INTERACTIVE MUSIC WUNDERKAMMER

A Master's Thesis

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INTERACTIVE MUSIC WUNDERKAMMER

Graduate School of Economics and Social Sciences
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by

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in

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January 2016

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Fine Arts in Media and Design.

Asst. Prof. Marek Brzozowski
Supervisor

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Fine Arts in Media and Design.

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ABSTRACT

INTERACTIVE MUSIC WUNDERKAMMER

Uslu, Doğa

M.F.A., in Media and Design

Supervisor: Asst. Prof. Marek Brzozowski

Co-Supervisor: Asst. Prof. Andreas Treske

January 2016.

This thesis accompanies my artwork prototype, an interactive music *Wunderkammer* for a *vaporwave* musician. This artwork aims to provide a new media prototype to express the artist's vision. I am going to provide consult theory to explain the content, and new media theories to describe the mechanics of my artwork. Lastly I provide detailed explanation of how my interactive artwork operates, and providing functional specifications and design choices. Working on an interactive art form for the first time, this study has helped me build the base of a new artistic position while learning a new technology, presenting me a broader understanding on the subject.

Keywords: Database Aesthetics, Hypernarrative, Remix, Vaporwave, *Wunderkammer*.

ÖZET

ETKİLEŞİMLİ MÜZİK WUNDERKAMMER'İ

Uslu, Doğa

Yüksek Lisans, Medya ve Tasarım

Tez Yöneticisi: Yar. Doç. Marek Brzozowski

Ortak Tez Yöneticisi: Yar. Doç. Andreas Treske

Ocak 2016.

Bu tez, bir *vaporwave* müzisyeni için oluşturduğum etkileşimli müzik *Wunderkammer*'ı prototipi olan sanat projemi desteklemektedir. Bu sanat projesi, sanatçının vizyonunu ifade etmek için yeni bir platform oluşturmayı hedefler. Önce, sanat projemin içeriğini, remix teorisinden yararlanara ele alacağım. Daha sonra, projemin işleyişini anlatmak için yeni medya teorilerinden yararlanacağım. Son olarak, etkileşimli sanat projemin işlevsel özelliklerini ve tasarımındaki seçimlerimi açıklayacağım.

Anahtar Kelimeler: Veritabanı Estetiği, Hipernaratif, Remix, Vaporwave, *Wunderkammer.*

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INTRODUCTION

The focus of this study is the creation of a prototype interactive music *Wunderkammer* (a cabinet of curiosities) as a proposal, an alternate mode of expression to the music artist's vision. My research is conducted on two areas. In the first chapter, under the scope of Lawrence Lessig and Eduardo Navas's remix theories, the culture of remix and birth of *vaporwave*, a music genre and an internet aesthetic, will be explained. Then in the second chapter, based on new media theorists' Lev Manovich, Christiane Paul, Steve Dietz and Sharon Daniel's arguments, the definition, structures, behaviors of new media objects are going to be studied. Lastly, in the light of the first two chapters, my thesis aims to articulate the accompanying artwork, the interactive *wunderkammer*, and study how can a *hypernarrative*, the distinctive narrative form of new media objects, be established by two layers of sampling: sampling and remixing of original music from the artist and images about/from the content of the *wunderkammer*.

This idea of an *interactive music wunderkammer*, arose from interactive music videos – new media objects that derived from music videos, where an

end-user can control the narrative experience based on the rules (designated by the new media artist), tools and objectives provided by the artists. Lately interactive music videos have become a popular and a rich form of entertainment, exploring new trajectories in storytelling. Interactive music videos are a dynamic form of artistic expression, for they operate on technical principles of new media objects. They are a part of a larger, multi-disciplinary industry, where creative individuals from a wide range of backgrounds such as computer programming, literature, film, graphic and visual communication design, performance arts and many more, collaborate to explore artistic and cultural boundaries.

This thesis aims to focus on a particular artistic position, the practice of collecting and remixing. An artist can operate as a collector of culturally related objects, aiming to create an experience by presenting them through particular methods. Relationships between the collected objects can be cultural, formal relationships or personal utterances.

The technologies (and skills) of creating new media objects are vast, and most of them can be easily accessed through the internet. Amateur creativity all around the globe has flourished since these technologies, knowledge and cultural material have been easily accessible to the amateur user. While many channels, such as online forums, communities and pirated or open-

source technologies enrich amateur creativity, concepts like copyright and authorship pose legal and technological boundaries to the individual. Such concepts also act as representations for the politics of their time. As a response to boundaries drawn by copyright enforcement, counter–cultural positions emerge, as a backlash, a response to or as a product. Those counter-cultural positions vary from artists to technological specialists.

Cyberpunk subgenre of science fiction literature (and the *cyberpunk* culture), has been an inspiration and a literary reference point for the individualistic creativity. Fictional characters who hack computer networks, implement their own bodies with cybernetic augments, utilize and re-purpose found technology and manifest themselves through their abilities, aesthetic stylizations, political views work as a metaphor for the remix and vaporwave artists.

The art project complementary to this thesis, *WYSH? (Will You See Her?)* is an interactive artwork, a *Wunderkammer*, a cabinet of curiosities of Cyberpunk culture, including both fictional works, and actual phenomena inspired from this literary form, as an interactive music video.

This thesis aims to interrogate the following core questions respectively:

1- What is a remix? (Culturally and technically)

2- How does the culture of remix correlate with vaporwave and cyberpunk subcultures?
3- What are the components and principles defining a new media object?
4- What is the relationship between a new media object and it's narrative?
5- What are the details regarding the creation process of an interactive artwork as a new media object?

CHAPTER 1

LITERATURE REVIEW

This chapter aims to highlight certain political positions and artistic techniques in practice that eventually gave birth to the vaporwave subculture. Remix culture, cyberpunk literature and the concept *new aesthetic* offer social and artistic frameworks that can provide a bridge to assess *vaporwave*.

