BOATNOA : AN AUDIOVISUAL REFLECTION ON A MODERN CITY

Óscar Bahamonde
dotzerosix
Universitat Politècnica de València
obahsua@posgrado.upv.es

Tania Cortés
dotzerosix
Universitat Politècnica de València
tcorbec@posgrado.upv.es

Gabriela Yánez
Independent Sound Designer
gyanez.sound@gmail.com

ABSTRACT

L'article suivant est une description étendue d'une composition audiovisuelle immersive et d'une performance appelée *boatnoa*. Cette œuvre représente les conditions modernes de la ville dans laquelle elle est présentée. Grâce aux méthodes de collecte et aux processus numériques utilisés, les artistes commentent les activités et les attitudes omniprésentes facilitées par les dispositifs numériques et les « boîtes noires ».

Dans ce contexte, cette œuvre offre au public une expérience pour réfléchir aux sujets proposés et, par conséquent, méditer sur leurs rôles dans le temps, l'espace et la caractérisation de la ville dans laquelle ils vivent.

1.   INTRODUCTION

boatnoa is a live A/V piece with real-time audio reactive visuals. As a composition, it maintains a general structure, while also allowing for improvised sections. In this work, the real-time audio reactive performance employs an ambisonic system and two parallel projections in order to generate an immersive space. Visuals react to sound, creating a space that invites the audience to reflect on the concept of 'a modern city', and what it means to inhabit it.
Audio and image are used to rethink the city (referencing its physicality, its people) and the digitality inadvertently present in it. On one hand, the evident references of the city are created from material taken from Paris itself: images, videos, soundmarks and soundscapes are components that describe its sensory characteristics. On the other hand, the methods used to gather this material speak of the ubiquitous digital activities: photogrammetry, recordings, digital photography, and sound and image manipulation.

The output of this work aims to offer two possibilities to its public: first, to allow a place and time for reflection, as the audience faces a condensed version of their urban living and different angles of it; and second, to expose the audience to uncommon creative languages, promoting a normalization process towards digital artistic works.

This paper will focus on the aesthetic representation of the mentioned concepts, as well as the description of the system behind *boatnoa*.

2.   BRIEF OVERVIEW OF BLACK-BOXES IN DAILY LIVING

This work is a creative reflection on modern devices, which have almost become an extension of our bodies and our perceptions. These are so ubiquitous, and yet they are designed to keep most people ignorant in regard to their inner workings. These unknown, hidden but essential parts of our devices are known as black boxes, and are purposely designed to be only used and not understood [2] (Hertz & Parikka, 2012).
As *boatnoa* uses sound and image to bring the hidden to the audience, the artists aim to allow for some reflection on the matter: how many invisible things happen in front of us, and because of us, every day? How do these ghostly processes affect the characteristics of the city we live in?

3.   CONCEPT AND AESTHETIC OUTPUT

3.1. Structural concepts

Since *boatnoa* talks about a modern city and its inhabitants, it is essential to revise the presence of devices in daily living. These ubiquitous machines are the core topic of this work; in consequence, the audiovisual work approaches their two sides: the one that is manipulated by citizens and have become part of their routines (audio recordings, photos, videos), and the other known as 'black boxes' that is unreachable and mostly unknown to people. This concept is adopted for this work and presented as purpose-built devices that shape the sound and sight of *boatnoa*.

There are other secondary concepts that describe a modern city, which also relate to technology and describe human complexity. All these are part of the discourse expressed through sound and image in *boatnoa*: intergenerational links, diversity and plurality, mobility and sense of belonging.

3.2. Aesthetic choices

Specific processing techniques (sonic and visual) were chosen in order to cover three creative needs: a) to symbolize the ideas in the aforementioned concepts, bringing the digital (computers) into the human (creativity), b) to keep a high degree of coherence in relationship to the artists particular mode of expression, and c) to reinforce a certain level of connection between the main topics and the audience, as they would associate certain effects to the idea of "digitalism".

The techniques that translate to aesthetic choices in *boatnoa* are as follows:

3.2.1.   Sound processes

Delay:
This time-based effect symbolizes the presence of intergenerational bonds. A modern city is a complex superimposition of age groups, where some relate to technology more than others, but all are affected by it. Digitalism has generated conflict between these groups, but it has also brought opportunities for communication and closeness.

Harmony:
A modern city cannot be described without thinking of plurality. When using effects for harmonization in *boatnoa,* the intention is to mention all this complexity that makes the city: human mobility, efforts for inclusion, and diversity are topics sensibly thought of with this work. The constant presence of digital tools has given access to information and organization related to those topics. From the artistic point of view, digital tools have become a platform for a plurality of voices which otherwise would not be heard so closely.

Granulation:
The process of granulation is employed as an analogy. Just as this effect breaks down a sound into its micro-components, *boatnoa* aims to analyze the different smaller elements that compose the modern city. The use of granulation in this work elevates the complexity of its elements by looking closely into them. Just as this process zooms in into the texture of a picture and breaks down the grains of a voice note, in the context of a city each person represents the granulated whole. As a result, granulation is a comment on communal responsibility, since a city is the expression of its inhabitants, on the ways they come together or disregard each other.

3.2.2.   Visual processes

Glitch:
The visual elements of *boatnoa* are constructed from the same materials (digital captures of the city) but are used to reveal the inner workings of the human-machine relationship. Hence, the evident visual errors known as "glitches" are purposely employed as a hint about devices and black boxes. This visual characteristic is in itself the result of working with machines and, more specifically, it is the result of aesthetically embracing errors [1] (Cascone, 2000). Glitches become small, almost magical, displays of the automatic processes that surround modern life, even when they are mostly ignored. In consequence, making these errors visual and audible become another creative possibility. Glitch is picked as an stylistic choice to express how the value of technology relies on the way people use it, even when it remains a mystery for most.

