

# Autumn Leaves



Sound and the  
Environment in  
Artistic Practice

Edited by  
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# Locus Sonus

Locus Sonus is a research group specialising in audio art. It is organised as a post-graduate course by the Art Schools of Aix-en-Provence (École Supérieure d'Art d'Aix-en-Provence) and Nice (École Nationale Supérieure d'Art Villa Arson Nice) in the south of France.

Generally speaking Locus Sonus is concerned with the innovative and transdisciplinary nature of audio art forms some of which are experimented with and evaluated in a laboratory context. Equally important is the collective or multi-user aspects inherent to many emerging audio practices which necessitate working as a group. Two main thematics define our research - audio in its relation to space and networked audio systems.

## The Locustream Project

In the fall of 2005, the lab started work on a group project that aimed at involving the various different members of the group in a way that was loose enough to not stifle individual creativity, yet still provided a firm basis for communal experimentation and exploration.

Locus Sonus is inherently nomadic in nature, shared, as it is, between two institutions separated by several hundred kilometers; we travel regularly to meet and work together in and from different locations.

It was decided to set up some live audio streams, basically open microphones which upload a given soundscape or sound environment continuously to a server which is then accessible through the world wide web. Our intention was to provide a permanent (and somewhat emblematic) resource that could be tapped into as raw material for artistic experimentation.

After establishing a first permanent stream (outside Cap15 an artists' studio complex in Marseille) we started by using the stream in a performative or improvisatory mode employing the now standard repertoire of laptop and MIDI controller with homemade patches to reinterpret the stream in real time. This proved to be somewhat problematic because frequently nothing in particular would be happening on the stream at the specific time when we were intending to work with it. This led us to pursue various leads.

One involved developing a stream which used a denoiser and a sampler to continuously renew a database of the 'best of' current sound events or 'objects'. Although this made the stream much more listenable (and usable as musical material) it posed conceptual problems in that the sound was pre-composed at source. As the project has evolved, this 'adapted' stream has now disappeared to be replaced once again with the unadulterated open mike'.

Other approaches included an activity developed by one member of the group, Nicolas Bralet, which he calls "mémoires de streams". This consists of listening to the streams on a regular basis from wherever he happens to be at the time and producing a short composition deploying a mixture of sounds gleaned from the stream with those recorded from the local environment. The result is simultaneously



idealized projection of the remote site and a reflection on the schizophrenic aspects of the whole project (where 'schizophrenic' is understood in R. Murray Schafer's sense of a sound detached from its source).

At the same time another member of the group, Esther Salmona, conducted a similar activity but in this time in a literary mode, listening to and describing the streams as she switches from location to location, a sort of laptop Tardis with which she could make instantaneous hops (without stumbling around every time she lands).

*"Vendredi 1er septembre 2006. Une barre de fer vient de tomber sur le sol. Le bruit dénonçait sa façon de tomber qui dénonçait sa forme et sa longueur, un bout puis l'autre, un matériau urbain, assez légère de 50/60 cm. Une de celle dont on se sert pour soulever les plaques d'égoût. Et le sol? Pas de bitume, le sol, pas d'asphalte, dur, des dalles, et non surfacé, plutôt lisse, en grandes dalles. Je l'imagine clair ce sol et moucheté de grains de micas noir et gris et bruns. D'autres sons suivent, comme si la plaque soulevée, elle se soulève, je l'entends, on pouvait enfin travailler dans la ville, au coeur de la ville, un peu dans ses tripes. Alors? Cette illusion de la circulation est contrecarrée, niée, abrutie par l'intérieur (les clics, les bips, intimes) et l'intérieur (les dessous, les galeries). Un début de sirène de police, le frein d'un bus, le stream, maintenant épaissi, en vertical, en horizontal."*

"Friday, September 1st, 2006. An iron bar has just fallen on the ground. How it sounds reveals both the way it fell and its shape and length – reveals one end hitting first and then the other, reveals a material of urban origin, and something quite light of perhaps 50 – 60cm in length. It's the kind of thing that you'd use to lift up a manhole cover. And the ground itself? Not tar, this ground, not asphalt either, something hard, maybe cobblestones? Not ones that have been covered over, rather something smooth, large paving slabs, perhaps. I can clearly envisage this surface stippled with black, grey and brown mica. Other sounds follow, as if the cover is being lifted up; it is being lifted up, I can hear it; so that things can finally getting working in the town, in the heart of the town, in its very belly. What now? This illusion of movement, of opening up, is thwarted, denied by the internal sounds (intimate clicks and beeps) as much as by the interior itself (the floor, the galleries). A police siren starts up, a bus's brakes sound, the stream is now thickened out, both vertically and horizontally".