1.1 Remix

Eduardo Navas (2012: 11-31) argues that *sampling*, the act of copying a fragment from a larger archive of representations, is an essential act to create a remix. Recording is a form of sampling – it uses the same principle of framing a larger system. As a mechanical reproduction, *sampling*'s earlier meanings derived from the first stage of sampling – from 1830's- in early photography and sound recording (2012: 17-22) as they were in a technical sense, capturing representations out of the world. After crossing a threshold

of cultural saturation in early 1920's, the second stage of sampling practices began, as photo collages and photomontages. Recycling of media through mechanical means start in this era, and becomes more widely used when sampling of music (keeping the original intact), due to availability of sampling machines in 1970's. Sampling, in the new media sense, where the fragments are favored over the original, began around 1980's, which also gave birth to hip-hop culture. Similar to the concept of sampling, remixing has undergone certain stages before acquiring the contemporary meaning used today. 1960's Jamaican dub set the first stage of remix, parallel to the second stage of sampling came to scene. Introduction of sampling to New York city gave birth to the second stage of remixing. In the third stage, remix culture gives popular culture outputs, when remix artists proliferate in 1980's and 1990's. In the meantime, by the beginning of 80's, by the widespread releasing of personal computers remixing, as an idea of using fragments of content began spreading to other domains of media. Arrival of *Photoshop*, in the late 80's, marks a significant change in the culture of remix, as the third stage of sampling (mechanical reproduction), where the remix operates on new-media principles. From here on out, the remix as a technique, does not necessarily output a "remix" product.

Lessig, (2008: 52-57) tells about his writer friend Ben, who made remixes with text. When Ben wrote, every sentence he'd form would be actually a

quote from someone else. This way, Ben created an aesthetic of stealing – for when he brought pieces together, the outcome of that text would surpass his own. In other words, when clips of text he quoted came together, this utterance would produce more a comprehensive meaning than his own words. This also indicated that Ben had a deep comprehension of the texts he had read, for he could construct an explanation of a text from various other texts. As with Ben's remixed text, quotations can take place from other media, as *sampling*. Furthermore, quotations don't have to be added linearly, for they can overlap, creating combinations between media forms. (Lesslig, 69-71)

In the first film his short series of documentary, *Everything is a Remix, Part I* (2010), the writer and director Kirby Ferguson, starts to introduce early remixes by referring to *Rappers Delight '89* – an iconic hip-hop song by *The Sugarhill Gang* on 1979. The bassline has been re-used by *Chic, Grandmaster Flash, Father MC, Will Smith, Gabriel O Pensador* and *Daft Punk.*

Just like Lessig's example of Ben, William Burroughs created one of the earlier remix objects, his novel called *The Soft Machine* in 1961. The entire body of *The Soft Machine* has been made by using a technique called cut-up

technique, which means taking pre-existing texts, cutting them (taking clips/fragments of their contents) and re-arranging them.

Remix is one of the pillar stones of Read/Write culture. Lessig (2008: 23-33), uses computer terminology of file permissions when he builds the cultural models Read/Only (RO) and Read/Write (RW). Read/Write culture, is a culture where individuals consume cultural inputs, and can add to, or recreate the culture around them by utilizing technology. Read/Only culture shows lesser tendency to give creative output, and is easily satisfied by consumption. Read/Only tokens (objects), for the most of twentieth century, were analog tokens. They were subject to deformation over time. Their analog structure made them susceptible to control in terms of distribution and modification.

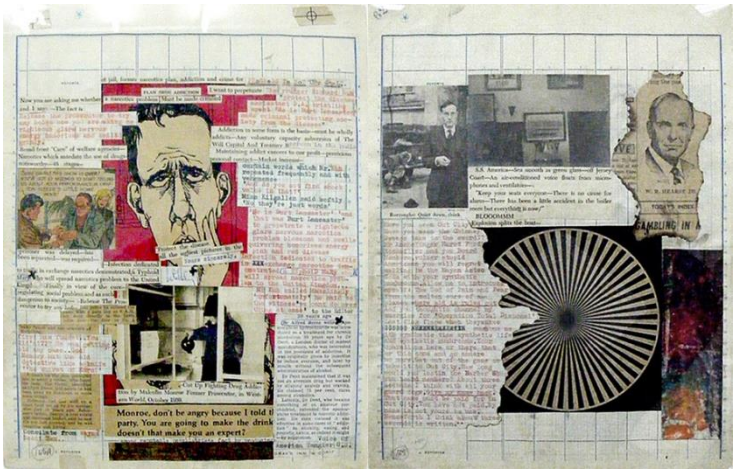

Figure 1: William S. Burroughs and Brion Gysin - cut-up collage technique

1.1.a Copyright / Copyleft

Birth of copyright regulations, explained by Lessig (2008: 24), originate to John Philip Sousa, an American composer is known to state strong political opinions against recording companies and abundance of recorded music around. Sousa had been outraged by the idea of recording companies, playing, distributing and profiting on a recorded piece, a composer once created. The authors of intellectual properties were being abused by record companies.

Sausa's legal proposal to the Library of Congress in 1906 was the first step of copyright system. Copyright granted intellectual and a portion of economic security to a composer. The intellectual owner gained control on the reproduction, distribution, derivation and even public performance of their content. However, the rapid progression and accessibility of technology rendered the Copyright Act ineffective – for the mechanized industry allowed low-cost copies. On the other hand, accessibility granted to a wide variety of cultural objects nourished the Read/Only culture. Over time, Lessig continues (2008: 32-33), Sausa's idea of copyright hit boundaries in terms of amateur creativity. He found it ridiculous to try and regulate amateur culture, in contrast to the profit making commercial structure.

In 1997-98, the U.S. Department of Commerce, took the copyright infringement penalties to extreme measures (Lessig, 2008: 39). Well known free content distributors like MP3.com and Napster were targeted at first, but then ordinary citizens took the hit. They were charged for downloading or disseminating content, including "a twelve-year-old girl and a dead grandmother" (Lessig, 2008: 39). A common allusion among the industry, that the only two ways to go were, going digital or mainstream, was dominant.

While Copyright as a structure restricts the end-user, the Copyleft, as a political stance, stands for the free distribution of information, creative work and software ("Licenses" , 2015). Implementation of copyleft is channeled through licensing of the product. One of the most widespread products in application of copyleft is *GNU.* An abbreviation to *GNU's not Unix,* is an operating system by Free Software Foundation, is a contemporary example of countercultural software. Free Software Foundation, released various free documentation licenses, including the widespread *GNU FDL* (GNU Free Documentation License). According to Free Software Foundation, a free software grants four kinds of freedom. ("What is Gnu?", 2015)

- The freedom to run the program as you wish, for any purpose (freedom 0).

- The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help your neighbor (freedom 2).
- The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this.

