

Expanded Interfaces – Element 2 Practical Submission

Title: Human_Drone_Markers

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An interface designed to encourage the acts of 'searching' and 'listening'; exploring themes of migratory movements and surveillance

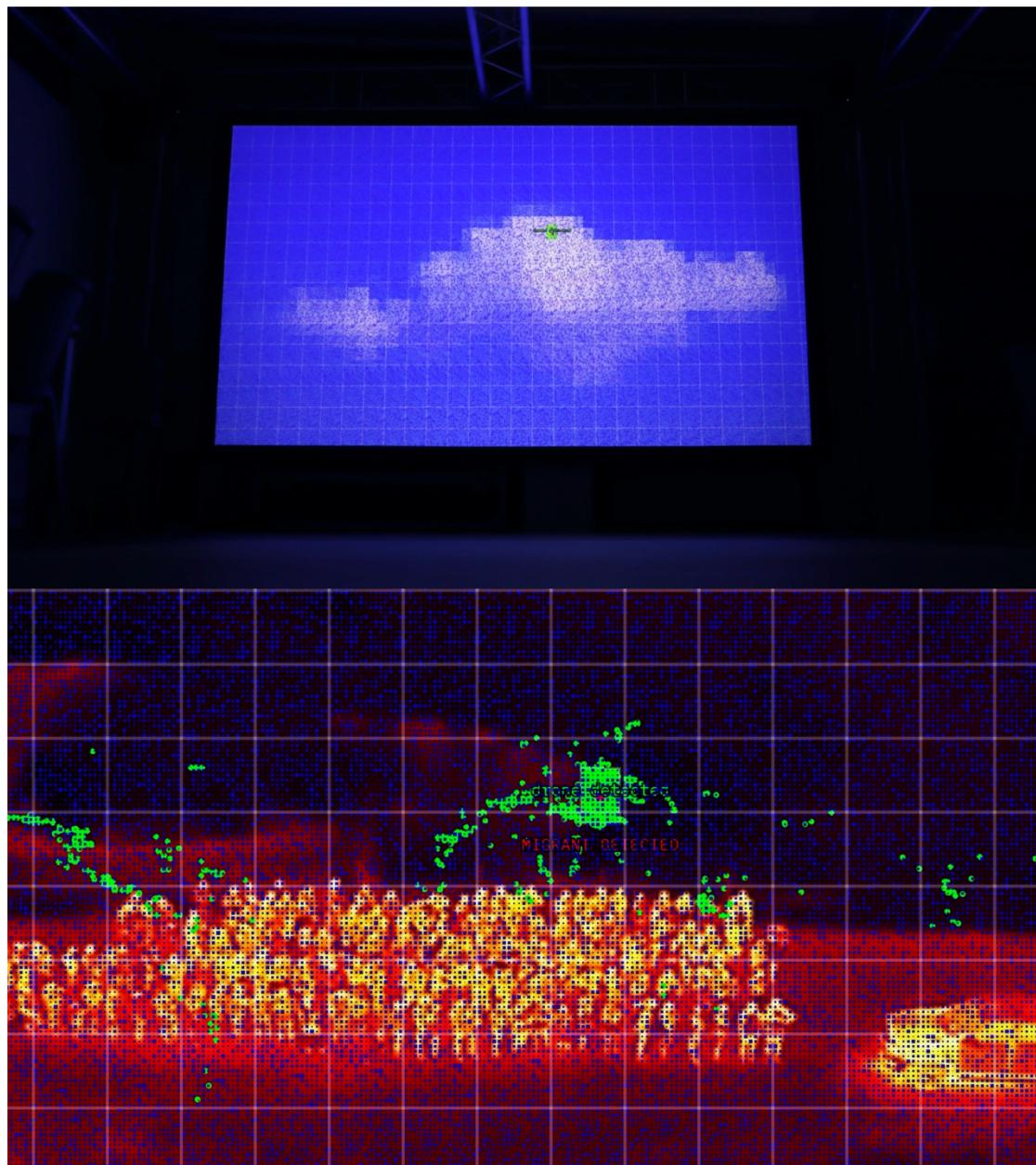


Fig.1– ‘Human_Drone_Markers’
Expanded Interfaces Project (p5.js)

