

FeelOpo: An Interactive Installation to Explore the “Beat of Oporto”

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ABSTRACT

FeelOpo is an interactive art installation that allows contact with fragments of the immaterial heritage of the Oporto City in the North of Portugal. Through location-based storytelling of the living city, this interactive installation allows visitors to explore, at different levels, several typical characteristics of this city, addressing aspects of cultural identity based on contrasting images and videos. The visitors feel and explore visual stories of the live city, through a process of appropriation and articulation of these narratives, generating an expansion of this intangible heritage.

KEYWORDS

Body As Interface, Cultural Identity, Digital Art, Digital Narratives, Interactive Art Installation, Social Identity

INTRODUCTION

In recent years, cultural tourism has increased, resulting in an intensification of the diversity of ways of living, demanding new and renewed dynamics intrinsic to globalization (King, 1991). This art installation explores the notion of “body as interface”, and represents a dynamic medium of communication between systems, not limited to objects. Using a kinetic camera and programming language (processing) - we potentiated hybrid forms of communication between the physical and the digital.

According to the Regional Tourism Authority of Oporto and North of Portugal, the city of Oporto and the Northern region of Portugal reached, in 2017, a record number of 7.5 million tourists. In this context, one of the main concerns and object of the public policies of the city of Oporto is damping the negative impacts of tourism intensification, such as desertion by the inhabitants of the old town and gentrification processes. One of the approaches of the municipality is the promotion of the city of Oporto as a brand name, emphasizing its originality and the singularity of the local culture.

Focusing on the intensification of tourism, and considering the effects, both positive and negative, associated with globalization processes, McLuhan’s (1969) reflections are pertinent; remember that he coined the notion of “global village” and the concept of “Globalization” - a term explored by Robertson (1995) - in which the connection of the local to the global is intertwined, intersecting globalization and local identity.

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With meaningful socio-spatial flows and changes occurring in a fast pace, how can we contextualize the urban-cultural identity of Oporto in this process (marked by uncertainty and indefiniteness) and how can technology contribute to the specificity, affirmation and dissemination of Oporto's culture and life?

In this digital art installation 'FeelOpo' technology assumes the role of a mediator of experiences, exposing multidimensional experimentation of the "cultural identity" of the city of Oporto - associated to iconic images and referring to the importance of a relevant framework.

The focus is on the social space and the discovery of the relationships that take place within this space, emphasizing the actions and processes that occur there. The use of the body as an interface allows for immersive experimentation, creation and expansion of narratives related to an intangible heritage. The result is the consequence of physical performance with a seamless digital background based on multiple visual storytelling segments (about Oporto).

CULTURAL IDENTITY

The experience of urban spaces is usually associated with a rational construction, even if subjective. It is in this fixed physical space that emerge processes and social practices with which we identify ourselves culturally (Hall, 2005), eventually translating into the "social space" of Lefebvre (1991).

Local identity arises intrinsically associated with the social space and the processes that occur, through the collective construction of local communities as well as their preservation by a collective memory (Castells, 2001). Hall (2005) also considers that the notion of social identity implies a collective dimension, in permanent construction, through cultural practices in constant (re) creation, and highlights the role of culture as critical action and social intervention.

This social identity, built collectively, generates innumerable images created by the various actors of these processes, giving rise to the "image of the city" of Kevin Lynch (2008). The image of the city, which reflects its immaterial patrimony, is thus associated with the processes of interaction that take place in its space, as Paulino says:

"(...) If on the one hand the intangible heritage appears dependent on a material space – a territory – full of meaning, or landscape that evokes this, the immaterial heritage always shows a relationship subject/area, even though both are subtext. (...) To consider the immaterial heritage as a solo element will result in decontextualization and, consequently, a loss of significance. (...)" (2010, p. 571, own translation)

Throughout the process of development and design of the artefact, it was considered that cultural identity is intrinsically related to the "other". The way we relate to others, whether we identify ourselves distinctly or similarly, the way we see ourselves versus how they see us, as Woodward says in her book "Gender, Class, Nation":

"(...) although as individuals we have to take up identities actively, those identities are necessarily the product of the society in which we live and our relationship with others. Identity provides a link between individuals and the world in which they live. Identity combines how I see myself and others see me. Identity involves the internal and the subjective, and the external. It is a socially recognized position, recognized by others, not just by me.(...)" (2000, p. 7)

The concept of "identity" is understood here as something that modifies, moves, adapts and (re) creates. The "image of the city", its identity, is therefore interpreted differently by the various urban actors, considering each interaction, reading and meaning.