Although open source / permissive and copyleft licenses operate similarly, authority over the end-product of the users can vary (Byfield, 2015). While with copyleft licenses, the users have to abide the licensing of the parent software/product (the original software) permissive license end-users are not subject to any sort of restriction. However, copyleft licenses are built on an ethical concern; the works built should remain available to anyone, without restrictions.

1.2 - Cyberpunk:

Timothy Leary (1994: 247-250) defines the origin of the word *cyber* as *kubernetes* from greek language, which means *to pilot*. The word implies the meanings of steering, regulation, restrain. To cybernate, deriving from

the word *cyber*, means controlling, or being controlled by a computer or cybernetic device. Cavallaro (2000: 12), summarizes the genre definition:

> The 'cyber' in cyberpunk refers to science and, in particular, to the revolutionary redefinition of the relationship between humans and machines brought about by the science of cybernetics.

However the term *Cyberpunk* has gained a subcultural reference over the years. Leary (1994: 247) draws from the Hellenistic culture mariners, who sailed the seas without navigational equipment. They were self-reliant and resourceful. The cyberpunks, according to Leary, (1994: 252-258), or the cybernetic people are much like the Hellenistic age Greek sailors. They are innovative thinkers, freelancers and specialists (such as hackers, artists and explorers). They adopt rouge-like characteristics. They utilize technologies (tools or methods) of communication and always look for new forms expression and new definitions.

William Gibson, one of the pioneers and literary fathers of cyberpunk, is mostly known for his book *Neuromancer*. The story revolves around the protagonist *Case*, is a skilled hacker who has once stolen from his employers and in return has been poisoned by a neurotoxin that slowly degrades him both mentally and physically. Grown reckless and suicidal, Case finds himself on *Sprawl*, utilizing whatever resource he can find to stay alive. Case is one of the most iconic examples of the cyberpunk stereotype mentioned above.

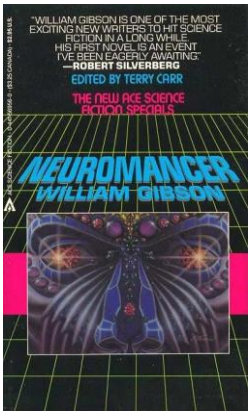

Figure 2: Neuromancer by William Gibson, first edition cover artwork by James Warhola, 1984

Figure 3: *The Laughing Man* logo – Ghost in the Shell TV Series – Production I.G, 2002

In *Ghost in the Shell – Stand Alone Complex* TV series (2002 – 2003) by the studio *Production I.G.*, one of the main villains, *The Laughing Man*, is another example of this stereotype. He is an anonymous hacker utilizes not his own, but technologies of other people: as in cybernetic (prosthetic) eyes, their bodies or brains, while also tapping into the urban infrastructure, puppeteering cybernetics to his will. *The Laughing Man*, when possessing a

body to attempt political assassinations, or make a public speech, hacks into every camera, cybernetic eye and other optic surveillance around to enforce his own logo into the face of the puppet.

1.3 - Vaporvawe

Cody Atkinson starts his article *QUESTIONING…VAPORWAVE* (2015) with a protest against the fluid change and emergence of subcultural movements:

> It's so hard to keep up with all the "waves" these days. When I was growing up, there was just new wave. That's it, just the one. Now you have chillwave, glow wave, dolewave… and now Vaporwave. Cody Atkinson looks at the new wave, but not that new wave.

Vaporwave is an aesthetic that can be broken down to visual and music layers. It's visual aesthetics has evolved largely from an earlier internet culture called *Seapunk.*

Figure 4: Screenshot from *@Lilinternet*'s first tweet that gave birth to *seapunk*

Seapunk, (Vega, 2011) starts a tweet that was meant to be a joke on the internet. It begins with *@LILINTERNET*, DJ Julian Foxworth, a twitter celebrity talking about a dream he had. A parody of early CGI (Computer Generated Imagery), sea creatures, surrealist dreamscapes including pyramids, vast oceans and pillars created an aesthetic form that started out as a humorous meme which later evolved into a fashion trend, a visual style and a music genre. Seapunk music draws from mainly *Drum&Bass*, *southern rap*, *witch-house* and *chiptune* genres, creating a vast range of different styles (Detrick, 2012).

Figure 5: *"#Seapunk Volume 1" - SPLASH001* - album cover - Coral Records Internazionale, 2011. Album art by Kevin Heckart

Figure 6: A collection of seapunk style fashion from *The Daily Beast* magazine, 2012

Not long after *Seapunk* culture was born, it spread quickly across the Internet, resulting in being adopted by two popular culture icons, Rihanna and Azelia. Rihanna performed her single *Diamonds*, with seapunk visuals in the background.

Figure 7: Rihanna performing Diamonds in SNL

Figure 8: Azelia Banks in official music video of *ATLANTIS*

Similar to (and also deriving from) *seapunk*, *vaporwave* began as an aesthetic. Most of its producers are anonymous, which is one of the defining qualities of the vaporwave genre.

Wolfenstein OS X, a YouTube user, also known as *wosX* (a vaporwave producer from Montreal, Canada) has put together a short web-documentary called *Vaporwave: A Brief History* (Wolfenstein OS X, 2015). He marks the beginnings of a genre into a few albums, in which defined the sound of the genre. One of the most influential and earliest albums, *Chuck Person's Eccojams Vol. 1.* was released by Daniel Lopatin, a.k.a. *Oneohtrix Point Never*, under the alias *Chuck Person*. The genre undergoes many shifts, and many artists modified this aesthetic attitude according to their own styles. Vaporwave, both in visuals and music, offers a vast arsenal of cultural objects, from satirical mashups of early graphic design, recycling of old advertisements and *muzak*, to mood-pieces conveying cinematic feeling.

According to *Sputnik Music* author Eli Schoop's review, (2014), *Eccojams Vol.1* is one of the derivative albums of vaporwave genre. It lacks a general theme, however, mainly consists of distorted loops from 80's and 90's music including *Michael Jackson* and *Marvin Gaye*.

