Eleven Rooms

for four saxophonists, a media-artist and a mixed-media setup

by

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Written for and commissioned by *KLEXOS*

Eleven Rooms consists of the following sections:

Entrance

Translation

Surveillance A

Solo A

Surveillance B

Solo B

Surveillance C

Solo C

Surveillance D

Solo Quartet

Agora

Exit

The total duration of the performance is flexible but can be estimated at approximately 20 minutes.

Each section is described individually further below.

Setup:

The performance is divided between sections taking place outside of the concert hall (Entrance), in the concert hall but not on stage (Exit), and those that are taking place on stage. The area outside the concert hall should ideally be the entrance area of the building or where the audience dwells before a concert starts and during the intermission.

On stage a video screen is used for the projection of a virtual 3D environment that the media-artist is interacting with. In front of it, the four saxophones are positioned on instrument stands, parallel to the screen with equal distances (2-3 meters between each instrument, depending on the size of the venue). The mouth-pieces are removed and instead the tube of a talk-box is connected to each instrument. This tube remains attached throughout the performance. Hence, the instruments are never played in a conventional fashion. The talk boxes are connected to an audio-interface, which is connected to a computer operated by the media artist.

Next to the instruments a megaphone is set up on a stand, at the height of a standing performer. Connected to the megaphone is the same audio-interface which is used for the talk-boxes. Attached to the megaphone is microphone (a separate microphone could alternatively be used on an extra stand) which is running to the audio-interface.

The audio-interface of the media artists uses in total 4 input signals and 8 output signals. They are connected as follows:

Fig. 1 + 2 Talkbox connected to Soprano Saxophone

Saxophonist 1:
Microphone -> input 1
Talk-box   <- output 1
Megaphone <- output 2

Saxophonist 2:
Microphone -> input 2
Talk-box   <- output 3
Megaphone <- output 4

Saxophonist 3:
Microphone -> input 3
Talk-box   <- output 5
Megaphone <- output 6

Saxophonist 4:
Microphone -> input 4
Talk-box   <- output 7
Megaphone <- output 8

The media artist is running a SuperCollider program and a Unity standalone application that communicate with each other via OSC.

The interface of the media-artist is a game-pad connected to the computer. With the game-pad the performer can navigate through a 3D environment – a house with various rooms – which contains various sonic and visual functionalities. Alternatively, the navigation can be realized with specially configured keys on the computer keyboard.

The game pad and the navigation is configured as follows:

Right joystick: navigation (L/R + front/back in 3D mode; L/R + up/down in 2D mode)
L/R can also be operated with the 'a' and 'd' keys on the computer keyboard
Front/back can also be operated with the 'w' and 's' keys on the keyboard
Button 1: jump (also 'spacebar')
Button 2: change scene (also 'g')
Button 3: duck (also 'y')
Button 4: tilt view upwards (also 'e')

Fig. 3 configuration of game-pad

Design of the virtual house

In the virtual house a total of 9 rooms are accessible. Apart from the living-room and a bath-room, all are private rooms. Those 7 rooms are attributed to the four saxophone players. The ground plan looks as follows:

Ground floor:

