

**for saxophone quartet,
video,
electronic sound,
and audience participation**

**Score
Facilitator Version for San Jose**

Flock (2007)

for saxophone quartet, video, electronic sound, and audience participation

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1 About the Piece

Flock is a full evening performance work for saxophone quartet, conceived to directly engage audiences in the composition of music by physically bringing them out of their seats and enfolded into the creative process. During the performance, the four musicians and up to one hundred audience members move freely around the performance space. A computer vision system determines the locations of the audience members and musicians, and it uses that data to generate performance instructions for the saxophonists, who view them on wireless handheld displays mounted on their instruments. The data also drives the real-time generation of a multi-screen video animation and an electronic soundtrack.

1.1 Duration

Approximately 60 minutes.

1.2 Performance Personnel

Four saxophonists (soprano, alto, tenor, and baritone).

Four facilitators to lead the audience's participation in the piece and be featured in their own "solo" section with the saxophone quartet. These facilitators may have training in music, dance, or theater but this is not required.

Two or three personnel to oversee the computer vision system, notation system, and audio and video generation.

Minimal stage, house, lighting, and sound crew.

2 Background for Facilitators

The facilitators guide audience participation in the piece by arranging people in particular configurations on stage, distributing and collecting instruction cards, and influencing audience behavior through their own actions. They are also featured during part of the performance when the audience remains in their seats.

2.1 Rehearsal

2.1.1 Individual Preparation

- Read through this score carefully in order to fully understand how the piece works and how the performance is structured.
- Watch the simulation videos on the companion web site.

2.1.2 Group Preparation

- Discuss and practice movement strategies for the section of the performance featuring facilitators and saxophonists.
- Depending on your background (music, theater, dance, or none of the above), discuss general character, tone, beats, or personality with which you will all facilitate the performance. Will each of you project individual personalities? Will you approach your tasks with seriousness, humor, intensity, or something else entirely? Will any of this change over the course of the performance?
- Walk through the performance structure in detail and decide (and notate) exactly which facilitator will do each task.
- Discuss where audience instruction cards will be kept and how they will be organized.
- Discuss what the facilitators will wear. Dress should be at least somewhat coordinated so that facilitators are easy for the audience to identify.

2.1.3 Rehearsal In Performance Space

- Practice moving around the performance space to develop a solid mental map of how positions map to video and music in various sections of the work.
- Practice individual sections of the performance, especially those without audience participation, with a focus on developing movement strategies that produce interesting visual and musical results. For sections with audience participation, a small group of volunteers will be on hand to serve as the audience.
- Run through the entire performance.

3 Structure

This section explains how the evening is organized, with a particular focus on the role of the facilitators in the performance.

At a minimum, you must understand when you need to be on/off stage, how you need to interact with the audience and the saxophonists and each other, and when to direct audience members in specific ways by bringing them out of their seats, organizing them, and moving them around. All of these tasks are described in the “script” sections below and also summarized in a single-page, printable “cheat sheet” at the end of this score. We encourage you to print out the “cheat sheet” and keep it in your pocket during the performance.

In general, you will receive two types of cues. **Visual cues** will be large, colored sheets of posterboard or an LCD screen easily visible to you from stage. **Contextual cues** describe the actions of other people that serve as triggers for you.

How you guide the audience is largely up to you: you may use gestures, you may whisper to individual audience members, or you may show them the printed instruction cards that appear at the end of this document.

Two more important notes about interacting with audience members: try to involve every willing audience member over the course of the performance by regularly exchanging audience members (inviting new ones onstage while telling others to sit down); but never force anyone to participate if they do not wish to do so.

Additional information below about durations, the electronic sound, what the saxophonists are doing, and how the music notation for the saxophonists is produced is provided for your reference only. It is not critical for you to know or understand all of this in order to perform the piece.

3.1 *Entrance Music: Covey*

Duration: 10 minutes.

This section runs from the time the house doors open until the performance begins. It involves the audience, video, and electronic sound; the saxophonists and facilitators do not participate.

3.2 *Verbal Introduction*

Duration: 5 minutes.

We briefly explain and demonstrate the basic modes of interaction: cartesian and polar mappings, instantaneous points and motion trails, audio, video, and notation, and the roles of saxophonists, facilitators, and audience members.

Facilitators are not involved in the introduction.