Floral Shoppe (2011) by *Macintosh Plus*, which is one of the aliases of the artist *Vektroid*, consists of plunderphonic sampling. In his review in the *Sputnik Music*, Downer argues that this album is significant for *vaporwave* genre for it is highlights the anonymity for the artist (using alias under another alias) and it's reutilization of adult contemporary music. The tracks sampled from belong to 80's and 90's easy-listening music, muzak (elevator music), and the album is renowned for the remix of *Diana Ross'* track *It's Your Move.*

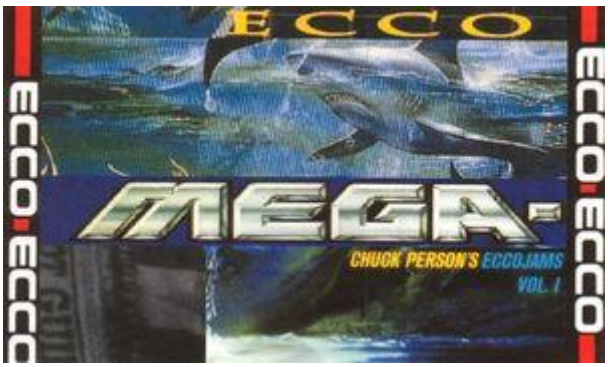

Figure 9: Album cover for Chuck Person's EccoJams

Figure 10: Macintosh Plus by Floral Shoppe, 2011

Adam Harper, in his article *Comment: Vaporwave and the pop-art of the virtual plaza* (2012), describes the genre as an underground movement that critiques 21st century capitalism from two fronts. Firstly, it is a critique of late capitalism through pointing out promises of 80's 90's advertisements, fiction and software culture. Secondly, it is the embrace of these ideals.

Figure 11: Still from *Saint Pepsi* music video *Private Caller*

Figure 12: Another still from *Saint Pepsi* music video *Private Caller*

Saint Pepsi, later known as *Skylar Spence,* has proposed an anti-anti-corporate theme in vaporwave, as mentioned before, embracing the ideals of late capitalism. The vaporwave sub-genre he pioneered became widely known as *future-funk.* (Lester, 2014) *Saint Pepsi* utilizes old funk tunes, reminiscent of late-disco and television commercials, and adds a futuristic and yet nostalgic feeling to it. His videos are highly energetic mashups of 80's TV commercials.

In his video *Still Life (Betamale)* (Soderberg, 2013), acting as a music video for *Oneohtrix Point Never*'s single from the album *R Plus Seven*, Jon Rafman created a visual essay from a collage of obscure parts of *hentai* and *furry* internet sub-cultures, social recluses, *4chan* anonymous forum and lo-fi imagery. Daniel Lopatin, the person behind *Chuck Person* and *Oneohtrix Point Never*, has a distinct sound to himself. He uses heavy droning loops, sharp and old-school synths.

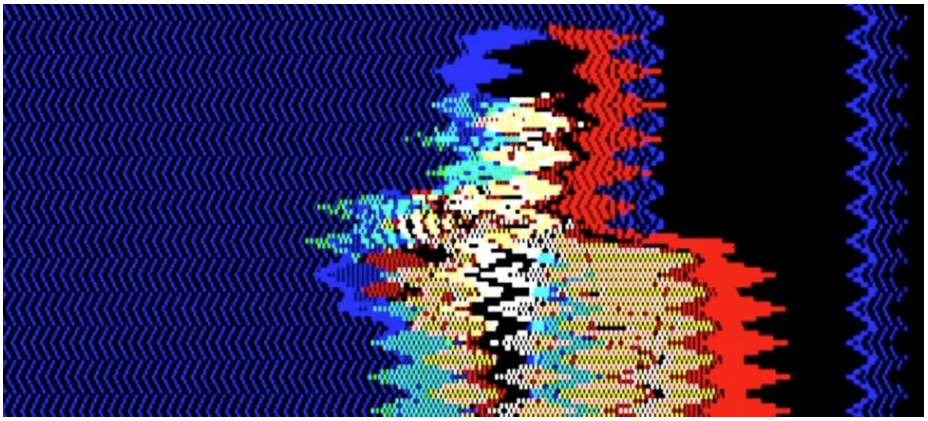

Figure 13: A still from Still Life (Betamale) by John Rafman, 2013

While some well-known artists bring in new sounds and personal reflections to this genre, it is possible to find a rich spectrum of anonymous artists and albums via *Reddit*, *4chan*, *Soundcloud* and many other frequented channels.

One particular anonymous artist, *Hong Kong Express*, also the co-owner of one of the most exclusive vaporwave record labels – *Dream Catalogue* carries a rather thematic discography. *HKE*, claims that *vaporwave's* anonymity helps create a mysterious aura, for it eliminates paratextual information about the artist to some extent and "…returning music to its primal state of sound" (Ricks, 2015: para. 3). HKE states that while techniques of creating *vaporwave*, be it sampling or us instruments doesn't matter that much, vaporwave artists who preserve this mystification aura tend to create the most significant works.

Figure 14: Hong Kong Express & t e l e p a t h テレパシー能力者 -2814 album cover

Overview:

Cyberpunks, vaporwave and remix artists share common grounds, in terms of being professional or amateur, as creative individuals utilizing their technological skills in order to explore new technological possibilities, forms of expression, out of enthusiasm or felt necessity. They operate

mostly on found material. Also, their studies help explore the amateur or professional content makers' relationship with media technologies, their structure and politics.

CHAPTER 2

NEW MEDIA

This chapter aims to explain what new media objects are, what common traits they bear and how a user interacts with them.

When Lev Manovich (2001: 27-48) explains the term new media, he sets out with five principles (or tendencies) new media objects have in common. Firstly, the new media object is a numerical representation at its core. It consists of code. For this reason, it can be manipulated digitally. It is either created on a computer, or transformed from an analog media into numerical representation, digitalized. The analog media is continuous, it can be measured and a digital object is discrete and therefore can be counted. Its data can take a limited range of values. The second principle is modularity. The new media object is constructed by a fractal hierarchy. Considering numerical representations decide the behavioral properties of pixels, a map of pixels form a bitmap image, and sequenced bitmap images form a movie. Each of these layers are independent, and can be assessed and modified

separately. The third principle is automation. The new media object's structure can be assessed and changed using computer algorithms. Low-level and high- level automations allow the computers to create or modify data with limited human intentionality. An example to a low-level automation could be the creation of 3D computer generated images using algorithms where an example of high-level automation is an artificial intelligence. The fourth principle of new media objects is variability. Since a new media object is a numerical representation and modular, it can be copied and distributed indefinitely. The quantity and structures of the copies and the process of copying can vary depending on the algorithms or the user's choice. Finally, the fifth principle is transcoding. Here Manovich breaks down a new media object into two layers: the computer layer and the cultural layer. Both these layers are subject to change over time. Computer layer is made of data structures and computer language. Cultural layer on the other hand, is based on the conventions on how the new media object is created. Transcoding is the translation of new media objects between formats.

