Critical Mass

for laptop ensemble

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Software:
Each performer is given a patch that listens to another performer's output and detects the pitch played by that performer. It allows the player to trigger a tone associated with what was detected, select a sound (out of 3), and control the random deviance from the detected pitch (referred to as variance).

Performance:
Choose sound #1 on the patch to begin.

Repeat the following process three times:

> Performers trigger tones at will slowly and with lots of space (there will be gaps of silence). The "variance" parameter should be manipulated at will but over the course of time it should be increased until it is at minimum variance. As you approach minimum variance, begin triggering faster and faster until there are no breaks between tones.

> When everyone has reached minimum variance, a single tone should emerge within the ensemble. Hold this tone for a bit as an ensemble.

> At some point during the held tone, anyone in the ensemble can begin to trigger at a rate similar to the beginning of the piece, slowly and with lots of space. Others in the ensemble should begin to do the same.

> Switch to your next sound at will (the ensemble as a whole should switch at a staggered rate).

The held tone in the final iteration should last the longest, the end of which will be dictated by the Conductor.

Conductor:
There is a separate patch for a single "Conductor."

This patch allows a single performer to modify the amount of distortion on all other performers' sounds. On each held tone, bring the amount of distortion up to increase intensity and lower it back down to 0 when the held tone sections are finished. The final held-tone of the piece should be the most intense

The patch also allows the Conductor to block everyone's ability to trigger a new tone. Use this ability to "tame" the ensemble if you think the held tone is coming too soon. You can also shape the piece with many smaller waves of approaching held tones. The piece should end by enabling this block on the held tone in the final iteration as a way to cut all sound off (there will be some decay after blocking).

Technical Requirements:
Each performer should have a laptop, an audio interface with at least one input and two outputs, and a speaker that will be placed next to each performer.

Daisy chain the laptop audio interfaces by connecting the second output channel of one audio interface to the first audio input of the next performer's audio interface and so on. The first audio output of each audio interface should connect to the performer's speaker.

A wifi network should be available. Preferably this network should be local to the ensemble (as opposed to using a larger network such as you would find in an institution). This avoids most connection problems that might arise from network security policies.

Lighting:
The software itself acts as a lighting element, casting light onto each performer that is related to various parameters. For this reason, the stage should be dark during the performance to highlight the light from each monitor cast upon the performers.