3.3 Opening

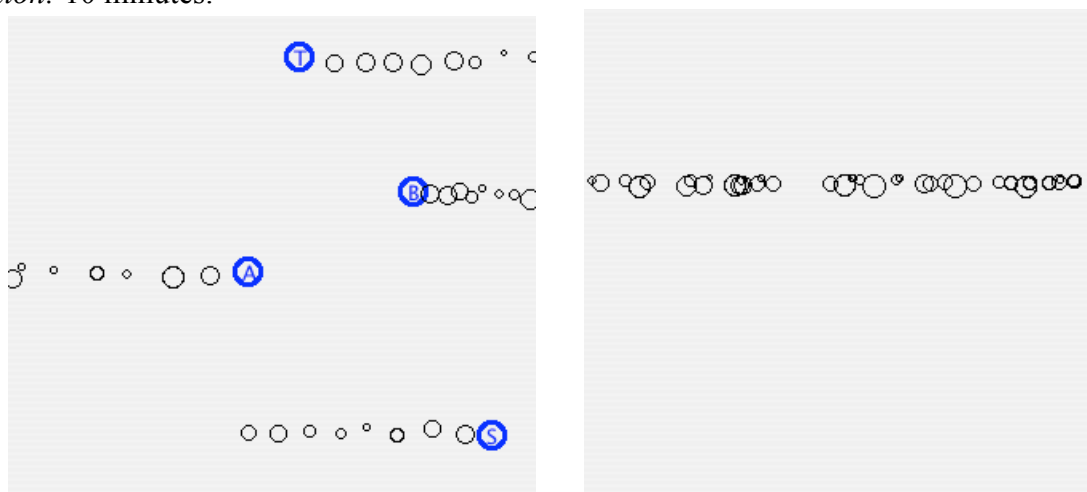
Duration: 15-20 minutes.

- **Quartet entry:**
 - *Script:* Each saxophonist comes out on stage and then freezes in a location of their choice.
 - *Notation:* Each saxophonist generates a single note per measure for himself based on current position (x is measure position, y is quantized pitch).
 - *Electronic Sound:* None.
- **Facilitator entry:**
 - *Script:* Three of the facilitators, one by one, come on stage, move around freely for a short time, and then freeze in a location of their choice. (*Contextual Cue:* all saxophones onstage.)
 - *Notation:* Same as above, plus each facilitator generates a note for whichever saxophonist is closest to him.
 - *Electronic Sound:* None.
- **Audience entry:**
 - *Script:* The fourth facilitator acts as a “controller” and brings four audience members onto stage, one by one, placing each in a location of his choice and instructing them to stay still. (*Contextual Cue:* First three facilitators onstage.)
 - *Notation:* Same as above, plus each audience member generates a note for whichever saxophonist is closest to him.
 - *Electronic Sound:* None.
- **Common-tone motion:**
 - *Script:* The “controller” facilitator moves one person at a time (saxophonist, facilitator, or audience member) to a new location on stage and instructs them to remain still. Instead of moving an audience member, they may also instruct them to sit down and then replace them with a new audience member. (*Contextual Cue:* four audience members onstage.)
 - *Notation:* Same as above, but note durations gradually become longer.
 - *Electronic Sound:* None.
- **Build up:**
 - *Script:* A second facilitator becomes an additional “controller” so that participants are moved more frequently than before. (*Visual Cue:* white.)
 - *Notation:* Same as above, but with more melodic contours.
 - *Electronic Sound:* None.
- **Climax:**
 - *Script:* The “controllers” instruct all participants to move freely around the stage and continue to “swap” audience members by instructing one audience member to sit down and bringing another onto stage to replace them. (*Visual Cue:* yellow.)
 - *Notation:* In addition to participant’s current locations, their recent locations on stage also generate notes to play. Gradually, the music incorporates a longer and longer history of participants’ movements to generate denser and denser textures.
 - *Electronic Sound:* None.

- **Transition:**
 - *Script:* Saxophonists stop playing and leave the stage. Meanwhile, the facilitators organize the four participating audience members into a horizontal line in the middle of the stage. (*Contextual Cue:* saxes leave stage.)
 - *Notation:* The notation gradually becomes less dense.
 - *Electronic Sound:* Electronic sound begins almost imperceptibly and becomes more prominent by the end of the section. Each audience member and facilitator generates a single note per measure on a modal-bar percussion instrument based on his current location (x is quantized measure position, y is quantized pitch).

3.4 Horizontal Lines

Duration: 10 minutes.