2.1 Database Aesthetics

Manovich (2001:218-219), sets out with explaining that a database is a "structured collection of data". A database is created in order to be accessed

by a computer. He also states that new media objects act as databases from the user's perspective – the user can interact with the database. Christiane Paul (2007:96) lists some of the common database models as hierarchical, network, relational, client/server and object-oriented. Manovich (2001: 218) explains that in this type of database, objects are stored complex data structures. These objects can form hierarchies.

A digital visual, according to Paul (2007: 97), always has a back-end and a front end. The back-end is the underlying algorithms and data. The user mostly experiences the front-end, which are the visual representations of the back-end structures. Manovich (2001: 226) claims that new media objects whether they follow database logic or not, still are databases - or in other words, interfaces to a database. In new media works, database and interface are inseparable.

M+, Hong Kong's museum for visual culture, created an interactive map of neon signs in Hong Kong, *M+;NEONSIGNS.HK* which is an online exhibition, an online crowd-sourced map of neon signs that is constantly growing.

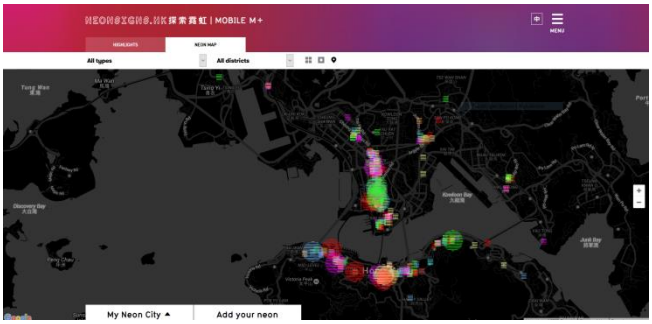

Figure 15: A screenshot from NEONSIGNS.HK

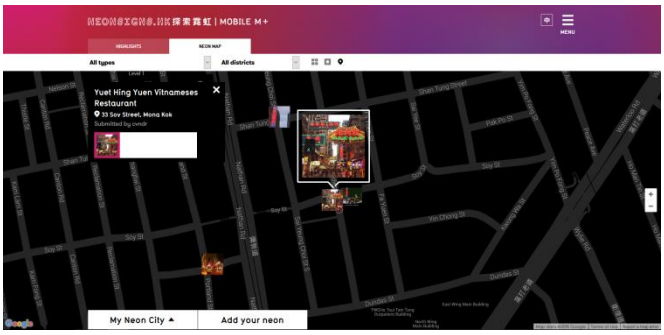

Figure 16: A screenshot from NEONSIGNS.HK – zoomed in

NEONSIGNS.HK project is a database artwork. It is a new media object – it consists of a database and an interface, constantly evolving as the users upload photos of neon signs they take and mark them on corresponding locations on the map. The interface provides access to the users, making the database legible and meaningful.

Daniel (n.d.: 4-13; Daniel and O'Rourke, 2004: 286-287) states that databases' contents are subject to change while their structure remain unchanged. While assessing database aesthetics, Daniels borrows the term

cellular automata from computational biology and cybernetics to describe a system that evolves in space over time. *Cellular automata* is an *autopoetic* system; which means it is an informationally closed system on its own, the system can see what the user sees, and it's components are in constant dialogue with themselves. Therefore it has the ability to look back in itself. It is a self-reflexive system. A *cellular automata* is also an emergent system (these systems evolve constantly as their components evolve adhering to a local set of rules). For these two qualities, the database maps out a set of potential outcomes. Daniel uses the term *collaborative systems* as a metaphor to describe art that is collaboratively produced by communities (local and online). These systems also operate on a set of rules, like the cellular automata. However this time, these rules are global conditions that govern social or historical discourses. *Collaborative systems*, she adds, are dialogic spaces. The meanings of a database's content are collectively produced. The content can evolve throughout time, and the initial conditions are determined by database's structure.

Daniel refers to uncertainty fields in physics, where she takes the postmodern position and argues that authorship and authority is fragmented and relative:

> …"field" is defined as "a complex of forces that serve as causative agents in human behavior" and a system is understood as "a complex

> of methods or rules governing behavior." Uncertainty is an inevitable part of the assertion of knowledge. Everything said is said to an observer; knowledge of reality is dependent upon the perceptions of the observer.

Daniel and O'Rourke refer to the visualization of information as mapping. (2004: 287). Map functions as a record and a statement. Daniel states that a map and a database are both representations of analog continuous information as discrete. Through a social framework Daniel (n.d.: 14-15) explains, databases can represent a cultural perspective of a society. Classifying data is a means of exercising power (as marking out the politics of difference) over the content. This is in direct correlation with Manovich's (2001: 46) use of cultural layer of a new media object. The cultural layer and computer layer is in dialogue. They together form human and computer interpretations. *The Database Imaginary,* a term used by Dietz (2007: 110-111) criticizes the databases position to be omnipresent; where he argues that the database is perceived merely as a back-end structure. He refers to an essay by Leo Steinberg, *Other Criteria* (1972), where the flatbed surfaces (such as billboards, table tops, studio floors) create an illusion (which could be interpreted as a myth) in which they are the sole media for information exchange. However by the introduction of new media, the data could be freed from the shackles of classification schema's, the metadata.

2.2 Hypernarrative

Garden of Forking Paths, (Borges, 1941) a short story by Jorge Louis Borges, takes place in England, during World War I. The protagonist, Doctor Yu Tsun, is a german spy, being pursued by an agent, Captain Richard Madden, who (Tsun assumes) has figured him out. Planning an escape, Yu Tsun finds himself in a village, in the house of Doctor Stephen Albert, only to realize that Albert has vast knowledge and insight on Yu Tsun's ancestor, Ts'ui Pên, who has created a novel, and a complementary labyrinth of equal depth, where no one should find their way out. The book and the labyrinth, *Garden of Forking Paths* turn out to be one and the same, a novel that branches out throughout time. The narrative of Ts'ui Pên's labyrinth, was all the possible combinations of narratives. It was a *hypertext*.

