the processing of sound information.

The traditional perspective of sound processing technological devices is that of externally artificial tools, which allow for the duplication, repetition, and alteration of specific sounds. The composition of Davide Di Saro and Kristy Trinier was specific only to themselves and therefore original in its inability to be extracted, copied, or replicated for multiple use, and currently exists only in residual documentation of the concept. The sounds heard by the participants remain fixed in the original context of time and space domain in which they were composed.

[1] Longman Dictionary of Contemporary English.
[2] Kahn, Douglas. Noise, Water, Meat. Page 7.

The Intelligent Street

Henrik Lörstad, Mark d'Inverno, John Eacott

ABSTRACT

The Intelligent Street is a music installation that is able to respond intelligently to the collective requests of users interacting together. The performance it creates is largely influenced by the collective set of text commands from users' mobile phones. In this way, users in shared environments, subjugated for so long to uncontrollable and often undesired 'muzak', can now directly influence their sonic environment and collectively create the aural soundscape that they desire. We see our project as enabling inhabitants of any given space from passive consumers to active creators, and anticipate it has significant commercial, social and educational potential.

The use of music, or muzak, in public places is extremely common. However, the individual within that space has no control over the performance of that music, and it can often become intrusive and unwelcome. In our work we are interested in building interactive and responsive sound installations, where the performance results directly from the interaction of the users within a given space. This project, known as the Intelligent Street, has been developed collaboratively in Sweden and the UK. The mobile phone has been selected as the controlling medium for this project because of its widespread use as a tool for communicating today, available to practically everyone. By making use of this easily accessible device we offer almost every passerby the opportunity to actively engage in affecting the sonic environment. Intelligent Street seeks to explore new possibilities and unexpected applications for the mobile phone. It is a project in which we wish to investigate alternate ways of composing music for non-linear media and attracting participation in a creative process through interaction. Another ambition we had was to demonstrate the social need for aural as well as visual stimulation within a well designed environment that could impact on future architectural designs.

BIO

Henrik Lörstad is a composer. When he developed "The Intelligent Street" with Mark d'Inverno and John Eacott, he worked at the "Sonic Studio Interactive Institute" in Piteå, Sweden. The Sonic Studio is "Interactive Institute's" research group for sound and music in digital media. The research focuses on the intersections where sound and music meet narrative, gaming and interactivity.

Sound Flyer: truly mobile joint music listening

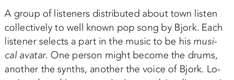
Mattias Östergren, Oskar Juhlin

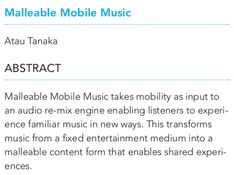
ABSTRACT

Following the widespread adoption of music media sharing applications for the Internet a growing number of research projects have explored sharing in a mobile context. Insofar these projects have mainly addressed face-to-face copresence situations. The Sound Flyer prototype, on the other hand, is designed to provide joint music listening experiences among drivers in traffic. Through field trials with a prototype application we have learned the importance of including awareness information but not necessarily distributing complete music media content in order to provide meaningful experiences.

In the Sound Flyer project we set out to explore truly mobile activities and the impact it has on design of music sharing applications. In essence Sound Flyer provides joint listening experiences in traffic encounters. It works like a shared car-stereo, you can hear your own music, but also overhear what other people currently play as long as they stay within proximity. Sound Flyer also gives a shallow graphical impression of other users. It is not obvious that joint music listening while driving is beneficial or even possible technically. However, we show through restricted field trials with 13 users that it is both doable and enjoyable. Particularly although only hearing snippets of music, users were amused when they could interpret the awareness information and determine from where the music was coming. Thus, we argue that mobile music sharing applications should be designed to reflect the social context and particularly illustrate awareness of other copresent users and be less focused on distributing music media files in their whole.

Despite a non-exhaustive field trial evaluation of the Sound Flyer prototype we have collected convincing evidence that joint music listening in traffic is an interesting and promising application of mobile music sharing technology. Particularly, we argue that music sharing has the potential of being more than the mere exchange of complete music media content. Sharing snippets of content in conjunction with awareness of co-located users is and enjoyable experience in its own right.





BIO

Mattias Östergren is a Ph.D. in Applied Information Technology, at the IT-University of Göteborg. Mattias holds a M. Sc. in computer Science from Uppsala University, Sweden. Mattias research interest lies in applications of mobile wireless ad hoc networking. He has mainly been working with programming the Tocsman, Sound Flyer prototypes. Mattias has also been involved in various other projects such as Placemenno, Backseat gaming and Road Rager. Currently he is woking with RoadTalk.