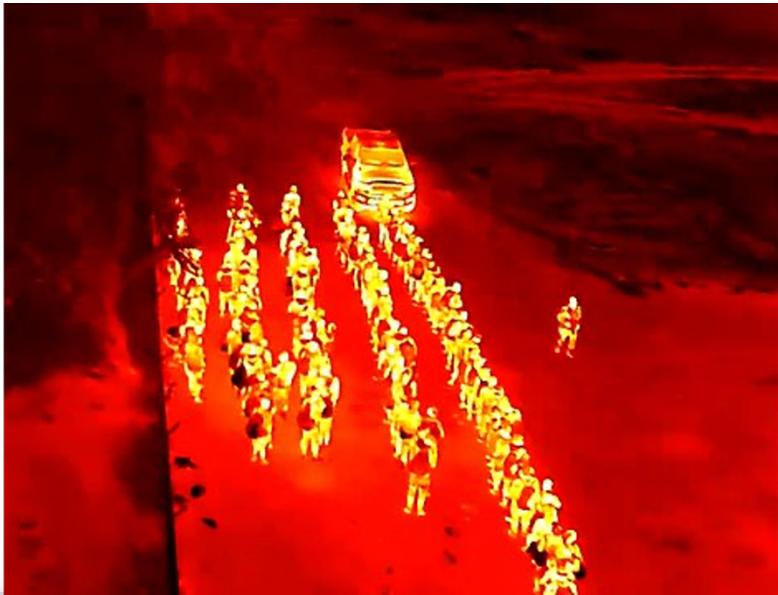
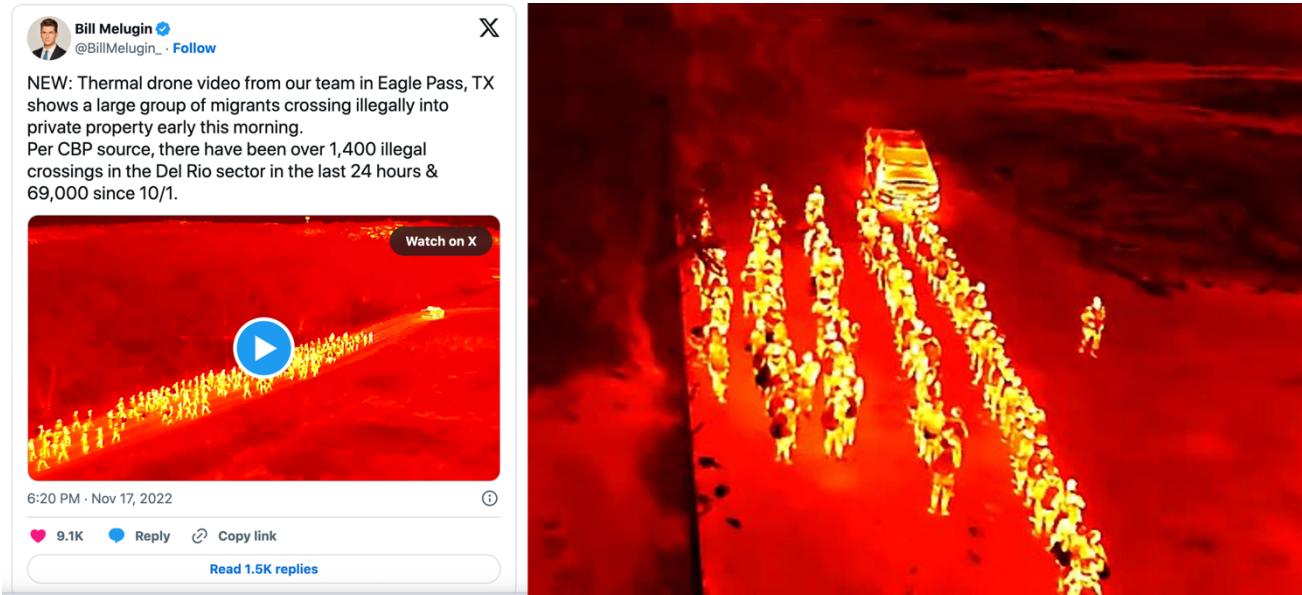


Fig.2 – Daily Mail – Thermal drone footage of illegal migrants
Aneeta Bhole, 18 November 2022

On November 18th, 2022, Aneeta Bhole released an article detailing the news of a new thermal drone video that reveals a large group of migrants crossing illegally onto private property (Bhole, 2022) [Fig. 2]. The increasing use of drones to enhance coastal surveillance operations has served as the starting point for my project, sparking my interest in the deployment of drones on high ground to monitor migratory movements. Upon researching how these devices are used to patrol borders, I discovered that the ‘Missing Migrants Project’ hosts the only existing global database on migrant deaths. I realised that despite the ongoing crisis of unsafe migration worldwide, this issue appears to be hidden and overlooked in our collective awareness. To address this problem and the ethical considerations behind the use of drones, my project endeavours to prompt political reflection on the implications of mass surveillance. Simultaneously, it targets audiences who take interest in the critical issue of humanitarian concerns.