> In all fictional works, each time a man is confronted with several alternatives, he chooses one and eliminates the others; in the fiction of Ts'ui Pên, he chooses-- simultaneously--all of them. He creates, in this way, diverse futures, diverse times which themselves also proliferate and fork.

Manovich (2001: 225) posits databases and narratives as enemies. The database rejects the causal relations and strict orders of narratives. However, they can co-exist to form multiple alternatives to a linear narrative. This is called a *hypernarrative*.

Narrative can be described as delivered information over time (Jennings, 1996: 346-350). Jennings refers to the circular (word to mouth logic) of African oral language, and her claim is that the rhythm and form of the sound and dance creates the appeal of a multimedia artwork. Repetitive patterns made of narrative units (narrative rhytms) convey strong aesthetic experience. Similarity between these nodes provide balance to the narrative structure. Utilizing a concept called *open work.* When a narrator utters an open work, just like a new media object, it offers a set of possible trajectories.

Paul (2007: 99-100) argues that whenever a multimedia material database is accessed by one or more interfaces, the result is data visualization. Database aesthetics largely rely on interpretation of data on an algorithmic level. On the other hand, database aesthetics can also interrogate aesthetics lying behind the formation of databases.

CHAPTER 3

OVERVIEW OF THE PROJECT

3.1 – *Wunderkammer*

A *Wunderkammer* (Spenlé, n.d. para. 1-2) is a collection of rare, exotic and wondrous objects. Although it is a cultural output of early modern period, *Wunderkammern* also offer a framework into examining the 16th and 17th century thinking. While acting as a miniaturization of the external world, posits the viewer in a dialogue with his/her surroundings. The *Wunderkammer* creates a macrocosm and a microcosm – where objects are networked, and they communicate with one another. Two separate forms of *Wunderkammer*, *Artificalia* (creation of men) and *Naturalia (*creation of god*)*, however these boundries are blurry.

In correlation with Spenlé's explanation, *Wunderkammern* are very similar to databases. They have a set of registered items, the items can create relationships with one another. Moreover, a *Wunderkammer* itself can act as

an interface by presenting its objects to the outside eye. The objects gain a new hierarchy, based on the artists choices (an algorithm) and intertextual qualities based on their juxtaposition.

Nature demiurge insectes by Jacques Kerchache, a French collector of primitive art, is one of case studies of Daniel (n.d.: 12-14); it is a book acting as cabinet of curiosities. Kerchache collects insects and creates artworks from his collection. Daniel, reframes Kerchache's *demiurge* to set up a metaphorical framework to the database artist.

Demiurge, is explained by the New World Encyclopedia (2013: para. 12) as:

> …the Demiurge as antagonistic to the will of the Supreme Being. His act of creation either occurs in unconscious imitation of the divine model, and thus is fundamentally flawed, or else is formed with the malevolent intention of entrapping aspects of the divine *in* materiality.

The *demiurge,* creates patterns through iterations of similar structures. In Kerchache's book, the casings of the insects are identical while every individual object exhibit their own characteristics. The way Kerchache creates these patterns are also influenced by juxtaposition of objects. In some sets, the shapes change while the internal structures show similar qualities. In some others, the rendering styles of the insects change while the form remains consistent. Representation in this database is intentional. The author is a collector of objects, and exerts power through classification, naming and possession.

3.2 – Interactive Music Videos & Influences

As new media objects, interactive music videos are interactive visual complementary objects to pre-existing music. A predecessor of this art form was the interactive film.

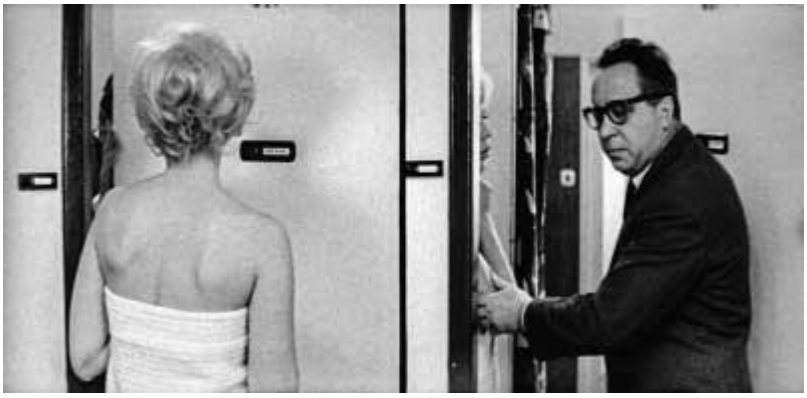

Figure 17: A scene from Kinoautomat (1967)

Kinoautomat (1967) was the first interactive film (Willoughby, 2007) screened in Czechoslovakia in *1967 Expo*, gave the audience control over the narrative on certain occasions. Nine times throughout the movie, the audience can vote using the two buttons installed in front of their seats. They can choose between two outcomes, and the film will progress based on their choices.

ROME – "3 Dreams of Black", by Chris Milk, is an interactive music video for the song *Black* by Danger Mouse & Daniel Luppi, with Norah Jones. The artwork contains a variety of scenes, some animated, in which the user can modify the image by rolling over with mouse, and in some, the user can roam around in low-poly 3D worlds, commanding hordes of animals and procedural foliage.

Figure 18: A still from *3 Dreams of Black*

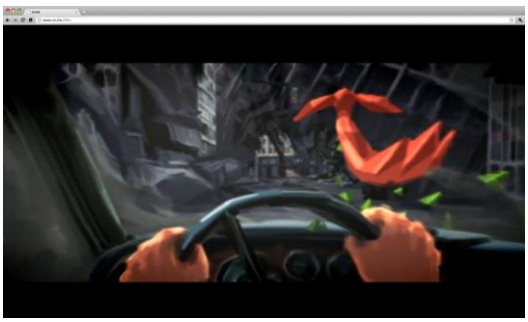

Figure 19: Still #2 from *3 Dreams of Black*

Figure 20: Still #3 from *3 Dreams of Black*

3.3 - WYSH? (Will You See Her?) / The Project

WYSH? (Will You See Her?), is an interactive music *wunderkammer* for *Hong Kong Express*'s track *Broken Hearts (ft. V I R T U E),* from the album *THIS*. In *WYSH? (Will You See Her?),* the player wanders through the interactive *wunderkammer* (Cabinet of Curiosities), a digital museum of Cyberpunk. In *Interview: Dream Catalogue's Hong Kong Express on Vaporwave's Past, Present, and Future* (2014), HKE explains his vision stating "I think the most important thing to aim for in vaporwave as a producer, is to make something cinematic in effect."

