

MusicXR @ICMC2020/21

Recognizing the extraordinary situation of a completely virtual ICMC, there was a special call for works and experiences to be presented within the virtual conference venue using XR technologies. The call invited works ranging from virtual representations of sonic installations, and interactive concert pieces, to wholly new experiences in XR using browser-based presentations and formats suitable for virtual reality head-mounted displays. At the conference, 11 MusicXR works were shown. In the following, you can get an impression of four of them.

4 reviews

By Patrick Hartono

***Antiphon* by Andrew Blanton**

Antiphon is a virtual audio-visual "venue" and instrument controllable via a remote server through incoming streaming data from Max/MSP. There is no specific information regarding the audio and visual methods executed over the browser. However, it seems the scale values of the 3D object are synchronously animated with the audio (audio-reactive). It would be interesting to

know whether the musical elements are generated using the web-based synthesizers or a specific approach on computer side which then streams the audio over the internet. In contrast with the other works, *Antiphon* does not focus on the visitor's interactivity but offers a unique performative experience, where the audience can freely decide their individual perspective within the space. Moreover, since the visitor's movement is not restricted and the level design is considered an "open space," this may cause disorientation for those new to this kind of 3D platform.

Although this virtual space is not constructed using Mozilla Hubs, there are appear no significant differences since New.ArtCity (medium used) was also developed upon three.js similar to Mozilla Hubs.

***Extrapolations on a Vega Banjo* by Brian Ellis**

This virtual reality installation allows visitors to interact with a virtual Banjo in a different way than usual. Visitors are not playing a Virtual Reality Musical Instrument, but explore a gigantic Banjo environment through an immersive virtual expe-

rience similar to a sound walk. This unique approach aims to manifest the notion of a connection between performer and artifact from a different perspective.

The audio materials of this work serve two functionalities: as primary musical material and sub-materials that are placed spatially in different locations and offer various aural nuances. The visitor is encouraged to locomote and explore the surrounding environment, which simultaneously determines the individual sonic experience. The combination of scratch sounds from the Banjo resonator and a continuous drone engenders a distinctive soundscape structure. However, the variety of sound gestures and timbre seems only dominant at a particular location (center). In my opinion, it would be interesting to have more audio zones with different types of timbre in other areas of the environment to achieve multi-layers of sound immersion. Since the ground surface (topography) is flat and without any additional objects, the interactivity aspect between visitor and environment (Virtual Banjo) seems to be neglected, which actually can be an essential element in enriching the sonic experience. The visitor's loco-

motion has no variations besides adhering to the topographic design that adapts the Banjo shape.

***Fountain* by Matthew Gantt**

Fountain adapted the participatory approach as a means for the visitor to respond to the generative soundscape that continuously plays in the background by adding additional sound using the "Import Media" feature. Visitors can add sound from any online streaming link within Mozilla Hubs without complex procedures. Furthermore, with the spatial panning mode, each audio added by the visitor will sound spatially regarding its location, creating immersive sonic scape.

Since the fountain is located in the middle of a virtual forest and visitor's locomotion is not restricted, it would be interesting to have "ornamental objects" surrounding the fountain or encourage the visitor to share visual objects such as 3D objects, images, videos, even drawing which is also possible with Hubs. I can imagine, that it would be interesting if the animated elements that orbit around the fountain can move off-set from the center location, greet the visitor as they enter the room, and begin to

approach the fountain.

***The Big Crash VR* by Malte Steiner**

The Big Crash VR is an immersive virtual reality artwork inspired by the urban phenomenon of “gentrification” due to the instability of the real estate market in most big cities nowadays. It is originally an expansive art project that can be manifested in different forms such as physical installation, live electronic performance, etc. The 3D asset and audio files’ creation are uniquely different from the other works because they are made based on the data harvested from the real estate ad site and CAD data (Berlin), then processed using machine learning algorithms.

I was fortunate to have a chance to experience this piece in a different format (standalone VR with Oculus quest), which is, in my opinion, not much of a difference, since Mozilla Hub sites can also be displayed using HMD. There is one specific object from the Oculus version I like, and it seems it does not exist here – a vertical animated object that can function as an escalator for the user to go above the building. Regarding the environmental de-

sign, this work has created a well-elaborated surrealistic virtual space that disseminates all objects evenly within the environment. The objects comprise 3D objects (animated and static), image fragments, and a custom image texture for skybox; I assume the environment was previously created with a 3D modeling software and then arranged within the Hubs environment. The animated object (buildings) functions as “bridge” (metaphorically) with which the environment is interacting with the visitors, particularly, in my experience, when entering the building. However, this mesmerizing immersive experience would be more engaging if more musical material is applied within the environment, perhaps, for example, on each building(?).