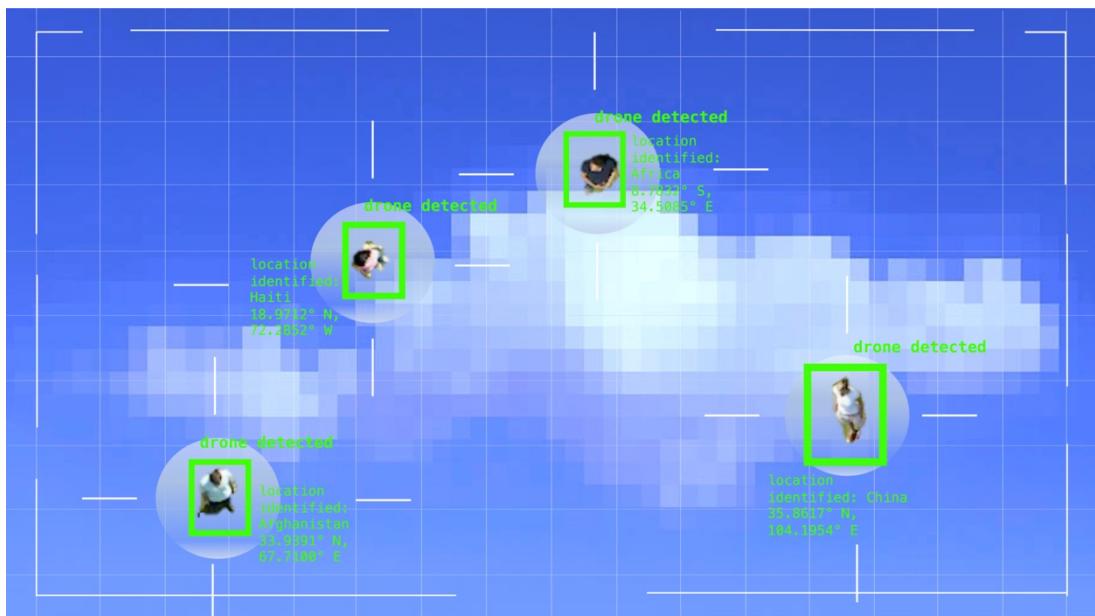


Fig 3. – Initial planning and sketches
Visualisation and representation of monitoring above high ground

The aim of this project is to create an interface that encourages participants to engage with data through performing tasks such as surveillance and monitoring. My objective is to use a metaphorical approach, simulating and re-enacting the experience of monitoring above high ground. Drawing inspiration from the concept of glass floors, I used an image of a sky to allow participants to experience the feeling of being suspended in mid-air while observing the landscape below. Intrigued by the dynamics of ‘concealing’ and ‘unveiling,’ and the filtering of information, I introduced a blurred, pixelated cloud to further replicate the effect of concealing information. This serves to comment on algorithms and their constant arbitration of what is shown and what remains hidden. By intentionally creating a ‘filter’, the interface alludes to the habitual norm of what we ‘don’t want to see’ or typically choose to ignore on television news. While this conveyed the concept of monitoring from high ground, I found that it did not effectively portray the consequences of mass surveillance and privacy invasion. This prompted me to introduce additional object detection, emphasizing security concerns and acting as an ‘interference’ that prevents participants from searching the correct locations. In doing so, I introduce a dynamic interplay of time constraints and responsibilities.

