

VIDIKSIS

Density Function

for iPads and other portable electronic devices

*Premiered and written in collaboration with members of the Boyer
Electroacoustic Ensemble Project (BEEP) at Temple University*

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for iPads and other portable electronic devices

composed by Adam Vidiksis

2017

Density Function is a work for iPads and other portable electronic devices and spatialization choreography. The work plays on the psychoacoustic effect generated by how we use timbre to help localize sounds. Forming and reforming to create clusters of bodies and notes, the individual players act at times as individual sound sources, and other times as partials of a larger timbral event. This work was workshopped and co-composed by the student members of the Fall 2017 Boyer Electroacoustic Ensemble Project: Alyssa Almeida, Megan Burke, Joshua Carey, Simeon Church, Stefano G. Daddi, Bailey Fatool, Sean Gallagher, Daniel Gilbert, Fede ZyMoon Gillespie-Anderson, Kay Gross, Austin Johnson, Zachary Kane, Eric A. Keefer, Jon Mayse, RJ McGhee, Dan Moser, and Anthony Passaro.

Performance Notes

Required equipment: This piece requires a portable electronic instrument that can make varied sounds with the control necessary for the gestures in this piece. A tablet or other mobile device (such as an iPad) is an example of this, but other electronic instruments sufficient to the requirements of the piece could be used as well. It is important that the sound each performer makes is projected from their location throughout the performance.

Required sounds: Each performer is required to produce three different electronic sounds throughout the piece. These sounds are described in detail below. They will also require a control interface that can perform expressively, and should be able to play pitch accurately both in the grid of equal temperament as well as smoothly between these pitches. The music app Bebot by Normalware (<http://normalware.com>) is a recommended example of software capable of this task, but any software can be used.

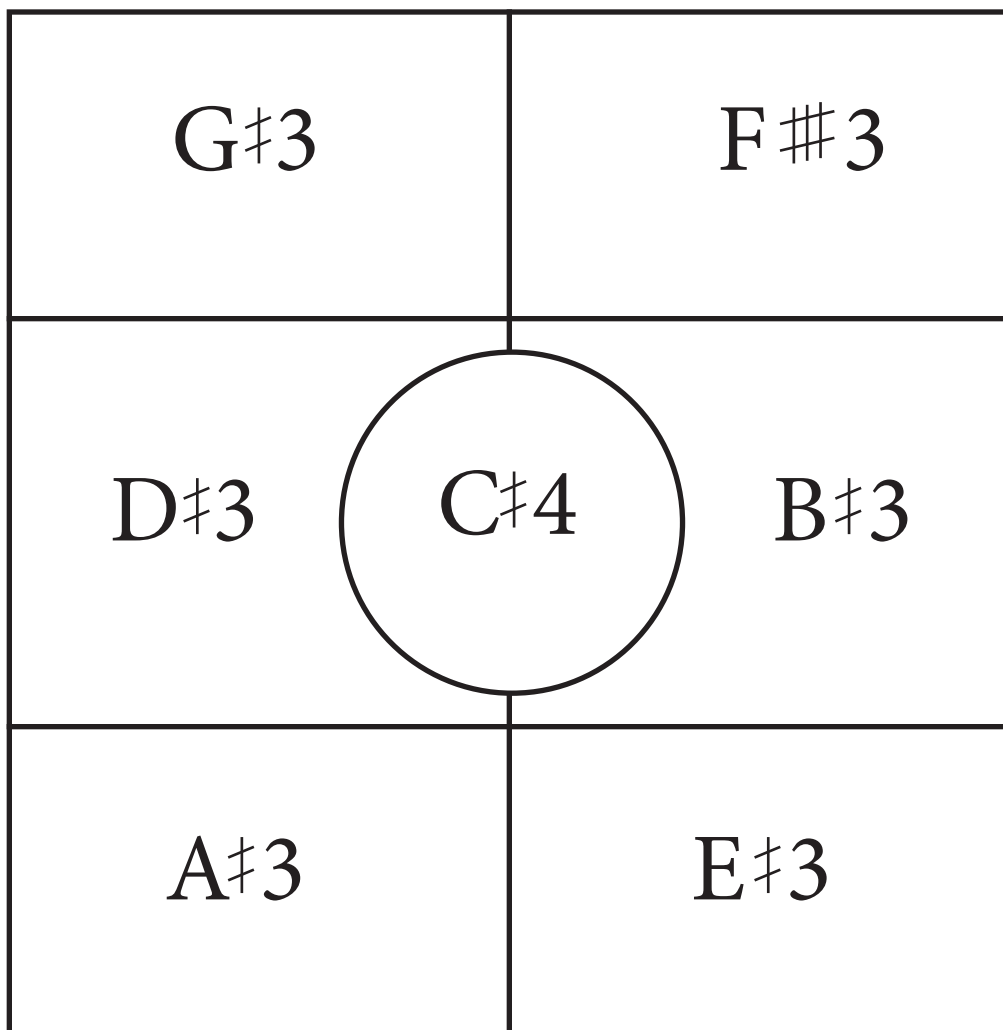
The piece requires three sounds:

1. Sine tone — A sine-tone-like sound. In the sections using this sound, players will be divided into two groups, each using only note of one of the whole-tone hexachords. (See notes in Section 1 for more information.)
2. Interrupter sound — Players are encouraged to make their own diverse sounds.
3. Rhythmic/Choral sound — Should have a vocal-like quality.