Fig. 4 ground floor of the virtual house and the distribution of rooms
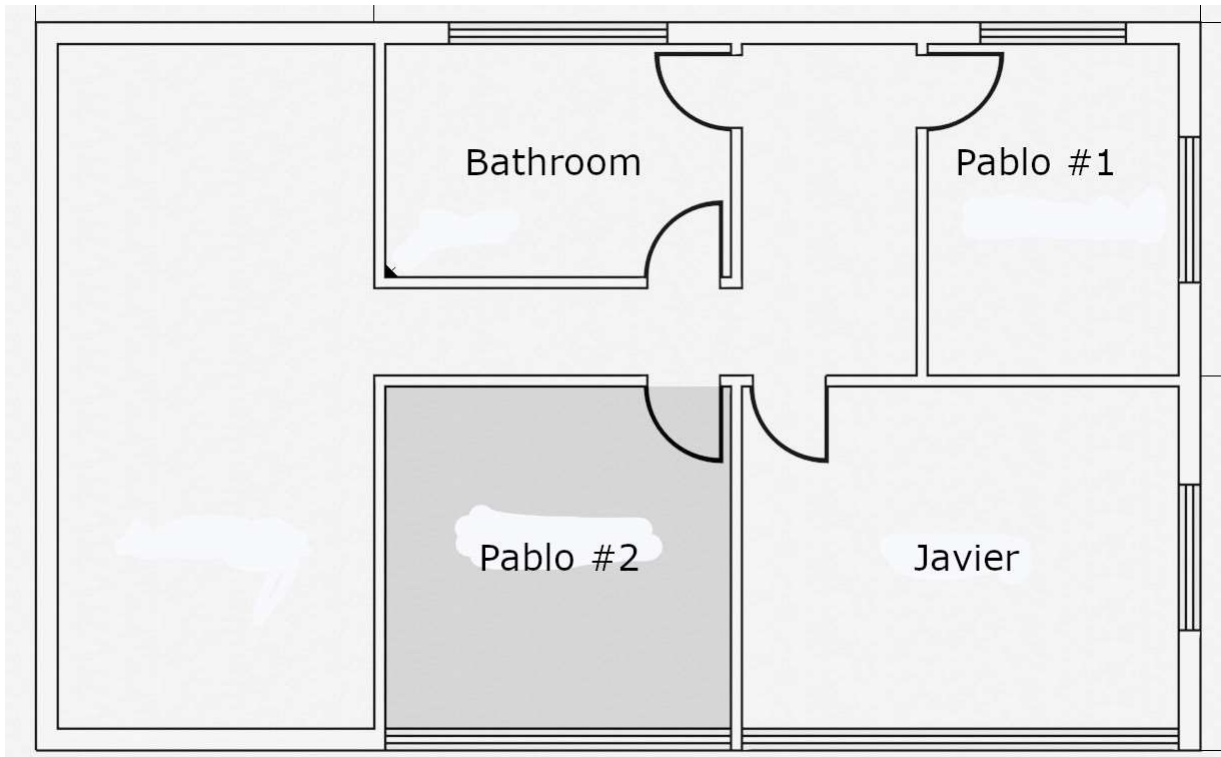
First floor:

Fig. 5 first floor of the virtual house and the distribution of rooms

Entrance

The saxophonists start the performance outside of the auditorium, where the audience dwell before the start of the performance. Each carries a tablet and their saxophone mouthpiece. On each tablet, three videos are contained, titled with their name and 01. ENTER, 02. LOOP, and 03. END.

The four performers start the first film in strict synchronization. The first minute is silent and black. They go to different positions in the space, in proximity to the audience members but relatively far away from each other, while still being able to see and hear each other.

After a minute the films start playing. They are showing scenes from everyday-scenes of the individual players. The sound is either broadband colored noise, the original sound from the films or a synthesized sound with impulses. The musicians can respond and extend this sound in three different ways:

1) Play the exact pitch that you hear (or its octave) with your mouthpiece with *piano* to *mezzo-forte* dynamics and hold the pitch while the films move on to other sections, until the next pitched material by ANY saxophonist's tablet is heard.
2) Play the exact pitch that you hear (or its octave) with your mouthpiece with *piano* to *mezzo-forte* dynamics and perform a slow glissando upwards while the films move on to other sections, until the next pitched material by ANY saxophonist's tablet is heard.

3) Play pitched or unpitched slap-tongues, imitating the rhythm of the impulses you heard.

After about two minutes slowly move to the auditorium. Indicate to the audience to follow you, as the continuation of the piece will take place in the auditorium. Before the first audience members enter the concert hall, the media artist has already started with the next section. Once the performers are in the concert hall and the seats fill up, they gradually fade out the sound of their films (which are by then only showing a black screen.

