

Title: Galactic Madness

1. PROGRAM NOTES

Galactic Madness is a structured improvisational network piece inspired by a set of pictures of the galaxy taken by NASA's James Webb Space Telescope(released in June 2022). After closely observing the pictures for hours, I wanted to create a mesmerizing system that resembles the infinite and enigmatic nature of the galaxy.

This piece is written for six MacBook Pro(2018 and later) laptops running Max/MSP and Sonobus. The piece utilizes the design of the MacBook Pro and feeds back the signal through its built-in mic and speaker(The microphone is placed right next to the speaker on the left of the keyboard). This piece is not specifically written for the MacBook Pro models, but it should be performed on laptops with a similar microphone and speaker placement.

2. PROJECT DESCRIPTION

The Max patch adds three audio effects: pitch-shift, bit-crusher, and reverb on the signal chain. Ten parameters from the audio effects are trained through the neural network from the machine learning toolset FluComa, projected onto a two-dimensional plane so that the touchpad can control the ten parameters at the same time. Generally, the performer uses their lefthand palm to create a cup-shaped chamber to resonate the feedback or to tap/rub against the microphone surface to add more sounds. The feedback signal changes according to the shape and volume of the hand and the distance from the palm to the built-in microphone surface. The righthand moves the mouse on the two-dimensional plane, an XY pad in Max. In this case, the computer becomes a playful instrument that needs no extra plug-in device.

All six performers use Sonobus, a low-latency audio application through the network, to send and receive audio from each other. The network functionality frees the players to play remotely. The instruction of channeling within Sonobus is provided in the score and must be followed in time to produce the best result. Through Sonobus, players will feedback other/each other's signals in many ways, which resembles the infinite and enigmatic nature of the galaxy.

The performers should spend time playing and improvising on the instrument. They should focus on the collaborative movements of two hands and become familiar with how the instrument works in terms of the relationship between the hand movements and musical elements such as timbre, texture, density, and dynamics. The neural net training data is saved and comes with the patch which means the way the XY pad controls the parameters will remain the same. The score shows a descriptive movement of two hands within a given period of time. It is up to the performer to improvise with the instructions and collaborate as a group/sub-groups.

3. MEDIA LINK(S)

- Video:
https://drive.google.com/file/d/1kmnXsG5j_tUSIqqiGdHv27_eMiUTrjGo/view?usp=sharing
- Score:
https://drive.google.com/file/d/1OQTcwoxcDqH0vJs62HybopH4gXRGsRmz/view?usp=share_link

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