Structure: The duration of each section of the piece is up to the performers' discretion. Each performer follows the instructions for each section, both for spatialization choreography and music, and acts independently of the other performers, except where specified. Care should be given not to assign directors or cues, but to allow the structure of the piece to emerge from the autonomous actions of each individual player.

Preparation: Due to the need to move throughout the piece, it is recommended that players memorize the rules for each section in advance. Choreographed movements should not be overly dramatic—use natural, commonplace motions for moving throughout the space as much as possible. Before the performance, the players will need to coordinate where the pitch locations in the space for section 3 will occur. Additionally, players may want to confer on which whole-tone hexachord they will play in the opening sections, so as not to be unbalanced between the groups.

Example of Pitch Locations in the Performance Space:

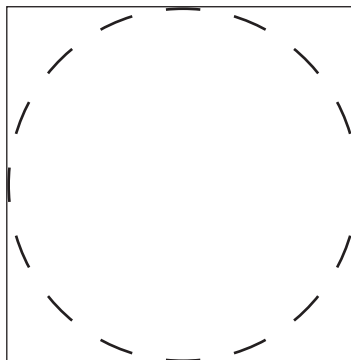


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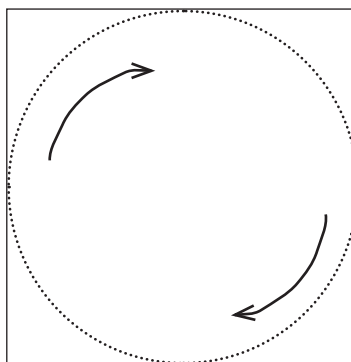
Adam Vidiksis

Start



All performers should be spaced evenly in a circle around the edge of the performance space.

Section 1

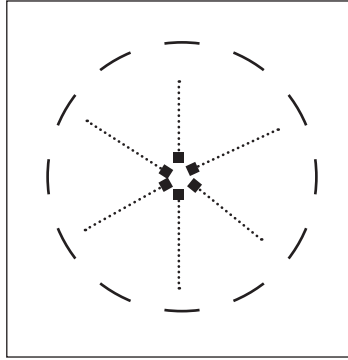


Sound: Uses the Sine Tone sound.

Choreography: Move clockwise in a circle.

Gestures: Each player should choose to play notes from only one of the whole-tone hexachords (either C, D, E, F#, G#, A#, or from C#, D#, F, G, A, B). Play any pitch within your group's hexachord above middle C. Attack is slow, sustain for between 4-12 seconds, then slowly decay to silence. Continue choosing different notes from your chosen hexachord.

Section 2

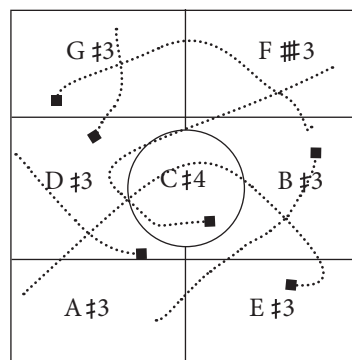


Sound: Uses the Sine Tone sound.

Choreography: Move slowly to the center of the space then hold. Stay until all other players have arrived in the center.

Gestures: When you arrive, play a C $\frac{1}{4}$ # 4 (middle C) and hold the sound until all other players arrive. Slowly oscillate the sound a few cents sharp or flat while holding in place, creating beating with other players.

Section 3

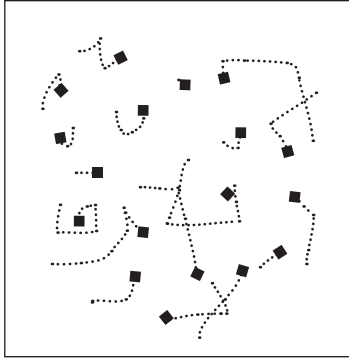


Sound: Uses the Sine Tone sound.

Choreography: Slowly wander around the space.

Gestures: Same as section 1. As you wander, however, if you encounter other players in the space, hold for an undefined duration and play the tone specified by your location together in the space. (These pitches should be designated before the performance begins.) The designated pitches are: F $\frac{3}{4}$ #3, B $\frac{1}{4}$ #3, E $\frac{1}{4}$ #3, A $\frac{1}{4}$ #3, D $\frac{1}{4}$ #3, G $\frac{1}{4}$ #3. Slowly oscillate the sound a few cents sharp or flat while holding in place, creating beating with other players.