While the media artist I performing the section Translation, and before the saxophonists enter the stage, they switch to the film 02. LOOP (no synchronization needed!). If four additional video projectors are available, the tablets should be connected to them. The projectors should be pointed at the walls of the auditorium at the side of the stage area. The projectors don't need to be of same size and model and the walls they are projecting on neither need to be even nor in plain bright colors.

If no additional four video projectors are available, the four tablets should be positioned in the auditorium (not on stage but rather to the line and right side of the audience's line of sight) in such a way that the audience can see them.

Translation

This section is performed by the media artist while the **four saxophonists**:

- enter the concert hall,
- slowly walk on stage,
- stand beside their saxophone.

Performance Instruction:

With the game-pad, the media artist navigates through the virtual building that is projected on the screen, starting in the hallway. Once a room is entered, a pulse sequence starts to play through the four talk-boxes. When entering other rooms that have not been visited before, the pulses change.

In 4 of the private rooms the performer will find a TV-set where one of the saxophonists is seen playing their instrument. The performer should approach those TV sets which will cause a trigger which turns off the TV and makes a butterfly appear in front of the first-person perspective. These butterflies are the actual avatar of the media-artist.

Fig. 3 A room with a TV set, showing one of the players

In short, the task of the **media-artist** in this section are the following:

- Navigate through the entire building, changing the pattern and the harmonic constellation with entering each new room.
- Locate the TV sets and trigger them so the TV is 'turned off' and a butterfly appears (4 butterflies in total).
- Perform all these actions with musical awareness! By choosing a particular sequence of rooms and a certain timing, the musical result can be shaped delicately!

Fig. 4 View of the four butterflies serving as avatar

The bathroom has a special feature: when the media-artist 'looks' in the mirror of that is hanging in the bathroom, a delay signal is turned on that warps all running sounds.

Fig. 5 The mirror in the bathroom that triggers a signal when the view is directed to it

After the 9th room has been visited, the impulses gradually transform to a sustained harmony and the next section is started: Surveillance

Surveillance A–D

Basic situation:

The media artist navigates through the virtual 3D house. A total of 16 surveillance cameras are built into the house, 4 of them are active at a time and are displayed on the projection screen in screen-split mode. The performer's view, that previously covered the entire screen, is now confined to a small superimposed window in the lower right corner.

Tasks – media-artist:

Whenever a camera spots the avatar of the media artist, pulsating sustained pitches will become audible. The media-artist should try to evade those surveillance cameras while moving between the rooms.

Tasks – saxophonists:

Whenever the media-artist enters a room of one of the players, recordings taken from the player's daily life situations become audible in the Talk-Box of the saxophonist. If the player then blows into the microphone, one of the following two options happen:
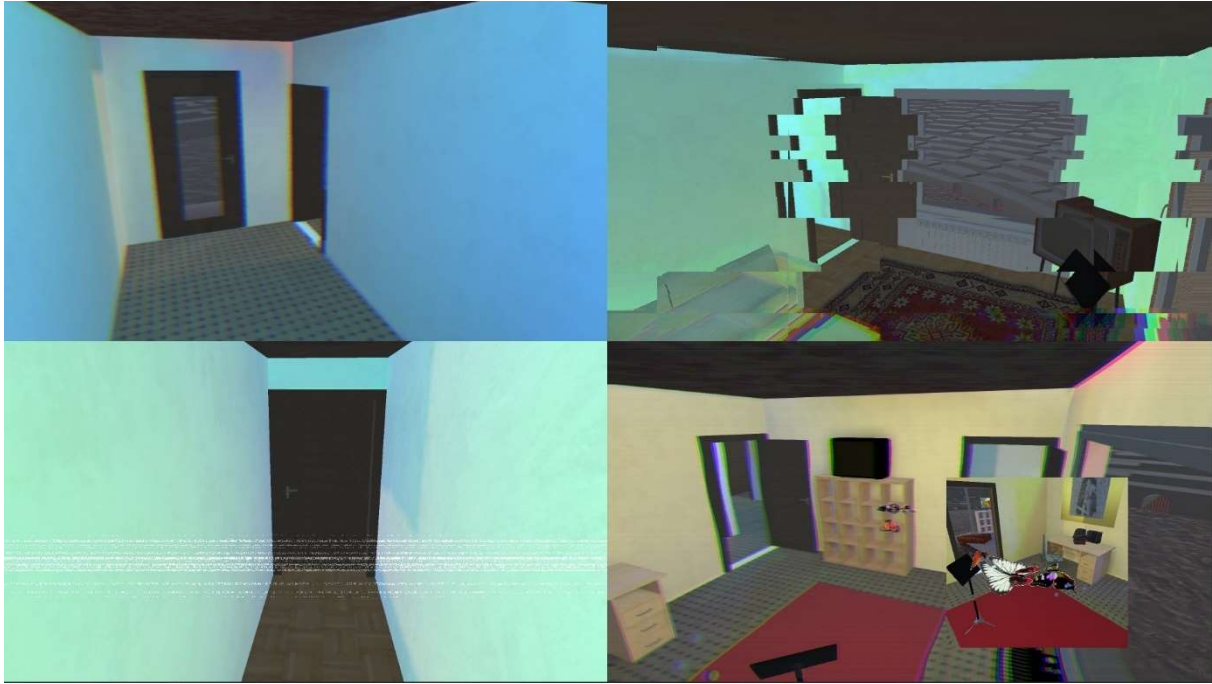
Fig. 6 The split screen with the surveillance cams and the performer's view in the lower right corner