From this notion of "local identity", we explored a few associated thematic approaches:

1. Traditions and customs (collective and subjective)
2. Characteristics that identify groups and reveal levels of belonging to spaces of the city
3. Communities, stimulating the narration of experiences, ways of living and living
4. The way in which these three areas, mentioned above, are reflected in the so-called “intangible heritage”

Therefore, having as an object of analysis the city of Oporto (second largest city in Portugal) and its urban actors, we reflected on its main characteristics. Different tangible and intangible elements have been identified, such as, local pronunciations, but also typical practices and ways of experiencing city spaces, materials, and colors.

Based on this framework, the ‘FeelOpo’ installation promotes the involvement/interaction between visitors, spaces (real and digital) and cultural heritage (memories, traditions, customs, proverbs). This interaction explores the identity of places in dialectical images, sounds, voices, memories, visual and symbolic references. These individual and/or collective experiences at the same time foster the exchange and sharing of emotions, which in turn generate decoding, interpretation and (re)creation of multiple narratives.

THE BODY AS AN INTERFACE

Several artists have been exploring the subject matter of the body as an interface, where the body interacts with visual stimuli from devices that deepen the unfolding of the visual component of artistic installations, encouraging people to interact. For example, Utterback (1999) in *Text Rain* explored the body’s interaction with the lyrics of a poem, recalling - as its name implies - a “rain of letters”. Mehmet Akten (2009) in *Body Paint* explored the kinetic dimension of the human body in an interactive way in which the movements produced were encoded and converted into images and colours.

Nonverbal communication - between physical and digital, between body and digital components - draws on the ongoing dialogue between physical gestures, movements and visual elements, promoting innovative artistic interventions that expand the boundaries between the real and the virtual. This is patent in the initiatives of the Japanese performing arts company ‘Enra’ (2016), in which choreographed performances trigger multidimensional narratives that take place between human bodies and digital graphic elements.

DESIGNING THE ARTEFACT

Through the movements of each participant, visitors (re)discover some characteristics related to what is commonly known as the “cultural identity” of the city of Oporto. Taking advantage of the intersection between the recognized heritage of this city, we used technology to support the interaction between the visitors and the media. The results were translated into the performance of multiple visual narratives.

As a method of collecting information for this art installation, several audiovisual recordings were taken at different times of the year, including day and night, in distinct locations of the city, together with several informal conversations with citizens.

The registered spaces were divided into four areas that could be virtually explored:

- **Public Space:** Allows for the exploration of several streets (Figure 1a)
- **Waterfronts:** Shows both riverbanks and the seaside (Figure 1b)
- **Entertainment:** Day & night (parks, gardens, nightlife) (Figure 1c)
- **Trade:** Markets and fairs (Figure 1d)

From this audiovisual footage, we highlight the day we tried to capture images of the Bolhão market. This traditional market place is one of the most emblematic buildings and an example of the neoclassical architecture of the city, dating back to 1914 and considered in 2006 a city heritage building of public interest.

The attempt to register characteristic sounds of the culture of this city - called “pregões” (trading floor voices) – originating in the vendors of the market was spoiled by the intense flow of tourists, thus preventing the experience of live traditional activities (Figure 2). The main spoken dialects by tourists were French, English, German and Mandarin.

However, in this relationship between the economic importance of tourism (in the context of globalization) and the preservation of the uniqueness of the local identity, we find a positive contribution in the promotion and rehabilitation of the city’s heritage and the local economy.

