

Dérive en Mille Sons "*Drifting in a Thousand Sounds*" an instrumental aesthetic for mobile music and mediated interaction

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Abstract

"Dérive en Mille Sons" is a musical work that uses mobile media technology to artistically examine the relationship between music and the listener. Contemporary media technologies, whether they be at work, home, or in your pocket, emphasize *playback*. These devices are designed to facilitate the storage and retrieval of pre-made media assets. This project endeavors to leverage the *processing* capabilities that rest dormant within these technologies. It explores ways in which onboard data and information processing can be used to enhance the use of a mobile communications device, and examines how an original, artistically-motivated combination of processing and interaction can transform the relationship between an interactive musical work and a listener. The initial work was completed in the summer of 2008 using a Nintendo Wii controller (Wiimote), and is currently being extended with the development of two new musical pieces for the Apple iPhone and iPod Touch (iP/iPT).

This project draws its name and interaction model from the "Theory of the Dérive" by writer and Situationist, Guy Debord. The act of moving through actual, geographically locatable places can be usefully characterized by the Situationist practice of the *dérive*. Debord described the *dérive* as, "a technique of rapid passage through varied ambiances," involving "...playful-constructive behavior and awareness of psychogeographical effects...". In a *dérive* (which translates as *drift*), movement through and across urban environments has an effect on the emotions and behaviors of the drift-er. Debord writes that differing ambiances from street to street can divide a city into zones. To *dérive* is to walk in a city while attending to psychogeographical preferences. There is no predefined path and no specific destination. The drift-er follows a path constructed by their valence of the ambient zones they encounter, moving towards those that appeal and avoiding those that do not. Each zone, created by its perceived psychogeographical character, becomes a unique space within the larger urban environment, and contributes to an overall ecology that can be experienced as one drifts from zone to zone or space to space.

"Dérive en Mille Sons" introduces spatial-aural interaction with the three-axis accelerometer found in the iP/iPT. The simple act of tilting the device left to right or forward and back sends input that can redraw ("move") images on the screen. As with psychogeographic zones discovered in Debord's *dérive*, generative sound clusters and musical phrases are organized into adjacent spaces. Tilting the iP/iPT in the direction of a sonic space that draws their curiosity "moves" the listener from zone to zone. This kind of interaction is completely aural in nature. From a musical perspective it grants the listener a much greater deal of autonomy because they are no longer a passive receptor. "Drifting" interaction allows the listener to share an active role akin to a performer or composer, where the music they hear is, for the most part, their own construction. The physical simplicity of this interaction adds an additional dimension to the overall experience. Tilting is a natural motion that can be done almost unconsciously. This subtlety helps overcome potential distraction with the mechanics of interaction. Listeners can fully immerse themselves in the music without the burden of having to perform awkward keystroke combinations, button presses, and joystick maneuvers.

This project is primarily concerned with the relationship between music and the listener in the context of mediated interaction. Online music libraries like Pandora, and digital media management software such as iTunes offer unprecedented flexibility for discovering new music and organizing the recordings you already have. These tools, while useful, don't take full advantage of the processing and interaction that is now possible with contemporary, mobile media technology. As a musician and sound artist this is a niche where I see enormous potential for development.

Recent iPhone applications like "RjDj" and "Bloom" show the way forward. Rather than accept the limitations imposed by years of media technology solely designed for listening, this project endeavors to take a different path and explore the emergent possibilities of generative music by leveraging the data processing capabilities of the iP/iPT. A generative piece can play for hours never repeating itself. "Dérive en Mille Sons" goes one step further to make the generative musical work something that can be explored or performed

through simple, meditative interactions. Generative techniques, when combined with interaction, reveal the behavior of a musical instrument that pushes back on the performer and communicates what it can and cannot do. This kind of friction or "resistance" (Evens, 2005) offers both practical and conceptual potential within a musical work that is subject to interaction.

Debord, as well as philosophers Henri Lefebvre and Michel de Certeau offer additional support that spatial concepts are extremely relevant in other media where sound, music, and interaction are brought together. Once sound is organized into conceptual spaces it can be used as a means of facilitating communication and understanding. By conceiving of a subject spatially, mediated interaction makes it possible to explore its facets in all their nuance and complexity. In the realm of digital art and music, this means developing sound palettes that convey spatial and conceptual relationships, and acknowledge the potentiality of a given subject. As a work is experienced, interaction leads to a conceptual drifting across its various sound spaces. This paper will show how the *dérive* can become a kind of instrumental performance, where the openness and emergence of interactivity is articulated through sound, as music.

Biography

Norbert Herber is a Lecturer at Indiana University Bloomington in the Department of Telecommunications. He is a musician and a sound artist whose research explores the relationship between people and sound within mediated environments. Norbert's artistic work can be described as Emergent music—an innovative generative style that uses artificial life systems to sustain continuous, real-time modification and adaptation. Using this approach he is focused on creating sound and music in digital environments for art, entertainment, and communications. Norbert is a Ph.D. candidate in the Planetary Collegium through the University of Plymouth, UK where he studies under the supervision of John Matthias, Roy Ascott, and Brian Eno. His works have been performed/exhibited in Europe, Asia, South America, and in the United States. Current projects can be heard online at www.x-tet.com.

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