1) If the media-artist has **NOT** been spotted by one of the surveillance cameras, the sound of blowing into the microphone will start a sequence of resonating noise sounds going from saxophone to saxophone (or rather: from talk-box to talk-box). The blowing player should keep blowing until the resonant noise becomes audible (this happens with a delay of several seconds). **Each of the other saxophonist** should then perform rhythmisized fingerings on their saxophone while the noise is audible. The fingerings should be chosen so that clearly discernable different filterings of the noise occur. The changes of fingerings should be based on the tempo that can be picked up by pulsations in the synthesized pitches. If those are not clearly discernable, a tempo of quarter = 72 should be taken as reference. As the resonating noise moves from player to player, they should also pick up the tempo and style of changes of fingering from each other.
While the noise travels from instrument to instrument, videos of the player's apartments become visible in one of the quarters of the split screen on the video screen.

2) If the media-artist **HAS** been spotted by one of the surveillance cameras, the sound of blowing into the microphone will immediately start a dense chordal texture that is played through all the talk-boxes. All players should start to perform fingerings on their instrument in a coordinated way: they start after the blowing saxophonist gives them a cue. They stop with the fingering once the chord has faded out – the cue for stopping is again given by the same player.
While the chord is playing the apartment of the player who blew into the microphone is visible on the entire projection screen.
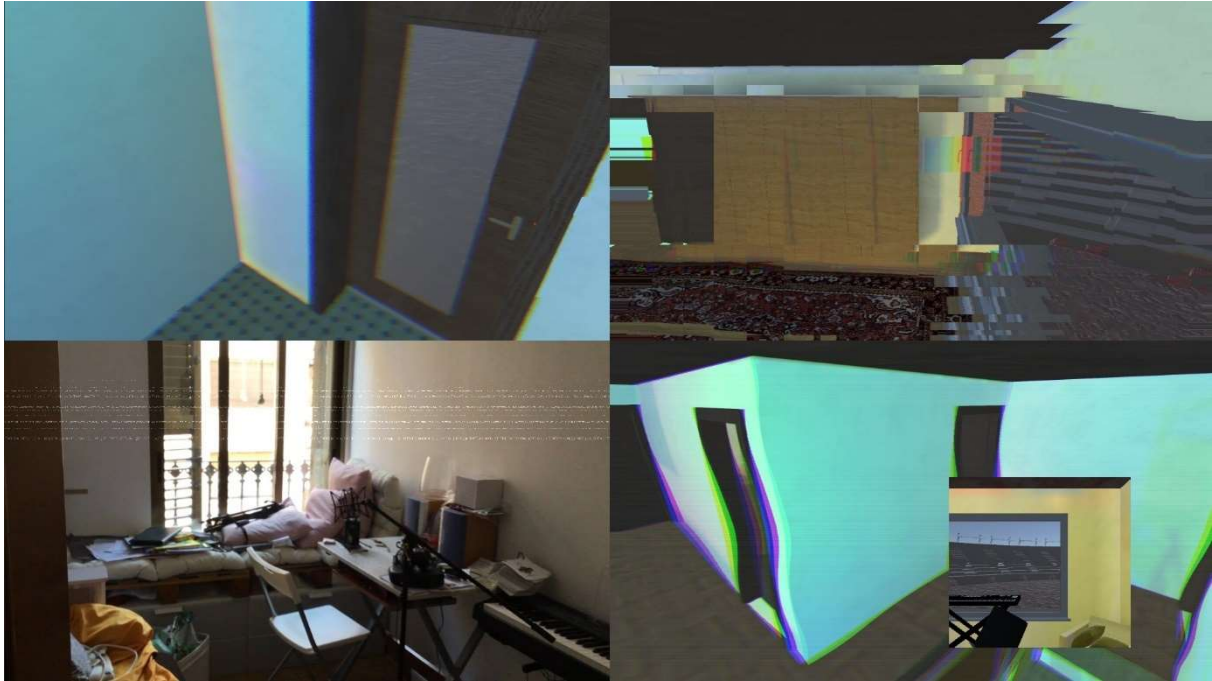
Fig. 7 recording from an apartment are replacing the virtual surveillance cams (lower left quarter)