The city is in constant evolution, it is not a still “image”, it’s changing every day, and tourism is the main driver. The city is a place of interaction, social and cultural innovation, and this we tried to bring to our art installation.

In this way, different discourses and narratives may be explored and referred to the question that Marot (2006) put forward:

(...) which refers to the possible correspondence between mnemonic location systems and mnemonic series of images: is it possible to establish relations of compatibility between different kinds of spaces and different kinds of speeches?” (p 20, own translation)²

Through the many audiovisual records collected, a set of possible approaches may be explored, starting from the general ones and gradually approaching the particular cases, reaching the most characteristic, the essence.

Through the relationships between the “personal space within the city of Oporto” and the concept of “proxemics” (the study of the hidden distances between people and space) of Hall (1986) we established relevant interactions. “FeelOpo” reacts differently to the presence of the body, alluding to each one’s personal space, generating different communication processes and respective readings.

Several videos are projected, however, the image resolution, as well as its reading and understanding, changes depending on the distance a visitor is from the screens and where he positioned himself related to the projected image. The installation is based on an approach detection device (Kinect) making sure the visitors establish relationships with different kinds of images and sounds, depending on their position in space, measuring the depth between the visitor and the projected image. The further away a visitor is from the projection surface the more generalist the narrative will be. Coming closer to the installation implies to have a glimpse at the essence, allowing the resulting narratives to be also more intimate and personal. The interactivity explored in this installation relates directly to the positioning of people within the visual environment designed for “FeelOpo”, allowing

Figure 1. The four areas selected for exploration

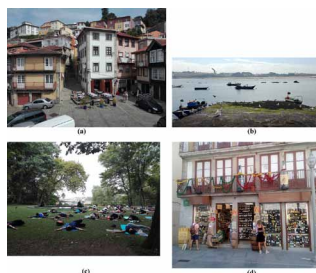


Figure 2. One of the accesses to the Bolhão Market, Porto



for the reading of the visitor's body position and movements, thus triggering the "discovery" of new experiences.

Technically, it uses different media types - data, image, audio and video - which act as compositional elements that perform different projections (collage-like). The distance, location, and movements of the visitors are the factors that work as triggers for the different media types.

The interaction space is thus "divided" into 12 different areas of exploration (Figure 3). People approaching the projected image at a distance of:

- At 4m - the projection of the initially half-blurry image becomes sharper;
- At 3m - the various pictures and audio are activated;
- At 2m - the videos related to the cultural specificity of the city are generated - revealing experiences and appropriations.

These videos report us to specific locations in the city. More than tourist-known sites, they are local landmarks of important moments in the development and growth of the city. The river banks and the seaside with the characteristic sound of the tram and seagulls (Figure 4), several street chats, vandoma market, among others. (Figure 5).

In still mode, the visitors see a defocused but appealing image of the city of Oporto projected in a blurred way, and hear some fragments of local conversations. which is eventually activated by the presence of one or more visitors in the exhibition space. The kinetic camera then reads and draws the outlines the body for the interaction. Programming is implemented with Processing language (Reas & Frey, 2014). The Kinetic camera reads the contour of the intervening body(ies), and within specific distances, the multimedia projection will appear (see Figure 4). Different depths reveal different narratives. At close range the image presented becomes clear and the contour of the body relative to this space (previously defined) appears. According to the diversity of possible paths to be taken by the participants in their approach to the screen, the images will become increasingly perceptible, thus enabling watching the videos related to the cultural specificity of the city – the images revealing current and past experiences.