Section 4

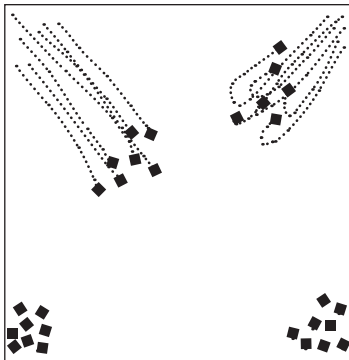


Sound: Uses the Interrupter sound.

Choreography: Move quickly for a few seconds, then hold. Change direction radically upon the start of the next gesture.

Gestures: Relatively short bursts of sound, can be complex or rhythmic if desired.

Section 5

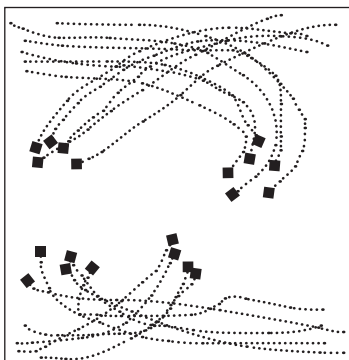


Sound: Uses the Rhythmic/Choral Sound.

Choreography: Move to a corner of the space and hold. (If there are no corners, establish “meeting zones” for this purpose in advance.) People in a corner together now act as a group. Occasionally, move quickly to the center of the room and back, again as a group.

Gestures: Using the key of B Phrygian, improvise consistent staccato 1/8-note rhythms (Q=144-160). When your group decides to move to the center and back, slow your rhythm as your approach the center. Speed back up to tempo as you return to your corner. All groups (corners) should try to play together rhythmically as best as possible.

Section 6

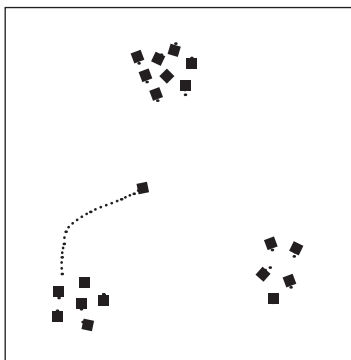


Sound: Uses the Rhythmic/Choral Sound.

Choreography: Wander slowly through the space as a group. Stay together.

Gestures: Transition to long sustained choral like gestures. Each member of the group can shift to these sustained sounds individually. Once all members of the group are making sustained sounds, begin wandering. Gradually shift key to center on G major.

Section 7



Sound: Uses the Rhythmic/Choral Sound.

Choreography: Leave your group and move slowly to the center.

Gestures: Each player will individually arrive at any note in a C major 7 chord and continue to hold this note. When a player does this they will leave their group and slowly wander to the center of the space. When they arrive there, they will stop moving and continue to hold their pitch loudly.

Section 8

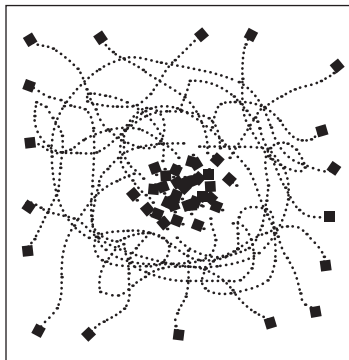


Sound: Silence.

Choreography: Raise your hand.

Gestures: When all players have arrived at the center of the space (still holding their pitch from the C major 7 chord), suddenly and as one, all players should simultaneously raise their hand, thus stopping the note. Hold this silence and position for a few seconds.

Section 9

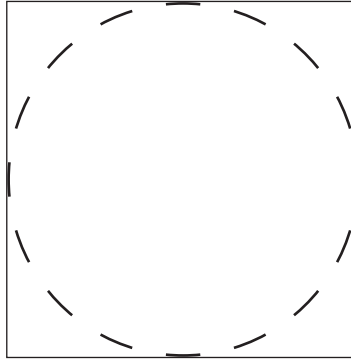


Sound: Uses the Rhythmic/Choral Sound.

Choreography: Slowly wander back to starting position.

Gestures: Enter again on the same exact pitch from the C major 7 chord in the previous section, but now very quietly. Bend this pitch down in a gliss gesture lasting 3-6 seconds. Continue to reiterate this gesture, with each repetition starting a bit lower than the start of the previous gesture. These iterating gestures should crescendo to forte. Continue to do this until you reach F#3 and have arrived at your starting location.

Section 10



Sound: Uses the Rhythmic/Choral Sound.

Choreography: Hold in place.

Gestures: Upon arriving at your starting location, hold on the note F#3. Fade in and out on this note in gestures lasting 3-8 seconds each. Players should slowly oscillate a few cents sharp and flat while repeating this pitch. Each iteration should be quieter than the last until all players have reached complete silence.

End

