Ubiquitous Music: How Are Sharing, Copyright, and Really Cool Technology Changing the Roles of the Artist and the Audience?

Moderators:
Lars Erik Holmquist (Viktoria Institute)
Atau Tanaka (Sony CSL Paris)

Panelists:
Akseli Anttila (Nokia Corporation)
Arianna Bassoli (London School of Economics and Political Sciences)
Gideon D'Arcangelo (New York University)
Lalya Gaye (Viktoria Institute, Future Application Lab)

Overview

Since the 1970s, when the Walkman liberated music, we've moved on to iPods and mobile phones, which define contemporary social music experiences. How will we listen to music tomorrow? Because music is often a technological harbinger (digital representation, workstation editing, and optical storage came to sound before its media counterparts), this panel looks beyond current debates on copyright and presents new forms of music creation, listening, and sharing. It sheds light on ubiquitous content and social-interaction models afforded by mobile technologies.

Panelists from all segments of this nascent industry discuss current and future systems; the technical, artistic, and legal ramifications of sharing; new paradigms; and the roles of artists and listeners in the creative process.

Position Statement: Lars Erik Holmquist

The mobile music revolution has just begun – new technology is around the corner that will make your iPod seem as quaint as an old travel gramophone! The next generation of mobile devices will come with wireless local area networking and internet connectivity; this is already evident in the new generation of handheld game consoles such as Nintendo DS and Playstation Portable. You will soon be able to share your musical world directly with people around you – which will be much more exciting than the anonymous, barely legal file-swapping that currently happens on stationary PCs. Being mobile means being in a shared context with other people, and these new listening devices will let you connect in completely new ways. My research group, the Future Applications Lab, is already building and testing prototypes that explore how we will listen to and interact with the music of tomorrow.

Biographic Sketch: Lars Erik Holmquist

Lars Erik Holmquist is leader of the Future Applications Lab at the Viktoria Institute in Goteborg, Sweden. He is one of the founders of the emerging ubiquitous music research community and also has a long-running engagement in the fields of ubiquitous computing and interaction technology. He organized the first International Workshop on Mobile Music Technology in Gothenburg, Sweden, in June 2004, and co-organized the second workshop in Vancouver, BC in May 2005. He was general chair of UbiComp 2002, the major academic conference on ubiquitous computing, and demonstration chair for UbiComp 2004. He has presented work on human-computer interaction and information visualization at conferences such as CHI, UIST, InfoVis and Interact. SIGGRAPH presentations include four emerging technologies exhibitions, a panel on mobile entertainment, and several sketches. He is an associate professor at the Gothenburg IT University and associate editor of Springer's Journal of Personal and Ubiquitous Computing.

For more information, see:
Future Applications Lab, Viktoria Institute
http://www.viktoria.se/fal/

Position Statement: Atau Tanaka

Mobile music is more than just about ringtones, it's about new forms of media content authored specifically for mobility. Malleable Mobile Music is a prototyped concept that applies this vision of future music formats. It goes beyond simple file sharing – it takes the social dynamic generated by chat rooms and P2P environments as inputs to a creative content generation engine. Friends log in, find each other, and listen to a common musical stream over wireless networks. Actions and gestures on their personal music players are captured and affect the evolution of the music. Musical Avatars use parts in the music to establish identity. As a friend gets closer, we might not see them, but we hear them coming up in the mix. Urban mobility and dynamic media delivery create the "Social Remix."

The social computing approach to mobile media creates the architecture for a participative, context aware music system. Communities of listeners enter a Shared Musical Experience. Music is no longer a commodity, it becomes, once again, a dynamic, live cultural form.

Turning these visions into reality means looking at the whole value chain, from authoring, to delivery, to new license schemes. Artists will make their titles available in modular format to be played on the Malleable Music Engine. Dynamic streaming creates synchronized shared listening. Users can purchase Musical Avatars as easily as they do ringtones, but instead of buying a throwaway, they access a module that becomes part of a rich musical experience.

The system points out avenues in Mobile Social Music Software (MoSoMuSo) for 3G mobile phone networks. Participative generative contents are suited for licensing under the Creative Commons. The Malleable engine is currently being deployed in a European research initiative on Pervasive Gaming. Mobile music serves as a pilot for future mobile entertainment services.