Fig. 8 apartment on main screen from the player who triggered a chord

The chord described in 2) will connect to the next section. In Surveillance A this transition will occur after the chord has been triggered the 3rd time, in Surveillance B after the 2nd time, and in Surveillance C and D after the first time. Each Surveillance section leads to a Solo section:

Solo A–C, Quartet

The soloist is the saxophonist who triggered the last chord that led to this section. If the same player has already been a soloist before, the 'solo-role' is passed on to the next player who has not been a soloist, yet.

During the solo section the video shows the current-soloist playing the saxophone. The recording belonging to the video is audible as well, but in a heavily processed fashion. In Solo B, C and Solo Quartet not only the sound of the current soloist will be heard bit also of the previous solists.

Task-soloist

The soloist takes the mouth-piece of the saxophone and performs a slow upward glissando with forte dynamic. Circular breathing can be used, the duration should be approximately between 20-40 seconds.

Task-former soloist

In Solo B, C, and Solo Quartet the players who have had the role of soloist in one of the previous Solo sections, also blow into their mouth-piece, precisely coordinated with the current soloist. However, they remain on a static pitch of their choice without performing a glissando. They also end their note in coordination with the current soloist

Task-non soloists

The players who are neither former nor current soloist can blow into the microphone during this section or perform pitched or unpitched slap-tongues. Blowing can be performed as short impulses or in longer blocks. The actions will cause distortions of the image of the playing soloist on the screen – the screen behaves like an elastic surface that vibrates after a virtual force has been applied to it. These distortions of the image in turn will alter the parameters of the sound processing of the playing of the soloist(s).
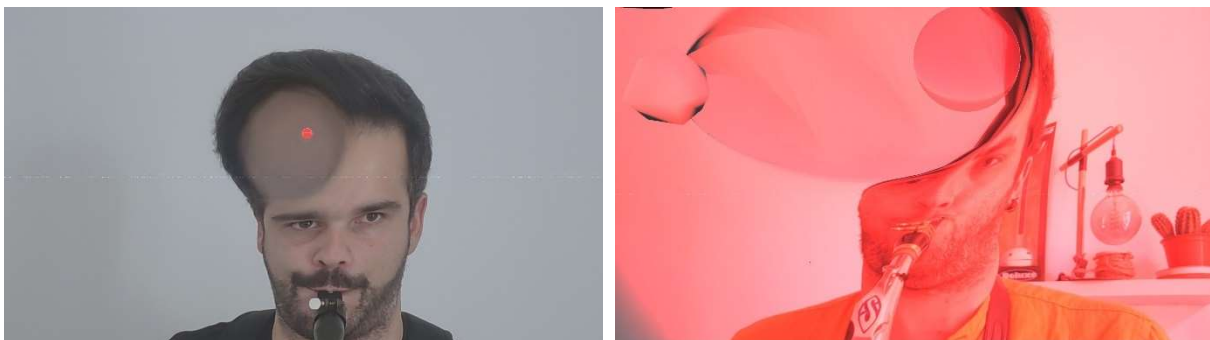