Figure 3. The different interaction spaces of 'FeelOpo'

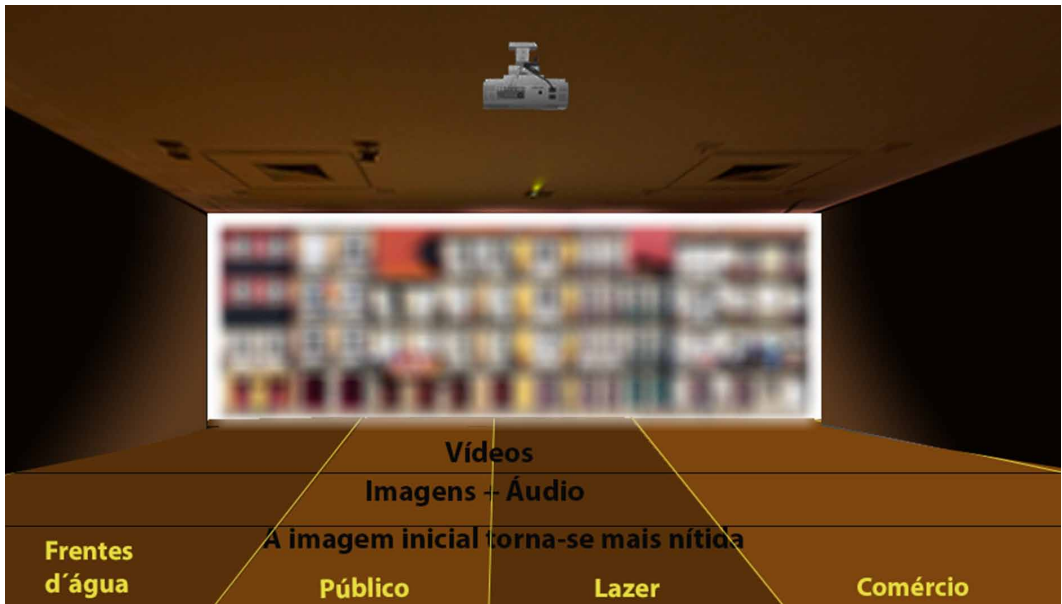


Figure 4. The tram Line 1: Passeio Alegre-Infante on the northern bank of the Douro River



The installation allows for the interaction of several actors at the same time, allowing, in this case, the visualization of a larger area of information display. The tracking of the contours of visitor's bodies enables complete images to be visualized, not being in question how many bodies the kinetic camera

Figure 5. The São Bento railway station

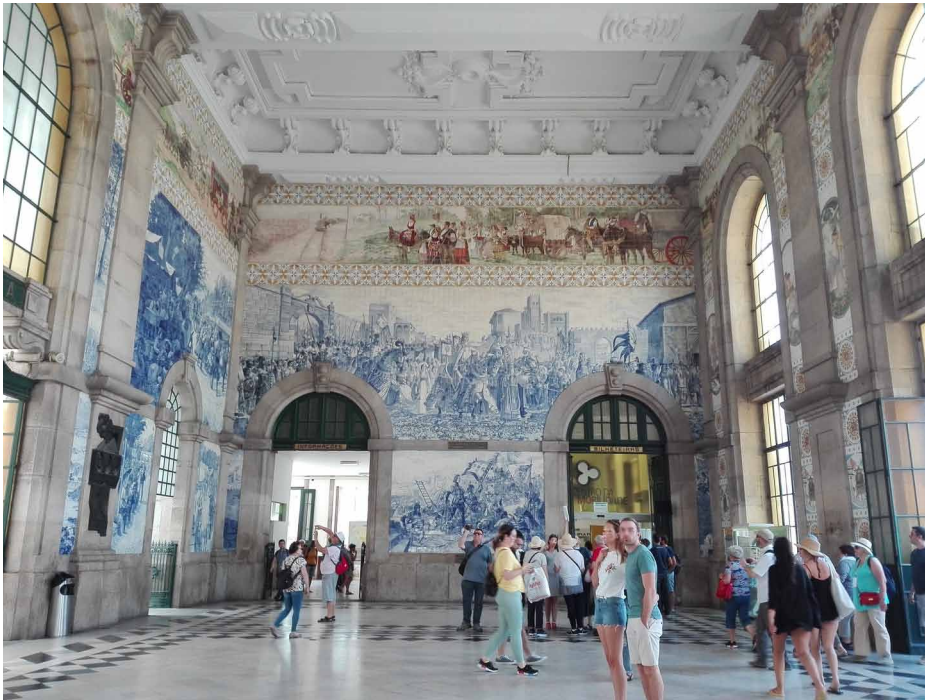


Figure 6. Visualization of the 'FeelOpo' installation



can register, but rather the number of images visitors can see. The hidden image in the background is presented in a quadriptych format, each of the images corresponding to a set area (Figure 6a to Figure 6f). For videos, the procedure is identical. There is only one video being projected but it is divided into four areas (Figure 7).