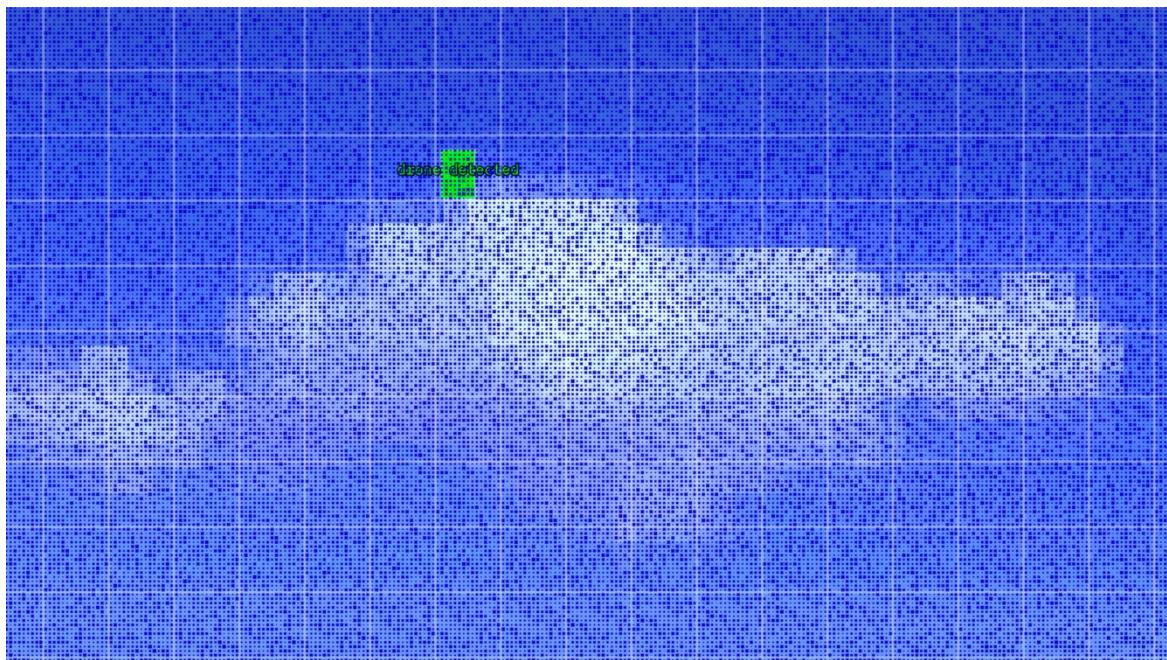


Fig 4. – Pixelated cloud filter (p5.js)
Representing surveillance and searching above high ground

To initiate the search of missing migrants and thereby reveal the concealed data, participants will be recognised as ‘drones’. Subsequently, they will engage in the task of actively searching for coordinate points and the number of missing or deceased migrants. During this process, an SOS sound signal is generated, serving as a guide that gradually increases in volume as participants get closer to a specific coordinate. As illustrated in [Fig.3], my envision was to situate this project in a physical setting where the canvas will be projected onto the floor. Participants would be invited to walk over the canvas to mediate this interaction. The goal here is to demonstrate spatial awareness – the understanding of one’s surroundings, as well as auditory navigation – the ability to navigate by relying on auditory cues and sound direction.

The interactive elements of ‘searching’ and ‘listening’ aim to mirror the haunting experience of migration. Specifically, to elicit a response of urgency, desperation and fear. While participants embody the role of ‘drones’ in a quest to locate coordinate points, this activity of border patrol simultaneously portrays how illegal migrants live in constant fear and uncertainty of being caught. It transforms into a poignant reminder of the journey migrants undertake in search of a better environment. The SOS signal further conveys the heightened senses and awareness migrants develop during their journeys. Interestingly, the signal can be interpreted in two ways – a cry for help, or a sense of danger.