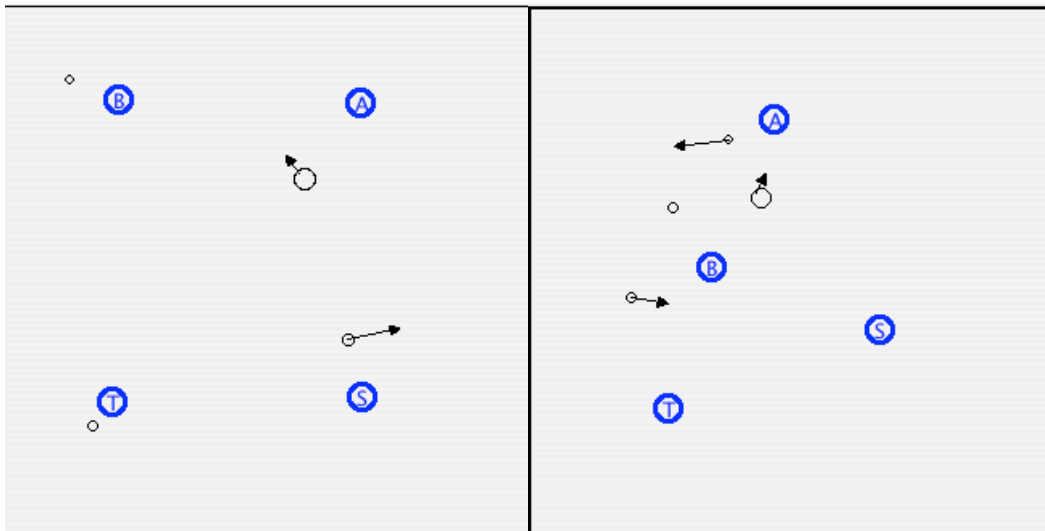


- **Building Lines:**
 - *Script:* One facilitator remains, still, with the horizontal line of audience members that ended the previous section. One by one, each of the other three facilitators build their own horizontal line of audience members, bringing 4-6 people on stage, one by one to form the line. (*Contextual Cue:* first line formed.)
 - *Notation:* None.
 - *Electronic Sound:* Each audience member and facilitator generates a single note per measure on a modal-bar percussion instrument based on his current location (x is quantized measure position, y is quantized pitch).
- **Saxophonists Return:**
 - *Script:* Saxes come back on stage, each joining a different one of the audience lines.
 - *Notation:* Each saxophonist generates a single note per measure for himself based on current position (x is measure position, y is quantized pitch).
 - *Electronic Sound:* Same as above.
- **Moving Lines:**
 - *Script:* Each facilitator remains with his line and guides their movement around the stage. Lines can move “marching” style (moving along the y-axis standing side by side) or “snake” style (turning to face a leader and following them around). (*Contextual Cue:* all saxes back onstage.)

- *Notation*: Notes grow longer, and a history of movements gradually makes the texture denser.
- *Electronic Sound*: Gradual crossfade from modal bar to plucked string sound.
- **Merging Lines**:
 - *Script*: Facilitators direct all four lines to merge into a single, large line that spans the entire horizontal width of the space. (*Visual Cue*: orange.)
 - *Notation*: The texture becomes gradually less dense.
 - *Electronic Sound*: Crossfade to plucked string sound completes.
- **Transition**:
 - *Script*: Facilitators instruct audience members, one by one, to sit down. (*Contextual Cue*: lines merged.) Once the audience is seated, the facilitators go offstage. (*Contextual Cue*: audience offstage.)
 - *Notation*: Single note per saxophonist per measure.
 - *Electronic Sound*: Plucked string sound until audience sits down, then nothing.

3.5 Polar Coordinates

Duration: 15-20 minutes.



3.5.1 Script

- **Facilitator Entry**:
 - *Script*: Saxophonists remain still in their quadrants. One by one, facilitators come on stage and each one dances around a different saxophonist. (*Contextual Cue*: all facilitators offstage.)
 - *Notation*: Each saxophonist is the center of a polar coordinate system, and facilitators generate notes for any saxophonist within a maximum radius based on their position relative to the saxophonist: theta maps to measure position and radius maps to quantized pitch. A very short history of positions generates contours and squiggles instead of isolated notes.
 - *Electronic Sound*: None.