The kind and degree of interactivity is explored through depth around the display space, and this may be linked to the “personal space” of the artefact. The bodies interact with the projected space and images, revealing stories, memories, expressions, sounds, colors, textures, architectures and emotions in the form of videos that narrate fragments of the life of the city and its people. The

Figure 7. Different layers of the projection



co-presence in the room of different visitors will activate several videos that will also interact with each other, generating the intertwining of visual narratives.

Depending on the depth and location of the user, videos or still images appear. In the case of still images, the visitor has to move or associate with someone who is in the same depth plane to reveal the completed image.

More than the presence, we intended to explore body movements as the triggers of the interaction to uncover the different narratives. The bodies interact with space and the screen via sensors. According to the diversity of routes explored in the proximity of the sensors, different characteristics related to the cultural specificity of the city become perceptible, revealing different aspects of local cultural identity.

At this moment, 'FeelOpo' was presented at ARTECH 2017 – the 8th International Conference on Digital Arts – in Macau, China, and accepted in the XX International Biennial of Art at Cerveira 2018 - Portugal.

REQUIREMENTS | TECHNICAL SPECIFICATIONS

For the construction of the interactive art installation 'FeelOpo', a room with low light is required (in which one of the walls must have a free dimension for projection of approximately 6 x 2 meters - length x height - to be used as an exhibition panel), a video-projector, two speakers and a Kinect camera. It is also necessary to ensure three ty points. For an immersive experience the installation requires some soundproofing in relation to external sources of noise.

CONCLUSION

More than show touristic places, 'FeelOpo' integrates technology with ethnographic knowledge to propose multidimensional experiences. The interoperability between the real and the digital

environments enables communication flows capable of providing the visitors with knowledge of the location, and of the local people who generate this immaterial heritage on a daily basis.

The visitor feels and explores visual stories of the lived city, through a process of appropriation and articulation of these narratives, generating an expansion of this intangible heritage. Allowing the (re)discovery of narratives and multimedia art expressions that represent the city of Oporto with its heritage and cultural identity. The contribution of this installation may be reinforced by the words of Rutten, Dienderen & Soetaert, regarding the importance and contribution of art installations that deal with ethnographic components:

By mediating between the concrete and the abstract, the micro and the macro perspective, the viewer, in his view, is confronted with two different forms of aesthetic experience: immersion and reflexivity. It is exactly the tension between these two forms of reception that gives these installations their significance. (2013, p. 468)

The outcomes of this digital art project involve the conceptualization of a wide range of sensorial and emotional interactions, at the individual and/or collective levels, envisioning the reinforcement of the Oporto brand. Interoperability between real and virtual thus ensures communication flows, generation of new knowledge, and, maybe, the (re)interpretation and expansion of an intangible heritage.

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ENDNOTES

- ¹ “(...) Se por um lado o património imaterial surge dependente de um espaço material – um território – que lhe confere sentido, ou uma paisagem que o evoca, o património imaterial evidencia sempre uma relação sujeito/espaço, mesmo que ambos estejam subentendidos. (...) Encarar o património imaterial enquanto elemento per si resultará numa descontextualização e, conseqüentemente, numa perda de significação. (...)”
- ² “(...) que hace referencia a la posible correspondencia entre los sistemas mneumónicos de lugares y las series mneumónicas de imágenes: ¿Es posible establecer relaciones de afinidade entre las distintas clases de espácios y las distintas clases de discursos?”

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