audioTagger: Wireless Phonography

Eva Sjuve
Nascent- Art & Technology Research
Institute of Digital Art & Technology
University of Plymouth
UK
eva@moomonkey.com

ABSTRACT
This poster describes audioTagger, a location-based sound application for mobile phones. audioTagger is using the sound recorder in the mobile phone to capture a sonic moment in urban space. In this application the mobile phone is the only device needed to participate, and to explore hybrid mediated space. audioTagger can be defined as wireless phonography bridged with network mapping.[ ] Urban sphere is the communication platform and urban space subject for investigation. A momentary event is captured as a sonic expression. The analogy to snap shots in photography can be made. Google Maps is used to visualize the location of the audio tags and to listen to them. audioTagger is a beta version.

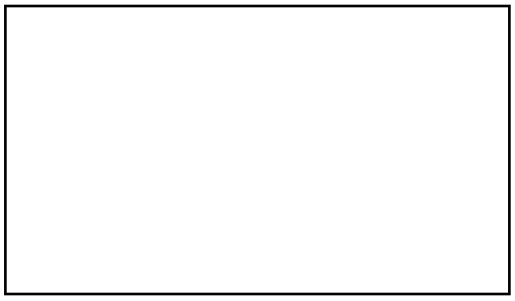
http://www.moolab.net/mobile/audioTagger.shtml

General Terms
Design, Experimentation, Human Factors, Theory

Keywords
Mobile phones, location-based art, sound art, field recordings, ubiquitous network, mobility, mapping, cartography, urban space, urban sonic sphere.

1. INTRODUCTION
AudioTagger [1] is a mobile-phone-sonic-art-in-urban-space project.

Its purpose is momentary exploration of the sonic environment in urban space, by the use of mobile technology. Anybody with a GPRS enabled mobile phone can participate in and contribute to audioTagger and the exploration of the environment, using the mobile phone as a field recorder. The mobile phone is used because it's the most ubiquitous tool at present within wireless architecture.



The mobile phone has many possibilities in terms of technology and amount of devices, but there are still technical limitations to consider, as storage space. As mobile phones developed with more computing power and faster communication capabilities, developers are exploring location-aware applications, social software, proximity, art projects and gaming.

Field recording have been used for various purposes, scientists collecting bird songs, musicologists recording music, or recordings made as sound effects for film, radio, and television. Field recording generally means it has to be planned ahead, to bring the recorder, microphones and batteries to a location outside of the recording studio. Using the mobile phone, already tucked in a pocket or bag has different set of characteristics from regular field recordings, it can be used instantly, and might capture something quite different, than a planned field trip with an audio recorder. A momentary event is captured as a sonic expression. The analogy to snap shots in photography can be made.

audioTagger can be defined as wireless phonography bridged with network mapping. The application audioTagger is a way for the physical space of everyday presence to be integrated into the wireless dataspace. Network mapping focuses our attention on the reciprocity between digital and physical-social worlds. [5] Urban sphere is the communication platform and urban space subject for investigation. What does mobility mean to the user and how does it affect the field recording.

2. RELATED WORK
Location-based work related to audioTagger, can be found in different areas such as field recordings, in the work of art groups such as the Dadaists, Surrealists and the Situationists, urban gaming, urban tagging, mail art and telephone art.

The sonic part of audioTagger is related to Russolo's sonic ideas, with sounds of cracks, buzzings and whispers [6] and Pierre Schaeffer's ideas with Musique Concrete [7], the use of recorded sounds, as well as field recording for scientific or musical purposes, including sound effects for radio and film.

The everyday poetic and artistic experience of urban space, realized by art groups such as the Dadaist and the Surrealist, was embraced by Letterist International, Constant Nieuwenhuys, and later the Situationists to form new practices, to create new forms of communication, participation, and subjective experience. [3] An early use of wireless communication technologies, in the late 1950s by Constant and associates in their practice to create new situations, to link

spatially separated spaces together, were practiced in Amsterdam. [8]

Telephone art, such as Vito Acconci's mapping piece, Points, Blanks, June 13, 1969. [2] The artist called into Paula Cooper gallery from pay phones located around Manhattan. The locations of Acconci's phone calls were marked on a map of Manhattan. This is an example of an early telephone artwork related to today's location-based application and tagging projects. A more recent tagging project is Yellow Arrow [9].

