June 6, 2012 @ 6:30PM
<fidget> Space
1714 N. Mascher Street
Philadelphia, PA 19122
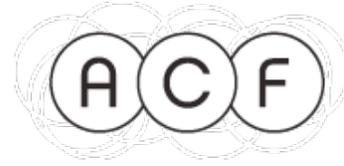
MULTICHANNEL WORKSHOP

Presented by American Composers Forum : Philadelphia Chapter
http://workshops.acfphiladelphia.org/

I. Lecture by Joo Won Park

Techniques and Aesthetics of Multichannel Composition

II. Multi Channel Listening Session

Welcome to Hasla (2007)
by Suk-Jun Kim
www.reddoorsound.com

Breath and the Machine (1999)
by Paul Koonce
www.arts.ufl.edu/composition/bios/kooncebio.html

Pollock's Dreams : Liquefied Sounds (2007)
by Konstantinos Karathanasis
music.ou.edu/oukon

Decrescendo (2003)
by Joo Won Park
www.joowonpark.net

Mi Bémol (1990)
by Yves Daoust
www.electrocd.com/en/bio/daoust_yv

Pre-Composition (2002)
by Mark Applebaum
www.markapplebaum.com

speaker

Stage

speaker

speaker

speaker

speaker

Sub

Sub

speaker

Audience

Mixer

Audience

speaker

Sub

Sub

speaker

speaker
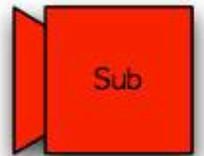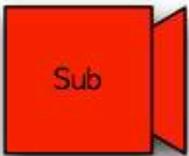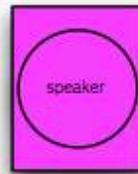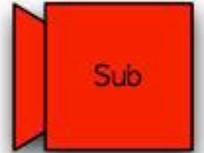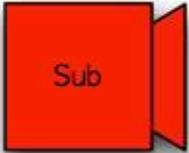
G.A.T.O.R
Multichannel System

스피커

Speaker

Sub

Sub

Speaker

Speaker

Speaker

Speaker

Speaker

Mixer

Speaker

Speaker

Audience

Speaker

Speaker
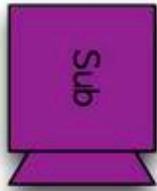
Orford Sound Workshop
Diffusion System

Speaker
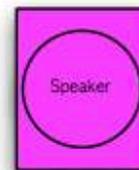
Tech Notes for Breath and the Machine
8-channel Playback Configuration

The sound files are mono. The 8 files group together into 4 stereo pairs: Front Narrow, Front Wide, Side, and Back.

1. Front Narrow:
   BreathAndTheMachineStMixPr1.L and BreathAndTheMachineStMixPr1.R
2. Front Wide:
   BreathAndTheMachineStMixPr2.L and BreathAndTheMachineStMixPr2.R
3. Side:
   BreathAndTheMachineStMixPr3.L and BreathAndTheMachineStMixPr3.R
4. Back:
   BreathAndTheMachineStMixPr4.L and BreathAndTheMachineStMixPr4.R

The speaker placement for the stereo pairs is as follows.

                    Pr1.L (Front Narrow)   Pr1.R

   Pr2.L   (Front Wide)   Pr2.R

Pr3.L   (Side)   Pr3.R

Pr4.L   (Back)   Pr4.R

       The side and back pairs contain mostly reverb and should therefore be positioned to give the audience a sense of spatial enclosure. Many of the more dramatic spatial events in the piece begin in the front and roll to the back with delays and reverb, enlarging the virtual space with the movement to the back; the side and back speakers should be positioned and their level adjusted to create this effect. Many times the back pair need extra gain depending upon there position.
       The front pairs should be equalized to create a frontal presence. A gain of 4-15 dB on a high shelf above about 6 kHz will achieve this. My experience is that this EQ is necessary in most halls as it accounts for the loss of presence incurred by the distance of the speakers from the audience, the masking effect of the hall's reverberant response, and the diffusing effect of the audience.
       The overall sound should be both intimate and impressive, reflecting a full range, high fidelity sound extending into the subwoofer;   however it should not be painful. Take care to attenuate the 2kHz-6kHz band (by 2 to 6dB) in the two front pairs if the sound is piercing (as a consequence of the type of speakers used and their placement.)

by Paul Koonce

Diffusion refers to the practice of performing electroacoustic music by projecting it through multiple loudspeakers placed around the performance space. Traditionally, the composer or other person sits at a centrally placed mixing console and manually controls the levels and other processing of the sound. **-** Barry Truax (www.sfu.ca/~truax/dm8.html)

Why Diffusion Is Needed In A Concert
"Even on a good hi-fi system, with the listener in the "sweet spot", the stability of the stereo image is notoriously fickle **-** turning or inclining the head, or moving to left or right by just a few inches, can cause all kinds of involuntary shifts in the stereo image. So if a stereo piece is played only over a single pair of loudspeakers in a large hall (which will probably also have a significant reverberation time), the image will be even less stable and controllable than in a domestic space, and will certainly not be the same for everyone in the audience. In the equivalent of the ideal listening position at home, everything is relatively fine, but elsewhere the story is very different. Listeners at the extreme left or right of the audience will receive a very unbalanced image; someone on the front row will have a "hole in the middle" effect, whilst a listener on the back row is, to all intents and purposes, hearing a mono signal! Listener (c) will also experience everything as "close", with listener (d) hearing it as "distant", simply because these listeners are in those real relationships with the loudspeaker cabinets. The shape and size of the hall have a huge influence on how marked these effects will be. But in any public space, some or all of these effects will occur. Events carefully oriented by the composer within the space of the stereo stage will simply not "read" in a concert unless something more radical is done." **-** Jonty Harrison (cec.sonus.ca/ econtact/Diffusion/Beast.htm)

<BEAST System>

Snapshots

for Bass Clarinet and Computer