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Never The Less: A Performance on Networked Art

Never The Less is a live audio-visual (A/V) networked performance, where participants are able to interact remotely and collaboratively. It adopts the newly-proposed web-based A/V *Akson* system, designed for an internet infrastructure, which allows both musical and visual content generation and interaction across multiple devices in remote locations. The system was built with great emphasis on live-performance and human collaboration, where experts and non-experts (i.e., artists and public) exist at the same level.

1 INTRODUCTION

Networked technology, and in particular cloud infrastructure has been enhancing degrees of interpersonal collaboration across multiple areas of human knowledge. Art has been a privileged medium where pioneers have adopted the network to foster new means of communication and expression (Dixon, 2015; Broadhurst, 2007). These new means of communication stimulate new creative spaces where artists can promote their work through a distributed array of mediums (e.g., smartphones and tablets) and the role of author, in other words, meta-creator (Malloy, 2016; Akkerman 2014). Furthermore, it has profound impact on the reception of the artworks, shifting the role of the listener and viewer to participant (Morandi, 2017).

In this context, we present *Never The Less*, a performance that explores the interaction and generation of A/V content across distributed devices in a network. Aiming to push the boundaries of networked art accessibility and familiarity (Tribe & Jana, 2009), we adopt the web browser as the interface of *Akson* and explore the web technology as content and medium (Büsher et al, 1999).

2 TOWARDS AKSON SYSTEM

The performance *Never The Less* publicly presents a digital space where the public can interact with the performers on stage. To promote this collaboration, we use the recently designed *Akson* A/V networked system, which is both a controller and a playback engine. It runs on any personal device (e.g., laptops, tablets and mobile phones) with multimedia capabilities allowing both local and large scale distributed performances.

Akson uses server-side programming with *node.js* (Tilkov & Vinoski 2010). The code relies on the *Web Audio API* (Roberts, Wakefield & Wright, 2013; Wyse & Subramanian, 2013), the *WebGL API* (Parisi, 2012; Marion & Jomier, 2012) and the *socket.io* library (Rai, 2013). The dynamic linking of the latter allows us to define different modes of interaction between the terminals in performance (Renaud, Carôt & Rebelo 2007; Barbosa, 2003; Brown, 2002). *Akson* places itself on the internet with the willing to treat the browser as a canvas but also to use the robust potentiality of the Web. These provide us programming interfaces and open-source libraries such as *tone.js* (Mann, 2015) and *three.js* (Dirksen, 2013) that are currently being used in the underlying code of *Akson*. The platform is also ready to converge large scale playback with potentially global distances across the globe (McKinney, 2016; Chew, et al 2004; Bédard, 2002).

3 PERFORMING NETWORKED ART

When *Never The Less* starts, everyone can connect to the system and it multiplies itself every time a user effectively establishes the connection. We will present two of the four modes *Akson* can have. The multiple synthesizer instance proposed by Roddy (2018) is similar, and the multiple

interaction methods explained by Todd Winkler (1998) that look at control issues are also covered in the development of the software. In *Never The Less* we perform in *The Conductor Model*, the paradigm of the *Symphony Orchestra* where the conductors are the master controllers shaping the dynamics and directing time flows. And the *Free Improvisation* method, based on the free jazz movement of the sixties that produced performances that were highly interactive, spontaneous, expressive and unpredictable. There will be a clear difference in the user experience on mobile phones, tablets and laptops. With small and less powerful devices the visual display will change automatically according to the connected user actions and in laptops it is possible to trigger a user interface to change visual and sonic properties.

On both the interaction methods explored in this performance, the users will be able to propagate synthesizer notes through the connected devices always with a coherent visual representation. Alongside that stream, it is also possible to control a filtered noise that acts as a second property of the instrument that doesn't propagate on other users. The performers will act as the overall conductors (Lippe, 2002) and playing in the main sound system in the venue. A method that will allow acoustical balance control and overall build of the artwork that has been used extensively on interactive composition (Winkler, 1998).



3 CONCLUSION

In this article we review the conceptual framework and technical taxonomies of the performance *Never The Less* that explore part of the *Akson* (A/V) collaborative system. The interaction that the public can have and a particular emphasis is given to some of the underlying technologies used. We also emphasize a relationship with the *wagnerian gesamtkunstwerk* (Koss,

2012) and a willing to seek a single medium of interactive collaboration in a digital environment.

The amount of artistic possibilities a digital network can have on human-computer interaction (HCI) is beyond the scope of a single performance, and certainly the restrictions on plural collaboration may change. *Never The Less* builds a public connection link in the north of Italy exploring multiple device collaboration on the specific methods defined earlier. The connected devices will act as a linking current between themselves and expanding a place of artistic creation as a vehicle and as content. This experiment is also immediately focused on the relevance, design and development of new collaborative applications to artistic performance but also helps evaluate existing systems of creative interaction (Fencott & Bryan-Kinns 2013) in a singular network.

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