

## « Échelle 1 » Playing the landscape

In this paper we present « *Échelle 1* »<sup>a</sup>, an art project which uses mobile and geo-localization technology to create infrastructure-less *in-situ* sound installations. The public space that surrounds us is the principal subject of these interactive installations. We select places which are of a specific interest, to which we add a spatialized sonic layer.

The visitor, equipped with a mobile device, interacts with the installation by walking around the site. The device tracks the visitors' position relative to a superimposed soundscape and triggers sound segments related to the current position. This immersive experience evolves in real time as the visitor discovers new sound pieces. While visitors are provided with a map of the soundscape, there is no fixed itinerary or order of play.

The soundscape is composed of pre-recorded sounds which are associated with precise geographic locations: one can only listen to them in the place for which they were conceived. In effect, we are using technology to re-establish a connection with the physical world.

To experience the installation, one need only install our software on a GPS-equipped mobile phone and go to the site. There is no physical on-site infrastructure or apparatus involved. This approach means there are no restrictions as to the positioning of sounds. This enables us to implant works in controversial or even (legally or physically) inaccessible places. The visitors, wearing headphones, pass by unnoticed, a ghostly presence in the (urban) landscape. Furthermore, this renders the works entirely timeless, in the sense that they can be experienced no matter how long ago they were conceived.

The technology upon which this concept relies is based on a combination of off-the-shelf hardware (smart phones with GPS receivers) and bespoke software (for the popular Java J2ME platform). We designed a flexible system in which the application logic (as encapsulated in the program) and the project-specific content are separated. The content consists of a descriptor file (in XML format) and a set of sound files (in MP3 or WAVE format). In the descriptor, geographic places are specified and linked to a textual name and one or more sound files. This separation allows artists to focus on the content of their works, rather than on technical matters.

« *Moillesulaz échelle 1* »<sup>b</sup>, the first instalment of the *Échelle 1* concept, was presented in the Autumn of 2008 at the *Biennale Version Beta* exhibition<sup>c</sup> in Geneva, Switzerland. In this piece visitors explore the border town of Moillesulaz, on either side of the Franco-Swiss border, while listening to poetic texts and analytical essays, accompanied by sonic compositions.

In the Spring of 2009 « *Les Halles: Architecture potentielle échelle 1* »<sup>d</sup> was presented as part of an exhibition<sup>e</sup> by the *Nogo Voyages* collective in Paris, France. In this work visitors hear descriptions of a hypothetical architectural project to augment and adapt the Forum des Halles in the centre of Paris.

A third iteration of the concept is currently being prepared. In *Saint-Denis Remixed*, the listener will compose a musical mix by walking in the area around the Saint-Denis railway station in the northern outskirts of Paris.

In this paper we want to analyse how the experiences that can be created using the *Échelle 1* concept are perceived. Secondly, we want to investigate which, some yet unexplored, artistic opportunities are made possible by the enabling technology. Thirdly, we want to reflect on future possibilities such as the introduction of new elements (e.g. sound mixing, video or dynamic story lines) and new dimensions (e.g. height, speed or time). Finally, we want to contextualize our work within the wider fields of sonic interaction design, locative media/art and ubiquitous computing.

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<sup>a</sup> "Scale 1" or "1:1", as in a full scale map of the world.

<sup>b</sup> <http://www.nogovoyages.com/moillesulaz.html>

<sup>c</sup> <http://www.version-beta.ch>

<sup>d</sup> <http://www.nogovoyages.com/architecturepotentielle.html>

<sup>e</sup> <http://www.arslonga.fr/archives/478>

# Biographies

## Stéphane Degoutin

Artist and lecturer. Born in 1973. Lives and works in Paris.

Stéphane's principal research interests are gated communities, the contemporary city, and public space. He is author of *Prisonniers volontaires du rêve américain* (*Voluntary Prisoners of the American Dream*; Éditions de la Villette, Paris, 2006), as well as the photo-blog [www.lostincreteil.com](http://www.lostincreteil.com). He created the online installations [www.googlehouse.net](http://www.googlehouse.net) (with Marika Dermineur) and [www.whatareyou.net](http://www.whatareyou.net) (with Marika Dermineur and Gwenola Wagon). Together with Gwenola Wagon and Alex Knapp he forms the collective *Nogo Voyages*. He teaches interior design and contemporary culture at Ensad and École Camondo in Paris.

<http://www.nogoland.com>

<http://www.nogovoyages.com>

## Matthias Stevens

Researcher. Born in 1983. Lives in Ghent (Belgium) and works in Brussels and Paris.

