

in a thousand drops... refracted glances

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Biographical information

Kenneth Newby is a media artist whose research and creative practice explores expressive applications of computer assisted media composition, performance and diffusion. He teaches new media composition and technique. Aleksandra Dulic is a media artist and theorist working in the area of interactive computer animation with current research underway in performative visualization of sound and music. Martin Gotfrit's research centres on the creation, performance and function of music and sound in many different disciplines and contexts. He is the Director of the School for the Contemporary Arts at Simon Fraser University. Together the three authors of this work have been working together as the Computational Poetics Research Group for the past four years.

Description of Work

in a thousand drops...refracted glances
Interactive Installation. Media Diffusion:
4-channel audio and 100-channel video.



in a thousand drops... refracted glances is an audio / visual sculpture in fragmented space and time that becomes a single audiovisual image as one interacts with the space of the exhibition. The work presents fragments of the bodies of humans in hybrid relations to themselves, thereby creating a sense of the fragility of experience. The work reveals a background made of deeper perennial questions: Who am I? What is my community? Where do its boundaries exist and how permeable might they be?

The interactive aspects of the work provide points of focus for flows of both audible and visible images. As one moves with the work a subtle effect is exerted on how these images are animated. Characters composed of multiples emerge and are accompanied by synchronized emergent musical gestures. The resulting audiovisual environment is one of construction and deconstruction of bodies through processes of stitching, repetition, collage, stretching, contraction, multiplication, and reduction. As a result of these processes new hybrid fugal bodies are born that speak to the variety and complexity of the ecological and interpersonal balances that depend on the mutual interdependencies of the community of agents that make up its population. Interactions with the work take the form of refracted glances both rewarding and confounding in an ongoing process of making sense of a chaosmos — the balance between confusion and order — the fantastic and the logical — dreamt and waking realities.

Musical Interface

A set of layered generative music processes are guided in their production by the data inferred by a motion tracking system including blob-detection, to determine individual locations for tracking in relation to the space of the installation, and optical flow sensing, to determine the relative direction of the participants' movement. The overall effect of the interactive process is one of a kind of spatially dynamic orchestration in which a particular musical process-gesture is mapped to either a specific location or a movement style such as motion along the slow-fast spectrum, the near-far spectrum, and stillness. These states are mapped onto the musical parameters such as orchestration, phrase selection and detail as well as stochastic characteristics such as glissandi speed and direction. As the same motion tracking information is also used to guide the visual animations, the audible and visible images have a strong synchronization. The participants, in this way, become collaborators with the unfolding audio-visual experience.

Given the dynamic character of the multi-screen animation, and the flexibility of the musical production, the work moves toward what we have been theorizing as a new form of process-based cinematic experience in which the processes guiding the audible and visible images are braided together into a new heteroform of multiply-mediated experience.