- **Audience Entry:**
 - *Script:* Each facilitator gets 2-3 audience members to join him moving around his saxophonist. (*Visual Cue:* red.)
 - *Notation:* Same as above but audience members generate notes for the saxophonists as well.
 - *Electronic Sound:* None.
- **Freer Movement:**
 - *Script:* Facilitators may “jump” from one saxophonist to another; their audience members follow them when they move. (*Visual Cue:* blue.) At any given time, multiple groups may be around the same saxophonist, and some saxophonists may not have anyone near them. Facilitators may instruct their audience members to sit down and may bring up additional audience members at their discretion. Eventually, the saxophonists begin moving freely around the stage.
 - *Notation:* Same as above.
 - *Electronic Sound:* None.
- **Build up:**
 - *Script:* Saxophonists gradually move towards the center of the stage, where they form a tight clump with each other. Facilitators and audience members continue as above, but naturally move towards the center as well to follow the saxophonists.
 - *Notation:* The length of the position history gradually increases and the notation becomes increasingly dense.
 - *Electronic Sound:* None.
- **Completely Free Movement:**
 - *Script:* Facilitators, saxophonists, and audience members move freely around the stage. (*Contextual Cue:* saxes move freely.) Facilitators use their discretion to instruct audience members to sit down and to bring additional audience members on stage.
 - *Notation:* Same as above. Eventually, the notation becomes less dense.
 - *Electronic Sound:* Each audience member’s current (x,y) location generates a component of a spectral “mush”.
- **Audience is seated:**
 - *Script:* Facilitators instruct audience members to sit down, one by one. (*Visual Cue:* green.)
 - *Notation:* Same as above, and position history length gradually decreases.
 - *Electronic Sound:* Same as above, and number of harmonics continue to decrease.
- **Conclusion:**
 - *Script:* Saxes stop playing and go offstage. Then the facilitators, one by one, leave the stage, as the lights fade to black. (*Contextual Cue:* all saxes offstage.)
 - *Notation:* Same as above until saxophonists leave stage.
 - *Electronic Sound:* Same as above until all saxophonists and facilitators leave stage.

3.6 Q&A Session

After the performance, the audience is invited to stay for a brief Q & A session with the saxophonists, facilitators, and creators.

4 Cheat Sheet

Section	Cue	Info	Action
1. Covey	—	—	Stay backstage
2. Verbal Introduction	—	—	“
3. Quartet Entry	—	Saxes come onstage.	“
3. Facilitator Entry	Contextual Cue: all saxes onstage.	Everyone frozen.	3 facilitators on stage, one by one, + freeze.
3. Audience Entry	Contextual Cue: 3 facilitators onstage.	Everyone frozen.	Last facilitator brings out 4 audience members, one by one, and freezes them.
3. Common-tone Motion	Contextual Cue: 4 audience onstage.	“	Last facilitator becomes “controller”, moving one person at a time.
3. Build up	Visual Cue: white.	“	Additional facilitator becomes a controller.
3. Climax	Visual Cue: yellow.	Everyone moves freely.	All facilitators move freely and instruct all audience to move freely.
3. Transition	Contextual Cue: Saxes leave stage.	4 audience members remain on stage.	Put audience members into a horizontal line and freeze them.
4. Building Lines	Contextual Cue: line formed.	Electronic sound only. Saxes remain offstage.	One facilitator remains with line. Other 3 facilitators each form a new horizontal line of 4-6 audience members.
4. Saxes Return	—	Lines remain still.	Do nothing.
4. Moving Lines	Contextual cue: all saxes back onstage.	—	Each facilitator leads his line around stage.
4. Merging Lines	Visual cue: Orange.	—	Four lines merge into one big horizontal line
4. Transition	Contextual cue: lines merged.	Saxes go to four quadrants.	Facilitators instruct audience to sit down, one by one.
	Contextual cue: audience seated.	—	Go offstage.
5. Facilitator Entry	Contextual cue: facilitators offstage.	No electronic sound. Polar mappings.	Facilitators come onstage one by one, each dances around a

			saxophonist.
5. Audience Entry	Visual cue: red.	Facilitators continue to dance around saxes.	Each facilitator gets 2-3 audience members to join him.
5. Freer Movement	Visual cue: blue.	Eventually, saxes start to move.	Facilitators (and their audience members) begin to “jump” from one sax to another.
5. Build Up	—	Saxophonists form a clump at center stage. Music becomes dense.	“
5. Completely Free	Contextual cue: saxes leave center stage.	Free movement for everyone. Electronic snd begins.	Facilitators instruct audience to move freely and move freely themselves.
5. Audience is Seated	Visual cue: green.	Music thins out.	Facilitators instruct audience to sit down, one by one.
5. Conclusion	Contextual cue: saxes begin leaving stage.	—	Facilitators continue interacting freely with saxes and each other.
	Contextual cue: all saxes offstage.	Only electronic sound remains.	Facilitators exit stage one by one.

5 Audience Instruction Cards

Come with me.

Stay right here.

**Return to
your seat.**

Dance.

Walk.

Roam.

**Lead someone
else.**

**Follow
someone else.**