Fig. 9+10 video recordings of soloists distorted by a blowing player

The distribution of the roles among the saxophonists during the different solos are thus as follows:

Solo A:
1 soloist
3 saxophonists blowing into microphones

1 recording is heard in a processed fashion

Solo B:
1 soloist
1 former soloist
2 saxophonists blowing in microphones
2 recordings are heard in a processed fashion

Solo C:
1 soloist
2 former soloists
1 saxophonist blowing in microphone
3 recordings are heard in a processed fashion

Solo Quartet:
1 soloist
3 former soloists
4 recordings are heard in a processed fashion
During this section, the video screen shows all 4 players in split-screen.

Task media-artist:

During Solo A, B and C the media-artist is idle. However, the media-artist triggers the return to section Surveillance in coordination with the current soloist by pressing the button 2 on the game-pad.

In Solo Quartet, the media-artist can perform the distortion of the video image in the same fashion as the blowing players did in the earlier sections. However, in Solo Quartet the butterflies become visible again (this time 5 butterflies, not 4!).

The media-artist can navigate the flock of butterflies left and right (keys 'a' and 'd'), and up and down (keys 'w' and 's') with the joystick on the game-pad. With buttons 1 and 3 (or keys 'space' and 'y') the flock can be moved closer or further away. When the flock gets very close to the screen, the same distortion of the image occurs as during the previous solos.

Fig. 11+12 Solo Quartet with the flock of butterflies causing the distortion of the image

Hitting button 2 after Solo D will not lead back to the section Surveillance but to the section Agora:

Agora

In this section the media-artist acts as a soloist. The four saxophonists play homo-rhythmic slap-tongues following a cue given by the media-artist.

Task media-artist:

The game-pad now has the function to control a sound that the media artist improvises with. The functions are as follows:

Joystick left-right: density of a repeating impulse sound, from approximately 1 impulse per second to 200.

Joystick up-down: the timbre of the impulse crossfades between a filtered percussive impulse (up) to a pitched impulse with four frequencies.

If the media artist holds the joystick in its left position for more than 2 seconds, a cue becomes audible that serves as an entrance cue for the saxophonists.

Task saxophonists:

The cue that serves as an entrance for the aforementioned slap-tongues consists of chords played through the four talk-boxes. The chord is played 8 times as 16th notes with a clear emphasis on the first and third in a group of four sixteens. The slap-tongues are fed into a delay system, which changes after every given cue. A total of nine cues are given by the media-artist. The slap-tongues should first be performed as pitched and with every additional cue less pitched, so that they are entirely non-pitched after the ninth cue.

The screen goes black at first but after about 40 seconds a QR code fades in with the invitation for the audience to point their mobile device to it and to load the page https://eleven-rooms.iem.sh, to start the film that is loaded and to play it. Every time somebody loads this page, another film from a selection of 28 films is chosen and played back with sound. This situation overlaps into the last section of the performance: Exit

Exit

During this section the saxophonists leave the stage area, take their tablet, turn up the sound and play the film with the name END. The film shows themselves practicing the saxophone but with a heavily processed sound. Point the screen towards the audience and walk around them. The sound of the processed saxophones should mix with the videos still playing on the audience members' mobile devices. Once the situation becomes too static, the performers end the performance by fading out the sound and turning off the tablet.