An early urban game based on location is Botfighters, created by Tom Söderlund in 2000 for the game designer group It's Alive [10] In the application mobile positioning [11] was used to find the location of the participant's mobile phones. Sms and WAP were used to create, locate and destroy the Bots moving around in Stockholm, Sweden.

3. DESIGN CONCEPT

3.1 Technology

audioTagger is developed to work with existing technology, a wide array of mobile phones models. The technology used is the audio recorder, email, sms and GPRS/3G, for sending data. The mobile phone is the only tool needed to participate in audioTagger, and no application needs to be downloaded to the phone. All data processing is made on the application's server, which also includes a databank of the sound files and user information.

3.2 Sound

Field recordings are usually made using mp3 recorders, DAT recorders or any recording device for audio. audioTagger is using the built in audio recorder, with sound files of 8 bit, adaptive multi rate (.amr), available on most mobile phones, giving the sound a certain characteristic.

3.3 User Interaction

All user interaction is handled on the mobile phone. [12] The user signs up to participate in the project, and thereafter receive instructions on how to use the application. A sound file is recorded and emailed to the application's server. The user has after participating the possibility to listen to sound recordings already made.

3.4 Administration

In addition to user management the application has mobile administrative capabilities, as well as database search, user administration, and handling of mobile possible mobile mail servers accepted to transfer information to and from the user on the mobile phone itself, to provide mobility for the administrators.

3.5 Visualization

An additional part of audioTagger is audioTags, markers on a Google map on the application's website. This is provided to make a visual and sonic representation of the participants contributions to audioTagger. The location is defined by using geo-coordinates, longutide and latitude, from street addresses, a service offered by Google Maps. [13] Geo-coordinates only work in realtime at this moment in the US, UK and Canada.

4. CONCLUSION AND FUTURE DEVELOPMENTS

During development of audioTagger, there has been a focus on the sonic exploration of urban space, the mobility of sound recording process itself, the characteristics of sounds collected, and to build up a data bank of mobile phonographic work. The mobility of the application's administrative and user interaction has been implemented, as signing into the application, participating, and updating the wireless network communication.

Because of technical alterations on some new 3G phones compared to older models of GPS/GPRS it is no longer possible to listen to the recorded sound files directly from the mobile device. The application a versatile tool future developments include the building of an application for listening and composing with the sound files collected in the database, on the mobile phone and on the projects website.

5. REFERENCES

[1] audioTagger was first developed by Eva Sjuve in January-March 2006,

http://www.moolab.net/mobile/audioTagger.shtml

[2] Collection of Rove Schachter, London

[3] Plant, Sadie, The Most Radical Gesture, Routledge, London: 1992

[4] Sonography or literally "sound writing"

[5] van Welden, Dirk, Else/Where: Mapping, University of Minnesota Design Institute, Minnesota: 2006, 29, Abrams, Janet and Hall, Peter, Eds

[6] http://www.ubu.com/historical/gb/russolo_noise.pdf

[7] http://www.cicv.fr/association/shaeffer_interview.html

[8] http://www.notbored.org/lefebvre-interview.html

[9] http://yellowarrow.net/index2.php, by Counts Media, 2004

[10] http://www.differentgame.org/tom.soderlund/portfolio/botfighters.html

[11] Triangulation, was used, calculation of a location based on 3 wireless signals.

[12] Thanking Dr. Gerald "Chip" Maguire Jr. at Royal Institute of Technology (KTH), Stockholm, Sweden

http://www.moolab.net/mobile/index.html

for his critique on the development of mobility.

[13] http://maps.google.com/