Hong Kong Express, is an anonymous *Vaporwave* musician who owns the *Dream Catalogue* record label. *WYSH? (Will You See Her?)* aims to support HKE's art with an immersive audio/visual experience. Although it's difficult to pinpoint every sub-genre, *Dream Catalogue* and *HKE* focus on creating a cinematic effect, inspired by Wong Kar Wai's movies, which take place in Hong Kong. The name "*WYSH? (Will You See Her?)",* has been chosen as a homage to the unfulfilled and surrealistic romantic stories that have inspired *HKE*.

3.4 – Functional Specifications and Nodemap

The player avatar in *WYSH?* is controlled keyboard controls used in gaming that are rather intuitive to a digital-native generation. With these, my project aims to convey a feeling of exploration by drifting through a vast cyberspace; in a 3D space. The interactions are conducted through on keyboard inputs, either hotkeys or navigating through certain areas. Therefore the primary target audiences are teenagers and young adults who have a background in video gaming and enjoy consuming underground genres of electronic music and particularly who are aware of *vaporwave*.

WYSH? (Will You See Her?) is designed to be accessed as a standalone software for now. It is designed for 15" screens minimum, and accessed through a personal computer. This product is aimed to be packaged both *.exe* and *.dmg* formats. The storyworld of *WYSH? (Will You See Her?) puts* the user in a point of origin, in a spherical structure. The scenery resembles a surreal mix of underwater exploration - ruins of a submerged city, and a digital collage as in a microblog. As the player wanders around, he/she comes across items from cyberpunk culture, fictional or actual.

The product consists of the following:

Content:

- WYSH? (Will You See Her?) Title Text Objects
- Credits Text Objects
- Tutorial Widget
- Glossary Widget
- A flying player avatar
- Horizontal floor grids (for sense of depth)
- Image Objects (static image or looping sequences)
- Object interactive areas
- Interaction Prompt (HUD)
- Object detail widgets
- Music Nodes(loops)
- Volume Controls
- Post-Process Effects

Features:

- Explore an immersive audio/visual museum.
- Drift through the music throughout the experience
- Read details about the collection objects

Functional Controls (Keyboard only)

- W,A,S,D for horizontal navigation
- Space, and C for vertical navigation

- E to toggle object detail widgets
- G to toggle Glossary
- R to restart
- Esc to quit
- 1,2,3,4 to toggle Volume levels, M to mute

The look and feel of *WYSH? (Will You See Her?)* are mainly inspired by aesthetic elements such as neon lights of Hong Kong, retro-futuristic grids of 80's cyberspace visualizations and 2D image assamblages (from still and gifs) that could be found micro-blogging sites. The player avatar is a black floating sphere drifting through chunks of music seamlessly mixing together, and monumental visual collages aim to convey feelings of timeless and isolation with a romantic component - to complement the aesthetic aims of Hong Kong Express.

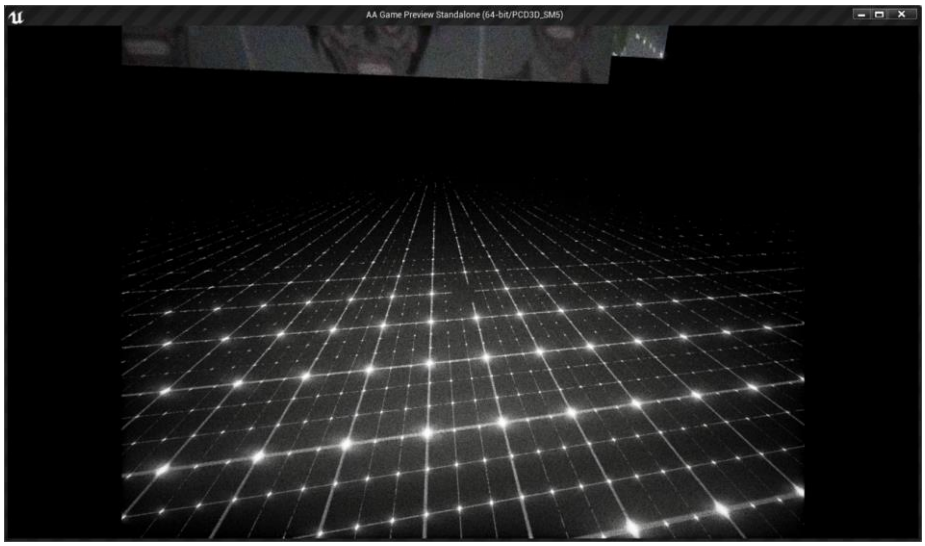

Figure 21: The glowing grids - Screenshot from the project

Sense of depth and navigation is partially built by glowing horizontal grids that are laid on top of one another. They are inspired by the naïve, retro-futuristic images of 80's and 90's cyberspace metaphors.

The logotype of the project is inspired by early digital typefaces, to be more specific, the *Chicago* typeface of early iPod's, Grilli Type's type family *Cinetype, and the glow of electric light.*

Figure 22: Illustrated example of the creation of my Logotype - Screenshot

Neil Harbisson (born 27 July 1982) is a Catalan-raised, British-born contemporary artist and cyborg activist based in New York. He is best known for being the first person in the world with an antenna implanted in his skull and for being officially recognized as a cyborg by a government. His antenna uses audible vibrations in his skull to report information to him. This includes measurements of electromagnetic radiation, phone calls, music, as well as video or images which are translated into sound. His wifi enabled antenna also allows him to receive signals and data from satellites.

Figure 23: Object Details Widget grids - Screenshot from the project

The body texts of object details are written in Adobe Garamond Pro, with first letter of paragraphs larger, to convey better legibility, and a temporary

break from the visual atmosphere of the artwork. This aims to provide better focus on content.

The glowing object areas are simple glowing circles to avoid unnecessary distraction, and also convey the information that clusters of objects will be accessible once inside.

