

Tactical Sound Garden [TSG] Toolkit

Mark Shepard

Departments of Architecture and Media Study

State University of New York at Buffalo

Buffalo, NY 14214

+1 716 829 3485 x308

mshepard@ap.buffalo.edu

ABSTRACT

The Tactical Sound Garden [TSG] Toolkit, a work-in-progress, is an open source software platform for cultivating public "sound gardens" in contemporary cities. It draws on the culture of urban community gardening to posit a participatory environment where new spatial practices and social interactions within technologically mediated environments can be explored and evaluated. Addressing the impact of mobile audio devices like the iPod, the project explores gradients of privacy, publicity and community in developing a platform for public collaboration in shaping the sonic topography of urban public space.

Keywords

Mobile, Sonic, Participatory, Public Space, Community, Open Source, Locative Media, WiFi, Enabling Technology, Augmented Reality

Project Website

<http://www.andinc.org/tsg/>

PROJECT DESCRIPTION

The Tactical Sound Garden [TSG] Toolkit is an open source software platform that enables anyone living within dense 802.11 wireless (WiFi) "hot zones" to install a virtual "sound garden" for public use. Using a WiFi enabled mobile device (PDA, laptop, mobile phone), participants "plant" (or "prune") sounds within a positional audio environment. These plantings are mapped onto the coordinates of a physical location by a 3D audio engine common to gaming environments - overlaying a publicly constructed soundscape onto a specific urban space. Wearing headphones connected to a WiFi enabled device, participants drift through virtual sound gardens as they move throughout the city.

The TSG Toolkit is a parasitic technology. It feeds on the proliferation of WiFi access points in dense urban environments as a free, ready-made, locative infrastructure for cultivating community sound gardens in contemporary public space. Access points producing the WiFi signals used to determine the location of a participant may be open or encrypted, and need not be "owned" by those deploying the TSG system. Where the presence of WiFi access nodes is minimal, gardens simply consist of plantings along a sidewalk. Where a local density of nodes exists, gardens potentially take the scale of a neighborhood. In cities where

wireless networks are pervasive, gardens potentially extend throughout the entire city

SOCIAL CONTEXT

The popularity of mobile audio devices like the iPod points toward a desire to personalize the experience of the contemporary city with one's own private soundtrack. These devices also provide varying degrees of privacy within public space, affording the listener certain exceptions to conventional protocols for social interaction within the public domain. Yet, to what degree does this contribute to a retreat or withdrawal of the modern urban subject by distancing him or her from the encounters and frictions that make urban public space such a vital component of democratic societies?

The TSG Toolkit supports the creation of shared social spaces within which people collaborate on the cultivation of sonic environments. The Toolkit builds on the practice of "playlist sharing" (sharing sequential lists of favorite music files amongst friends across a network connection) to articulate new terrain for social interaction in contemporary cities. The project attempts to spatialize this practice in the context of everyday urban environments as a means to transform passive mobile listeners into active participants in shaping the sonic topography of urban public space.

COMMUNITY

The project is being realized through the creation of a series of sound gardens in collaboration with local communities. The idea is to work with communities defined by the shared use of a specific public location – an airport, a park, a street, a plaza – rather than ones defined primarily by common property, place of residence, shared interests or beliefs. In this sense, the project seeks to build a sense of community that cuts across demographic divisions, one rooted in the diversity found in the everyday life of contemporary public spaces.

PARTICIPATORY STRUCTURES

While the project draws on the metaphor of actual urban community gardens, virtual sound gardens need not be constrained by the same parameters. For example, physical community gardens are often structured around the idea of the 'plot', where urban public space is partitioned for private cultivation by designated members of a specific community. Given the immateriality of the TSG, and its

open participation model, spatial partitioning is one of many possible parameters by which a TSG may be structured. The following parameters are currently being investigated:

1. Who can establish a garden?
2. Who can contribute the initial sounds to the library for planting?
3. Who can plant sounds? (Placing sounds in a specific location).
4. Who can prune sounds? (Modifying sound playback parameters).
5. Who can weed sounds? (Removing sounds from the garden).
6. Who controls access to the sound garden? (Access privileges).
7. Where can sounds be planted? (Spatial constraints).
8. When sounds are played back? (Temporal constraints).

As the project is implemented in various places, each sound garden will present a different participation model. This model will be derived by considering the relation between the specific location and the community it defines. As the parameters for participation will directly affect the auditory experience of the work, varying the model produces qualitatively different garden types. For example, in one case, only a local community would be involved in contributing the initial sounds available in the library for planting/pruning by the public-at-large. In another, while only the local community would be able to plant/prune/weed sounds, anyone would be able to listen to the garden. Alternately, spatial or temporal constraints can be defined whereby specific people can plant, prune, or weed sounds only in specific locations or set sounds for playback only at certain times.

In this way, the sound compositions of each garden would range from an open, unrestricted environment, to a more formally composed soundscape, to a highly structured composition of chance juxtapositions.

SCENARIO

1. Upon entering a sound garden, participants connect to a web page using a web browser, create a profile, and download a small software application along with a library of sounds to their device.
2. As one moves through the sound garden, the software periodically identifies the participant's position within the geographic limits of the physical location. This positioning information is fed to a 3D audio engine running on the client, which subsequently outputs a real-time audio mix of the sounds in the garden specific to the current location of the listener.
3. To plant sounds, the participant either uploads sounds recorded or stored on her/his device, or selects from pre-existing sounds in the library. The participant then sets parameters for volume, loop, and schedule for playback. This sound, its parameters, and the current location of the planter are subsequently broadcast to all participants currently in the garden.
4. To prune sounds, the participant selects a sound within close proximity to where s/he is standing, modifies any of the parameters of that sound, and attaches a short annotation to be sent to the planter of that sound. These modifications are then broadcast to all participants currently in the garden. The planter then receives a message that the pruner has modified their sound, along with any annotation the pruner has provided.

BIO

Mark Shepard is an artist and architect whose cross-disciplinary practice draws on architecture, film, and new media in addressing new social spaces and signifying structures of emergent digital cultures. His research focuses on the impact of mobile technologies and wireless networks on architecture and urbanism. He is currently Assistant Professor of Architecture and Media Study at the State University of New York at Buffalo.