Considerable efforts have been devoted to the development of a spatial system that could facilitate the installation and subsequent interpretation of the audio streams within a 'real world' local environment. The first attempts involved using resonating wires - long piano wires strung from wall to wall were set into vibration using piezo transducers at one end; the resulting modified sound being captured at the other end using guitar pickups. This set-up allowed a performer, Lydwine Van der Hulst, to play the streams by touching the piano wires and thus modifying their resonant qualities. Using an I/O board we increased the effect by detecting when a specific wire was touched and increasing the amplitude of the audio signal in that wire. By this point we had three streams up and running (Marseille, Aix-en-Provence and Chicago) and in this first version we used the wires to map out the virtual network, pointing the wire in the direction corresponding to its provenance with an angle that represented relative distance.

A discussion that followed this presentation led us to believe that it was necessary to define the protocol (sound capture/network/local form) that we were employing more precisely. One of our problems was the choice of the stream emplacement. Should this be made in relation to geographical location or sound quality or some kind of political or social situation? The decision was made to leave this up to other people, a partly practical and partly ideological choice. At this point we tidied up our PureData streaming patch so that other people could implement it without too much difficulty, boosted the number of streams which could be accepted simultaneously by our server, and started stripping down our ideas



for installations, confident that the worldwide audio art community (with a little help from our friends) would respond to our call, which they did.

#### **Locustream Tuner**

In its present version, the installation with which we present the streaming project, consists of a pair of wires stretched the length of the exhibition space with a small ball threaded on them. The position of the ball can be altered by the public acting like a tuner, an audio promenade where users slide their fingers through a series of remote audio locations. Multiple loudspeakers enable us to spatialize the sound so that each different audio stream selected via the wire emanates from a new position in the local space. In order to make the installation function efficiently we were obliged to incorporate a system allowing us to interrogate our server and update the list of current streams (people go away or use their streaming computer for a concert or a machine crashes). We use the list to provide visual feedback by projecting the names of the places the streams are coming from.

#### **Locustream Map**

At one point it seemed necessary to provide the 'streamers' (as we have come to call the musicians and artists who've responded to our call) with the possibility to access the streams themselves, not only to hear their own sound but also that provided by other people. Our website (<http://nujus.net/~locusonus/site/index.html>) now offers an animated map which shows the location of all the streams and indicates those which are currently active with a blinking light. By clicking on a chosen location you can listen directly using an OGG Vorbis plugin in any browser.

#### **What's Next?**

Several interesting things have happened through the act of opening up the streaming project to other people. Apart from the fact that we have found ourselves with audio environments which we would never have previously considered (a kitchen in Iceland, a noisy transformer in California), certain streamers have started to use the material themselves as part of their own artistic production. Invited by Jason Geistweidt from SARC in Belfast to perform we were surprised and delighted to find that some of the samples he used have been gleaned from the streams. The desire to meet the community of streamers who have got involved in this project, lead us to consider organising some kind of event or festival to accommodate different versions or interpretations of the project.

As the project grows and more people join in we are rapidly running out of bandwidth however a charitable soul has recently offered to accommodate an unlimited number of streams, so that is no longer an issue. We are currently working on a wireless 'streaming box' which could be placed anywhere within the range of a wifi router and stream continuously; increasing the range of sound capture; and enabling streamers to get rid of their computers.

To conclude, the locustream project through the articulation of its different facets offers a multitude of view points, that of the person/place emitting the stream, the walk through the installation, the walk of the user, the performer, the resonant qualities of the receiving architectural space, the remixing of sound into a slower form of stream (podcast). These positions are interlaced and embodied by the participants and their trajectory through the different spaces of transmission and reception the moment a stream is activated. The system becomes a unique instrument for each person taking part.

<http://nujus.net/~locusonus/site/index.html>