Matthias holds a Master's degree in Computer Science from the Vrije Universiteit Brussel (VUB). He currently works at the VUB as a PhD student with a grant of the Fund for Scientific Research – Flanders. He is also associated with the Sony Computer Science Lab (CSL) in Paris. His principal research interests are ubiquitous computing, geo-localization, location-based services, participative sensing and geographical information systems. At Sony CSL, Matthias was involved in the creation of *NoiseTube* ([www.noisetube.net](http://www.noisetube.net)), an ongoing research project focused on creating a collaborative platform for monitoring urban noise pollution.

<http://prog.vub.ac.be/~mstevens>

## Gwenola Wagon

Artist, lecturer and researcher. Born in 1975. Lives and works in Paris.

Gwenola currently holds an Assistant Professor position at the University of Paris at Saint-Denis (Paris 8), where she completed her thesis entitled *Utopias of an Interactive Cinema and the Accessibility of Moving Images*. She has a diploma from the Video Department of Interactive Research Studio at the National School of Decorative Arts, Paris. She also collaborates with the *Cela Etant* collective with whom she has co-authored a number of video, sound, and interactive installations. Her interests are centred around the impact of new technology on cinema. Together with Stéphane Degoutin and Alex Knapp she forms the collective *Nogo Voyages*. She has been teaching digital video in the Art department of the University of Paris (8) since 2001, in addition to leading numerous workshops in art schools in France and abroad.

<http://www.nogovoyages.com>

## ABOUT / PROJECTS

# ECHELLE 1

## PLAYING THE LANDSCAPE

Stéphane Degoutin, Matthias Stevens, Gwenola Wagon, 2009

### A propos du dispositif

« Échelle 1 » est un projet artistique qui utilise des technologies mobiles de géolocalisation pour créer des installations sonores *in situ* pour lesquelles aucune infrastructure n'est nécessaire. L'espace public est l'objet principal de ces installations interactives. Nous sélectionnons des lieux possédant un potentiel particulier, et nous leur ajoutons une couche sonore spatialisée.

Le visiteur est muni d'un simple téléphone GPS et visite l'installation en se déplaçant sur le site. Le GPS détecte sa position, et la met en relation avec les positions attribuées aux pistes sonores.

Des pistes sonores pré enregistrées sont associées à des localisations géographiques précises: on ne peut les entendre que dans le lieu pour lequel elles ont été conçues. Nous utilisons la technologie pour rétablir une connexion avec le territoire physique.

Les visiteurs se repèrent avec une carte des lieux, mais aucun itinéraire ou ordre de lecture ne leur est imposé. L'expérience immersive évolue en temps réel, au fur et à mesure que le visiteur découvre de nouveaux morceaux.

Pour faire l'expérience de l'installation, il suffit d'installer le logiciel « Échelle 1 » sur un téléphone équipé d'un récepteur GPS, et de se rendre sur le site. Aucune infrastructure ou appareil n'est installé sur place. Il n'y a donc aucune restriction pour le positionnement des pistes sonores. Nous pouvons donc implanter des oeuvres dans des lieux controversés ou inaccessibles (physiquement ou légalement).

Le concept repose sur l'utilisation de technologies existantes (téléphones GPS du commerce) associés à un programme écrit sur mesure (sous la plateforme Java J2ME, très répandue). Nous avons conçu un système très flexible, en séparant le programme et son contenu (les données spécifiques à chaque projet). Le contenu est lui même divisé en un fichier de description (au format xml) et un ensemble de fichiers sonores (au format mp3 ou wave). Le fichier de description liste les positionnements géographiques et les associe avec un ou plusieurs fichiers sonores. Cette séparation a pour but de faciliter la réutilisation du programme dans différents contextes. Elle a également pour but de focaliser sur le contenu de l'oeuvre, plutôt que sur des considérations techniques.

« **Moillesulaz échelle 1** », la première oeuvre réalisée avec ce dispositif, a été présentée à la **Biennale Version Beta** à l'automne 2008 à Genève (Suisse). Elle permettait d'explorer la zone entourant le poste-frontière de Moillesulaz, des deux côtés de la frontière franco-suisse. Le visiteur écoutait des textes poétiques, analytiques, ou des pièces sonores liées au territoire qu'il parcourait.

Au printemps 2009, nous présentons « **Les Halles: Architecture potentielle échelle 1** » pendant l'**exposition** du collectif Nogo Voyages à Paris. Ce dispositif propose au visiteur la description d'un projet d'architecture destiné à augmenter le potentiel du Forum des Halles.

### Notes on the "Echelle 1" system

« Échelle 1 »\* is an art project which uses mobile and geo-localization technology to create infrastructure-less in-situ sound installations. The public space that surrounds us is the principal subject of these interactive installations. We select places which are of a specific interest, to which we add a spatialized sonic layer.

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