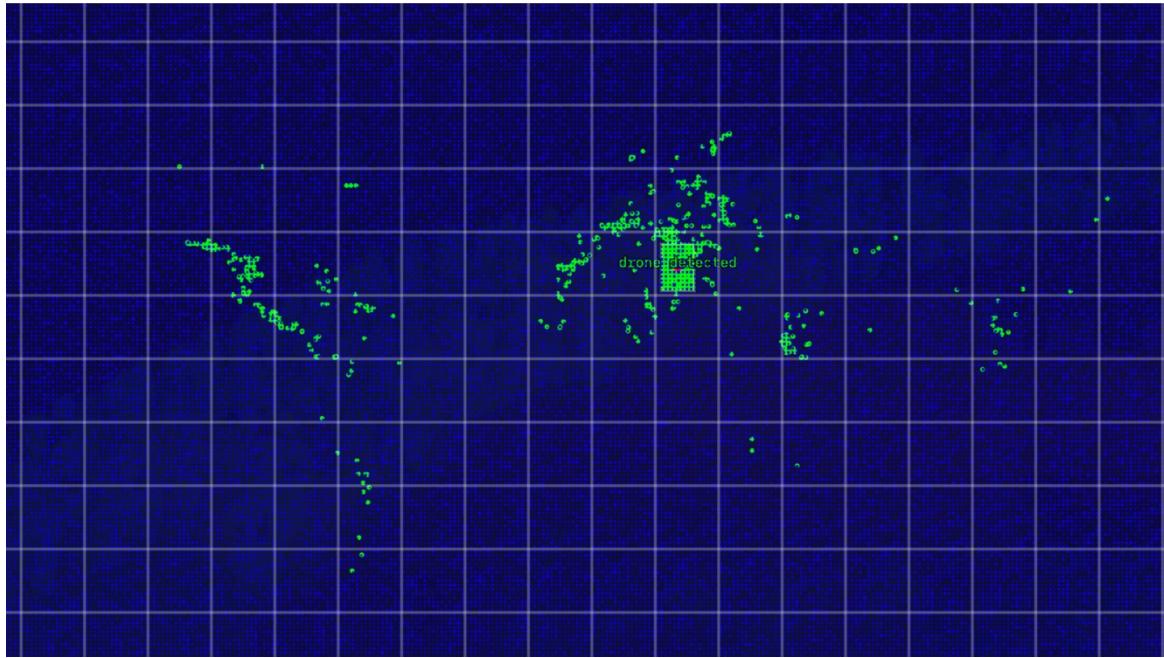


Fig 5. – Ocean map of missing migrants (p5.js)
Mapped coordinates of missing migrants based on CSV data

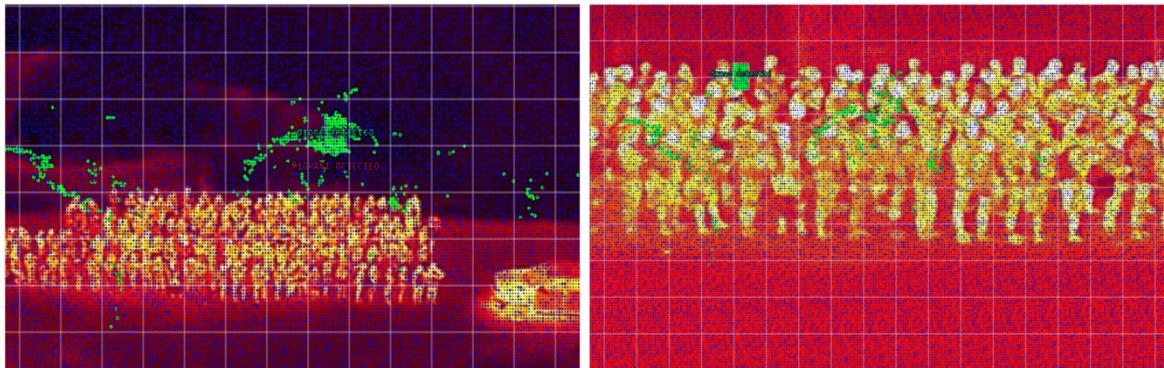


Fig 6. – Video footage of migrants and coordinate points (p5.js)
Video taken from daily mail offering multiple perspectives of migrants

Once a coordinate is successfully detected, the pixelated filter is deactivated – revealing the hidden data that lies underneath. This data includes video footage of migrants crossing borders, along with mapped coordinates of missing migrants [Fig. 6]. My intention was to transform participants into ‘location markers’ to symbolize the presence of migrants. Initially, I planned to show only an ocean mapped with coordinates [Fig.5]. However, this failed to convey a sense of unity between the participant and the migrants. By presenting the video footage alongside a timer indicating the duration it took for the participant to search for missing migrants, this not only reflects their active engagement, but also emphasizes the role of responsibility in the process.

When participants step away from the coordinates, the canvas reverts to its original view of a pixelated cloud, keeping the data concealed and hidden until the next participant chooses to engage. This is intended to create a unique experience for every participant. I began to realize how the pixelated filter acts as a shield or protector. Similar to how migrants shield themselves from potential violence and harsh conditions, participants are in a sense granting permission for the data to be revealed, deviating from our usual ‘unawareness’ against certain information. I realized that this interface design offers multiple layers for understanding the story and experience of migrants, especially the emotional and physical challenges embedded in their lives.

