

Michael Musick

Ecosystemic Improvisation System no. 3

2017

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The Ecosystemic Improvisation Environment is a creative improvisation instrument that generates emergent music by exploring connections made in complex, feedback-based systems. This environment adapts techniques of energy relationships and ecosystemic balance from installation compositions of the composer's Sonic Spaces Project. A performance in this system begins with the improviser creating sonic energy through acoustic means. This energy is analyzed by agents in the system, and used by them to live; making their own music. The emergent music of the system's digital agents and performer is further used as energy by additional digital agents. Unlike the installation based compositions from this project where the system slowly optimizes itself over time, in a performance with this system the composer actively alters not only the output mix of digital agents, but specific properties of these agents as well. This is accomplished through both controllers and the acoustic contributions of the composer.

A performance of this environment will include playing of the physical space, by using handheld microphones to capture unique acoustic nodes, vibrations, and anomalies in the space, as well as creating musical material that energizes the digital agents and plays with the digital agents. Through controlled feedback processing, otherworldly textures and rhythms emerge, unique to each physical space and performance. Borrowing from interests in nature, and natural environments, the goals in performance are to find harmony with space, music, and energy.

Setup Information

For performance, the setup is placed on stage. The hardware for this setup consists of the following (all of which are provided by the performer):

1. A computer
2. Audio interface
3. 2 microphones
4. Mixer
5. Korg nanoKontrol

The following should be provided by the host:

1. A 2.1/2.0 audio system
2. Balanced ¼" TRS cables to feed the audio system
3. A stage monitor
4. A table to setup the hardware on
5. Microphone Stands

Performance Examples

- A performance example of this work is available from;
<http://michaelmusick.com/electroacoustic-improvisation-solo-may-8th-2016/>
- Code is available from; https://bitbucket.org/mmusick/creative_improv/src

THOUGHTS ON EXPLORING THE ENVIRONMENT

The performer should allow ample time in private to practice the touch and management of the parameters. Part of the exploration is discovering what sonic possibilities exist through the manipulation of each parameter. This is what will allow the agents to come into their full potential.

A few important ideas would be management of time. Ideally 30% of the performance time would be spent playing SuperCollider through the use of the MIDI controller, 30% would be spent playing (hitting, whacking, tapping, scrapping, feeling the vibrations) of the resonating objects, and the rest (40%) would be spent listening to the texture and the progressions that naturally take place.

Due to the nature of how this piece is routed and hooked up, feedback will occur. This is not necessarily a bad thing for the purposes of this piece. The main amplifier's output has a limiter on it that will help protect the main speakers. Feedback should be managed and the performer should try to avoid it as long as is possible. But, as the piece progresses it will keep coming back and eventually destroy the textures created by the performer. At this point the performer is to explore the sonic textures available through the feedback.

When listening, the performer should feel free to stand up and walk out to hear the piece, especially if the piece is being performed in an interesting space. The performer should explore and "play" the room. Nodes will exist where certain frequencies build up and are exaggerated and where certain frequencies are cancelled out altogether. This exploration of the room is crucial to really hearing and exploring the textures and music being made.

The volume of the piece is left up to the discretion of the performer. It is suggested the piece be performed quite loud, so that the sonic footprint the performance space imparts on the sounds can be explored. However, the piece should also be highly dynamic. The performer should create opportunities where only soft sounds will come from the singing objects and conversely where the system seems on the brink of complete destruction.