Photogrammetry:
This technique consists of recreating a 3D imagen parting from a series of 2D captures. By using this process, visual information from the city, taken with regular devices, brings depth into the representation of the place. To obtain these 3D models, the artists complete a series of processes which by their own digital nature bring more glitch into the final result. The models become a series of point-cloud images which are explored as a series of particles (Figure 1), each one capable of bringing in more visual effects: gravity, weight, movement, trajectories, loops, fusing of images, and more (Figure 2).

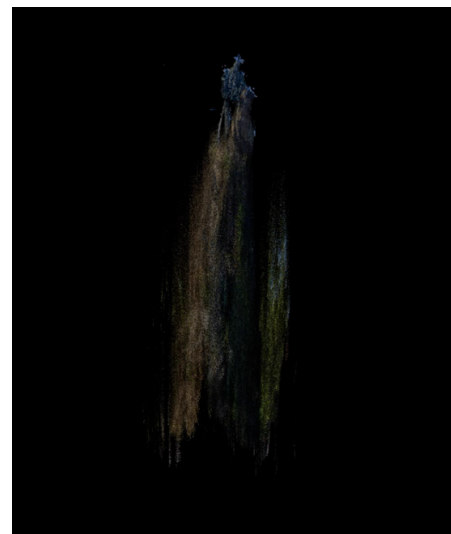**Figure 1**. Original 2D visual capture (left) can become a series of point-cloud information (right).

Figure 2. The point-cloud data can then be processed with effects for movement and texture.

Additionally, visuals are modulated by several sound parameters and triggers, which allows a solid and coherent link between sound and image. As a result, the audience experiences unconventional ways of perceiving their city, exploring different angles simultaneously.

Finally, the visual concept of this work is expanded by the way projections work. Two different surfaces are used for the image. The back screen represents those hidden processes on our devices, as they cannot be seen but yet are essential. The second projected surface is the frontal face of the performance. Made from gaze, this last layer represents the palpable interaction with all digital devices. Between both layers are the people, those who make technology meaningful.

4. TECHNICALITIES

The present work employs a 2D ambisonic array for sound and a two-screen projection that limits the area. Both sound and image are manipulated from the center stage, using personal computers and purpose-built devices. As mentioned before, the projection surfaces are set in front and behind the performers (Figure 3), while the speaker system surrounds them (Figure 4).

It is important to note that the chosen sound system will maintain the immersive character of the work while being adaptable. This work is built to fit different venues since its sound spatialization can be adjusted for any multichannel speaker configuration.
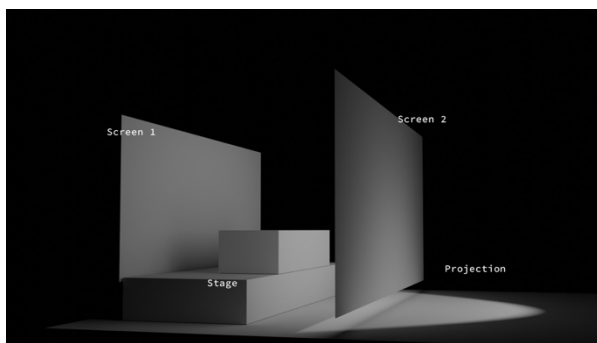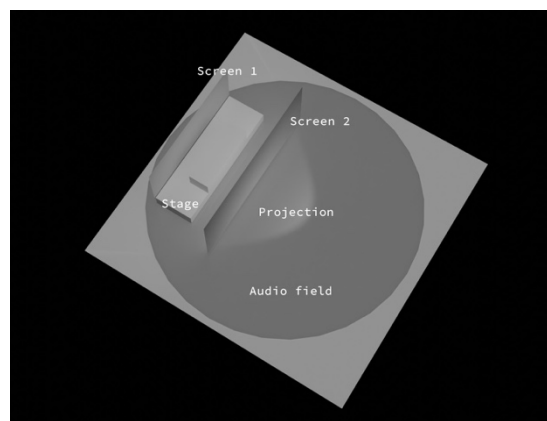

Figure 3. Stage set up.

Figure 4. The ambisonic set up can be adjusted to different multichannel speaker configuration, while the visuals are projected in two surfaces.

5. CONCLUSIONS

This extended description of the audiovisual work *boatnoa*, exposes its inner workings and the thought process of the artists. The marriage of both gave way to an immersive audiovisual composition and performance that serves as a place (time and space) for an audience to reflect upon the concept of a 'modern city'. Besides the sensory and conscious elements of a place perceived daily through sight and sound, it is essential to recognize the mostly unconscious presence of digital devices. This concept is highlighted by the methods of representation employed in *boatnoa*. Consequently, the audience is invited to recognize this now omnipresent element that influences and affects their daily urban living, in order to rethink their roles in the city with and through digital devices.

6. REFERENCES

1. Cascone, K. "The Aesthetics of Failure: 'Post-Digital' Tendencies in Contemporary Music." *Computer Music Journal*, vol. 24, Cambridge, USA, 2000.

2. Hertz, G. & Parikka, J. "Zombie Media: Circuit Bending Media Archaeology into an Art Method." Leonardo Music Journal, Cambridge, USA, 2012.

3. Russolo, L. "THE ART OF NOISE" [online], <http://www.artype.de/Sammlung/pdf/russolo_noise.pdf>, (Accessed February 28, 2023).

4. Thomson, P. "Atoms and errors: Towards a history and aesthetics of microsound." Organised Sound, vol. 9(2), 207–218, [online], <https://doi.org/10.1017/S1355771804000299>, (Accessed February 28, 2023).