Biographic Sketch: Atau Tanaka

Atau Tanaka is a composer and researcher spanning cultures and encompassing domains of artistic expression, scientific research, and industry. He was born in Tokyo and raised in the United States. He holds degrees in science and music from Harvard University and Stanford University's CCRMA. He has conducted research at IRCAM in Paris and was Artistic Ambassador of Apple Computer Europe. In Japan he has been in residency at NTT/ICC and taught at the Universities of Keio, and Chukyo. He has worked in interactive music since the late 80s. Projects of sensor instruments and network music installations have received awards and support from the Fraunhofer Institute, Japanese Telecommunications Ministry, and the Daniel Langlois Foundation. He has served on committees of the Audio Engineering Society (AES), New Interfaces for Musical Expression (NIME), and the board of ISEA. He is researcher at Sony Computer Science Laboratories (CSL) Paris.

http://www.csl.sony.fr/atau/mobilemusic

Position Statement: Akseli Anttila

Media and music in particular are becoming an omnipresent part of the mobile user experience. Music has become a digital commodity. Users have access to virtually limitless music catalogues through online services and P2P applications. The ability to consume and enjoy digital music anywhere through stand-alone music players and multipurpose convergence devices is available to everyone. However, designing these music devices and services is a particularly interesting problem due to the complexity of the mobile context of use. A portable media device, and associated media services, can be used in a wide range of situations, from private or home environment to public spaces. It is essential to pay attention to the social context in which the device may actually be placed, and in addition, the public space is already quite media-laden, communication and media are everywhere, ranging from background audio scapes to advertising and free newspapers.

A key opportunity we can investigate and exploit is the connected and communicative nature of the emerging digital music devices, they can afford new forms of music enjoyment through new ways of interaction with other users. Ubiquitous music technology opens the door for the user to experience the social nature of music anywhere.

Biographic Sketch: Akseli Anttila

Akseli Anttila is a senior concept designer at Nokia Research Center. He has worked on digital convergence since 2000, studying and designing new media applications and services for mobile terminals. He is a PhD candidate at the University of Art and Design in Helsinki, Finland, working on "Machine mediated communication and music enjoyment."

Position Statement: Arianna Bassoli

The Sony Walkman was one of the first mobile personal technologies introduced in the market. Its success, together with the following development and high penetration of mobile phones, has stressed the importance that ubiquitous technologies play in our everyday life. There are, at this stage, many new opportunities to explore for the design of future mobile devices, especially if we consider the fast improvements in terms of

broadband wireless technologies and powerful handheld computers.

Many studies have tried to explain why the personal music player has become so popular, and to research habits of consumption related to this technology (du Gay et al. 1997; Bull 2000). From these investigations it emerges that music can constitute a tool to control mood, to relax and to be disconnected from the surrounding environment. Nevertheless, the success of online peer-to-peer music sharing shows how there is space for new technologies that enrich the enjoyment of music and support the creation of social connections as well, even among strangers. The portable music player, which has kept its function and role in the society for the past twenty-five years, could now radically change and become a hybrid device that allows people to isolate themselves but also to connect more with others nearby, while being on the move.

With the tunA project we have been investigating this opportunity, and tested it with a goup of students in Dublin. tunA is a mobile wireless application that allows users to share their music locally. Users can "tune in" to other nearby tunA music players and listen to what someone else is listening to.The application also allows users to bookmark songs and users in range, and to send messages to each other.

Biographic Sketch: Arianna Bassoli

Arianna Bassoli is currently doing a PhD in Media and Communications at the London School of Economics. Her main interest is to design technologies that can support social connections among people who share the same physical environment. Before starting her PhD, Arianna worked for three years as a research fellow at Media Lab Europe, the European research partner of the MIT Media lab. She has a first class honour degree in Communication Sciences from the University of Siena, Italy.

Coming from a mass media background, she is now very fascinated by the potential that peer-to-peer applications have to decentralise the production and distribution of multimedia content, and to support grassroots phenomena. At Media Lab Europes she has worked on a project called WAND (Wireless Ad Hoc Network for Dublin), with the aim to create a testbed network for new ad-hoc applications and services that could integrate with the interests and needs of the local communities. Arianna's last project at Media Lab Europe was tunA, a mobile wireless application for local music sharing.

Arianna has presented at various ubicomp and music technology conferences all over the world, including Ubicomp 2003/2004, 5th Wireless World Conference, ISEA 2004 and the Mobile Music Workshop 2004. She also participated in the panel on "The future of peer to peer on mobile networks," Austin Mobility Roundtable 2004.

