

FLUOR SONSESCENCE (FOR THE SONIFICATION CONCERT)

Christopher Jette

Center for Computer Research in Music
and Acoustics (CCRMA)
Stanford University
Palo Alto, CA, USA
jette@ccrma.stanford.edu

Mark Broshinsky

Manhattan School of Music
New York, NY, USA
mbroschinsky@msmnyc.edu

ABSTRACT

Fluor Sonescence is a work for trombone, electronics and video, where sounds are translated to video and the videos are translated to sounds. The video documentation includes the video and sound components of the work. Please see <https://vimeo.com/255790972/> to hear and view Fluor Sonescence.

1. PROJECT OVERVIEW

Fluor Sonescence explores the creation of a piece of concert music for trombone, electronics and video using the visualization of air masses from a brass instrument as source material. Smoke is placed into the air column of brass instrument during the production of a tone(s). As the smoke exits the bell of the instrument a laser illuminates a slice of the cloud and a high frame-rate camera captures the visual data (see figure 1). This visual material is then translated into sound and combined with the video. The process of constructing this work is a series of translations from sounds to visuals and then back from visuals to sounds. The resulting artistic artifact is a musical composition for trombone, electronics and video projection.

The larger context of this project is the creation of a real time instrument for controlling and producing both auditory and visual elements. The first step in this larger plan is the work Fluor Sonescence, where the composer both develops the techniques that will be incorporated in the forthcoming instrument and develops what will turn into a formalized translation process. This work serves as an opportunity to investigate the sonic and visual palette of working with embodied sound and types of translation techniques. Fluor Sonescence serves as a first investigation of the sonic and visual material that both extends a compositional trajectory of the composer and combines research in the aesthetics of mixing sonic and visual material.

2. MOTIVATION

The interpenetration of the translated material provides temporal and gestural continuity. The translations are mediated and not

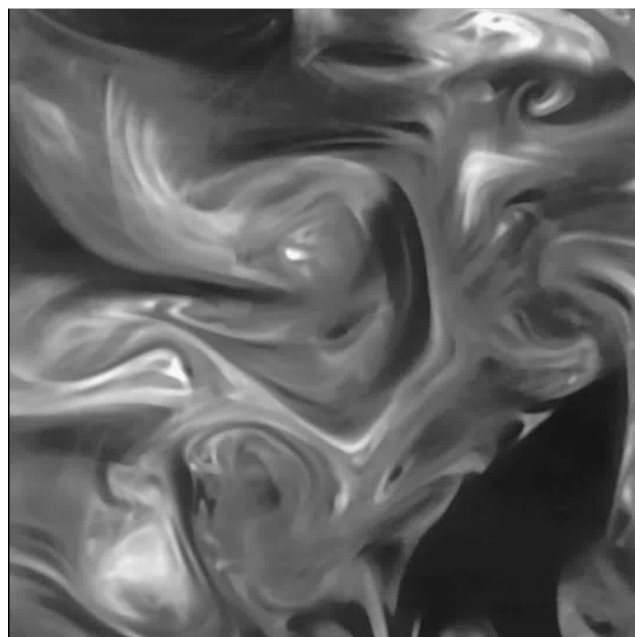


Figure 1: A still from the video, illustrating gray and white smoke in a black frame

meant to strictly synthesize across media but rather to balance compositional intuition and expressive data. The basic musical material is generated by translating image to sound and these musical phrases are edited to create a musical composition. This approach of working with recorded data in a studio setting in order to create a finished composition is elicits the approach of Musique Concrete composers working with recordings on magnetic tape in a studio environment. With Musique Concrete, the transformations of sound resulting from manipulations in playback speed, tape direction and tape splicing define a series of constraints. For composers working exclusively with tape, the source material and the operations present a set of constraints which gives rise to a range of sounds. While the transformation in Fluor Sonescence are less extreme, with only the reordering of material and minor temporal expansions and compressions. Like the constraints of tape music, in Fluor Sonescence the sonification process defines the sonic palette and the organization of the material gives rise to a particular sonic palette.



This work is licensed under Creative Commons Attribution Non Commercial 4.0 International License. The full terms of the License are available at <http://creativecommons.org/licenses/by-nc/4.0>



Figure 2: A still from the premiere of Fluor Sonescence

The composer will diffuse the work. A detailed technical description can be provided upon request.

3. AESTHETIC GOAL

The goal of this work is to present the audience with gestural information through multiple streams, video, acoustic instrument and electronics. The interplay of these streams of information is informed with notions of counterpoint. The individual elements combine sensorially in parallel and contrary motion with points of articulation created by gestures of punctuation. The translation across media imbues each stream with similar gestural archetypes. The challenge in creating the work became a matter of scaling the raw information to a perceptually relevant range. To achieve meaningful translations, each gesture in each domain needed to be identified and considered for similarities and differences in the rendering. With this information, the combination of the gestures becomes a puzzle where each media type contributes to sense of an archetypal gesture in a different way.

4. CONCERT PRESENTATION

Fluor Sonescence is presented as a concert work with live trombone performer, processing of the trombone, fixed electronics and video projection. For the concert presentation we require a stereo audio projection system, video projection surface and access to theatrical lighting in order to frame the live performer while not detracting from the video presentation. The work uses live processing of the trombone so an ideal mixing station enables the blending of both the electronic stereo signal and live trombone.