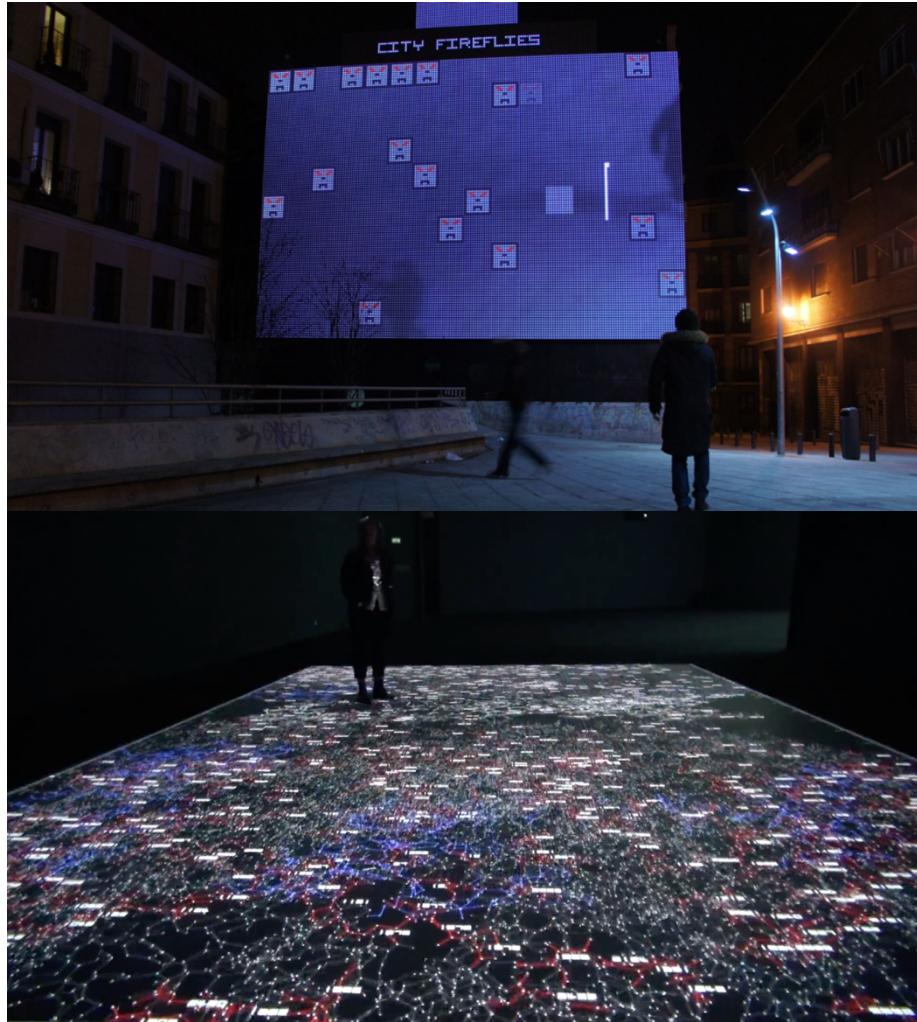


Fig. 7 (Top) – City Fireflies, Víctor Díaz & Sergio Galán

Fig. 8 (Bottom) – data.tecture [n°1], Ryoji Ikeda

Inspirational Artist Works

While my interface currently relies on digital screen interactivity, I plan to transcend this limitation by moving the interaction into a physical space – replacing the ‘mouse’ (drone) to a human participant. This embodied experience of being recognised as a technological device rethinks the way we interact with the world in both digital and physical realms. Hito Steyerl’s concept of “poor images” also contributed to developing my interface. These seemingly imperfect, low-resolution images foster a more dynamic and participatory engagement with digital media. The intentional pixelation acts as a ‘filter’, drawing a parallel with the potential ‘forgotten’ status of missing migrants. To reflect on my project, rather than focusing on the numerical data, this interface utilises visual representation, spatial awareness and auditory elements to portray acts of surveillance and migratory movements. However, I acknowledge a lack of collaborative engagement and collective experience in this current interface. To continue this project, I refer to my initial sketches, inviting multiple participants to reveal different coordinates. In addition, I will further experiment with the implementation of distance and trails based on migratory movements, adding a collective sense of unity between the participants and migrants when travelling from one location to another.

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