Position Statement: Gideon D'Arcangelo

As product designers dream up personalized geolocation-aware applications for mobile devices, sociologists are discovering that factors such as global travel and telecommunications are, in fact, WEAKENING the role of place in determining personal identity. How do we then establish identity as connection to geospatial location becomes less relevant? Music has always been a good means for establishing personal identity, therefore the mass appeal of products that enable us to carry our whole music collection

with us. Music taste is more eclectic than ever, largely because of decentralized distribution and unprecedented access to deep catalogs. A rigorous ethnographic approach, however, reveals another reason: as the dislocated, overcrowded, urban experience becomes more and more the norm, consumers need better ways to differentiate themselves. Do current product offerings properly take advantage of this potential?

Listeners want to create their own musical signatures expressing the uniqueness of their personalities. Massive digital collections, smart playlists, personal ratings and playcounts form the musical DNA of portable identities. Taste aggregators like Audioscrobbler and Mobster then reconstitute distributed communities that transcend outdated categories like genre, style or scene. What other opportunities are there for products, tools and services that enable people to maintain their unique portable ID? This presentation will introduce the place of ethnographic techniques in informing the design of mobile music products, services and social infrastructures. This points to rich potential not just for the music industry but for the SIGGRAPH public at large as music has often led the way in pointing out new modes of media consumption in the digital and network eras — where music goes, visual media are sure to follow. The interactive nature of music was interrupted with music recording. We are in the process of making music interactive again. One aspect of this is empowering the expressivity of the listener.

Biographic Sketch: Gideon D'Arcangelo

Gideon D'Arcangelo is an interactive media designer with a special focus on the intersection of new technology and musical experience. He is the creator of the "Walkman Busting" radio documentary series on Public Radio International's "The Next Big Thing." He occasionally reports on new music technology for PRI's "Marketplace." With ESI Design, his recent design projects include a science and technology center at NASA Stennis Space Center, the Children's Museum of Los Angeles, and the Reuters Sign at Three Times Square. He is an active member in the New Interfaces of Musical Expression (NIME) community. In the 1990's, he worked with ethnomusicologist and folklorist Alan Lomax on the Global Jukebox, an illustrated database of world song and dance styles. Recent writings include "Recycling Music, Answering Back: Toward an Oral Tradition of Electronic Music" (NIME 2004 Proceedings) and "Alan Lomax and the Big Story of Song," (Rounder Records CD1863).

Position Statement: Lalya Gaye

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 becomes a musical interface. At the crossroad between urban exploration and experimental music making, Sonic City enables its user to create live electronic music by simply walking through a city and interacting with their everyday urban environments. Sonic City is a wearable system that gathers sensor-based information about the user's actions and her environment, and maps it to the sound processing of live urban sounds collected by a microphone. The resulting music is output through headphones in real time and in context, as you are walking, which creates a tight link between the user and the city, and emphasises their interplay.

Sonic City has been 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.

This project shows how mobile and ubiquitous computing can enable the emergence of new forms of music that interface with everyday settings and practices. It thereby illustrates the potential and opportunities of mobile music making, in terms of creative act embedded in the everyday.

Sonic City is a collaboration between the Viktoria Institute and the Interactive Institute.
More information and an illustrative video are available at http://www.viktoria.se/fal/projects/soniccity/

Biographic Sketch: Lalya Gaye

Lalya Gaye is a researcher working at the Future Applications Lab, Viktoria Institute (Göteborg, Sweden) and a PhD candidate in informatics at the University of Göteborg. She has a BSc in physics from the University of Geneva, Switzerland, and an MScEng in electroacoustics from the Royal Institute of Technology KTH in Stockholm, Sweden.

Lalya's prototyping-based research explores new territories of everyday creativity enabled by ubiquitous and mobile computing. It is at the cutting edge of mobile music research, with a focus on technology for mobile music creation, and a unique insight into its design and use in the real world.

Her work has been presented at various conferences and festivals (such as CHI, NIME, DIS, Cybersonica, UIST, and Ubicomp), covered by the press and largely blogged on the internet (Wired, Receiver, Metro, Near Near Future, Networked Performance, Purselipsquarejaw, etc). Besides her participation in various program committees of music and entertainment technology conferences (NIME, ACE, MMT, etc) and in panels about mobile media and digital music (Cybersonica'04, DIS'04), she is actively involved in the development of the emerging mobile music community and is co-organising the 2nd international workshop on Mobile Music Technology at the NIME'05 conference, together with Lars Erik Holmquist and Atau Tanaka. She is also a member of the newly started Pervasive and Locative Arts Network (PLAN), and of a couple of sound-art and new media collectives in Göteborg, Sweden.