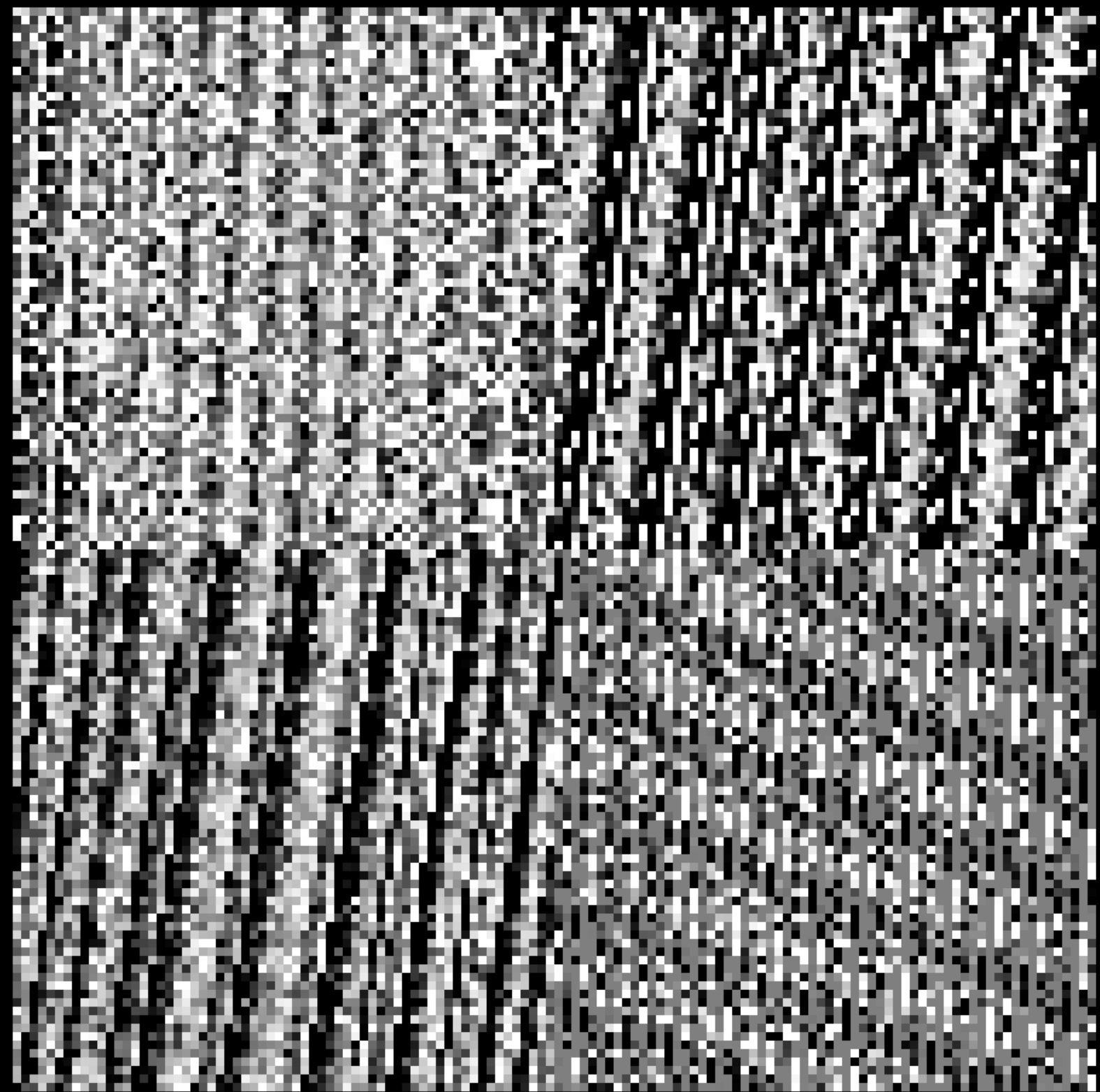Pixels

Pixels (2018)

Form
Interactive generative audiovisual Installation for computer, video projector, sound system and kinect camera.

Description
Pixels is an interactive generative audiovisual installation inspired by Ryoji Ikeda that tightly synchronizes visual and auditive impressions. It consists of a square projection of black and white pixels on the floor that lets the audience immerse in a digital memory space which is constantly rewritten with new pixel values. The pixel brightness of 4 sectors are scanned line by line and serve as audio samples for the 4 channels of sound. So, the sound and the visual output are the same data and lead to a synchronized aesthetic experience. Audio feedback between the sectors is used to establish order in a field of noise. The output varies between digital artefacts and organic impressions, between harsh, chaotic noise and more tonal organic sounds.

The system's behavior is dependent on the visitors' presence. Through a kinect sensor mounted on the projector, which is placed above the floor and projects onto the ground, allows for user interaction. Visitors can influence the behavior of the system through their presence and movements in an intuitive way. But it's not about controlling the system, it's about exploring and experiencing the reaction of an unknown entity. Users can even make the system glitch, which questions the predictability of such generative systems. There's no limit on the number of users, but with no audience present, the projection is just a grey area with no sound. As soon as people enter the square area their presence is detected which increases the activity of the system and their traces are fed into the system which serves as an initial input for the processing which in turn overwrites this input again. So, the audience's traces are constantly overwritten. The software is programmed with the processing language and the beads library for audio.

Setup
The height of the room should be 3 or more meters, because this installation uses a projection from the ceiling onto the floor. Depending on the height of the room, the projector should be a short throw projector to achieve a big enough picture size. The Projector is mounted under the ceiling together with a kinect camera, which is filming the area of the projected visuals.

The four loudspeakers are placed with some distance in the corner of the square projection facing the center.

The room should be dark without any additional lighting.

Pictures