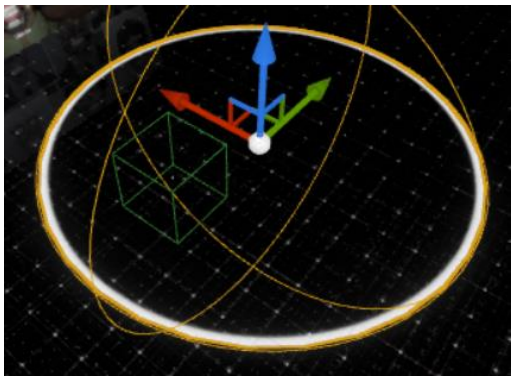

Figure 24: Object Area in editor view grids - Screenshot from the Project

The structure is as follows - the player character begins in the point of origin, center of the world. The music slowly fades in and starts looping. The character can move in X,Y and Z axes to navigate the museum. The camera shoots from a fixed distance, and rotation, however follows the character - the player is always in the middle of the screen.

This artwork is built around an object-oriented database. Repeating patterns of *Narrative nodes* which consist of linear node images or animated loops and text widgets that can be toggled while inside an object interactive area, make up a narrative node. Also, the sound cue objects, later providing instances to the map, act as an object oriented database. The only hierarchies in this new media artwork, are the main level, and it's children assets, the character and it's children assets, and the narrative node's children assets.

When the player character enters an object interaction area, indicated by a flat glowing circle, the player has the option to call an interface widget containing the details of that specific object.

Figure 25: Inside the Object Area - Interaction Prompt - Screenshot from the project

Figure 26: Inside the Object Area - Details Interface Widget Enabled - Screenshot from the project

The details will vanish if the player chooses to leave the object interaction area, or switch the widget off via input.

As for the sound design, first the music has been cut down into seamless loops: clips have been taken from the parent waveform, and using the drum machine as a reference, the clip has been sliced in an order where the beats in the beginning and the end of the clip are in sync. Then the sliced part is pulled back to the beginning of the clip, overlapping a necessary fraction of the beginning, and once the beats overlap, the two fragments are being crossfaded into a seamless loop.

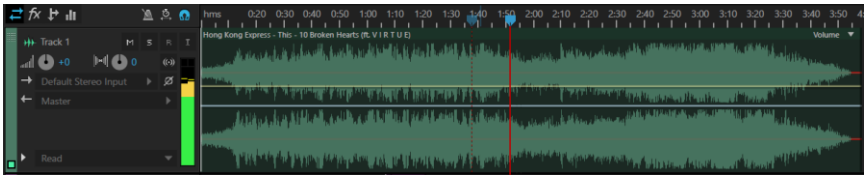

Figure 27: *Broken Hearts (ft. V I R T U E) - Hong Kong Express.* Original Waveform. - Screenshot from the project

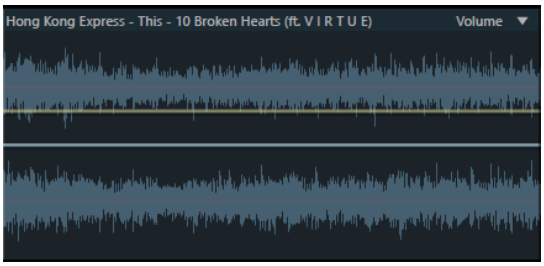

Figure 28: A sample clip from the original waveform. - Screenshot from the project

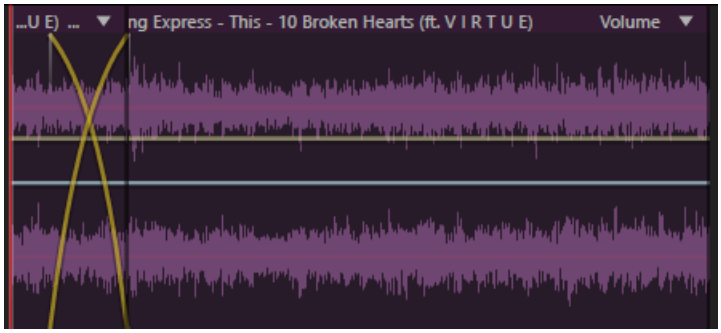

Figure 29: The sample clip, seamlessly looped via crossfading. - Screenshot from the project

Then these looping clips are distributed among the storyworld. As the player wanders through the world, the loops are going to crossfade into one another. There are no visual representations of the audio nodes in the

packaged project, and the looping clips do not follow the sequence they possessed in the original song. This method aims to convey deeper immersion by making the music less linear and more hypernarrative.

The sound files, are being converted into *audio cues*, which are basicly object blueprints, just like objects in an object oriented language. These *audio cues* are distributed throughout the world, and their volumes are being controlled by a database of *audio cue instances*.

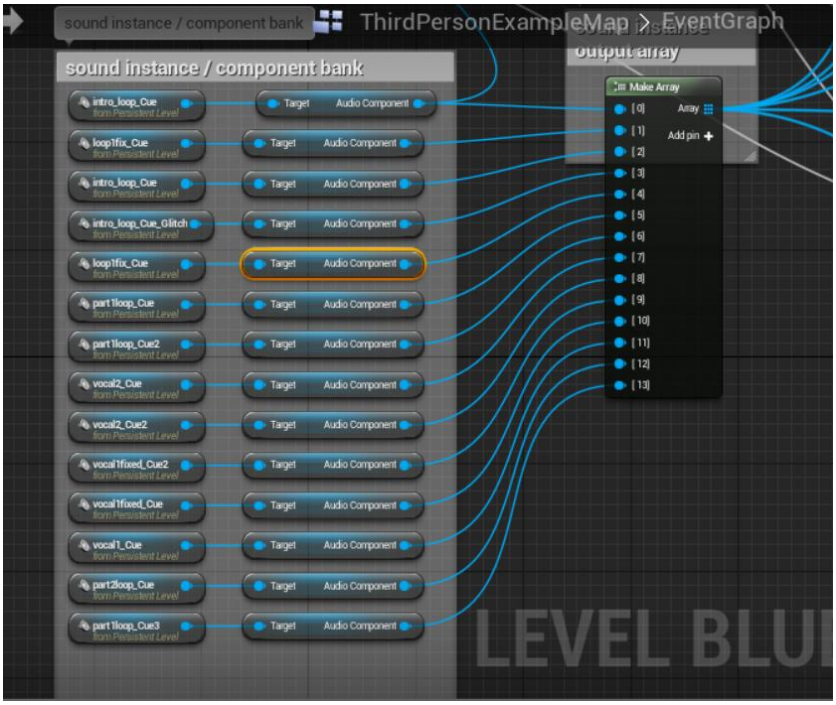

Figure 30: Sound cue instances database in the level blueprint - Screenshot from the project

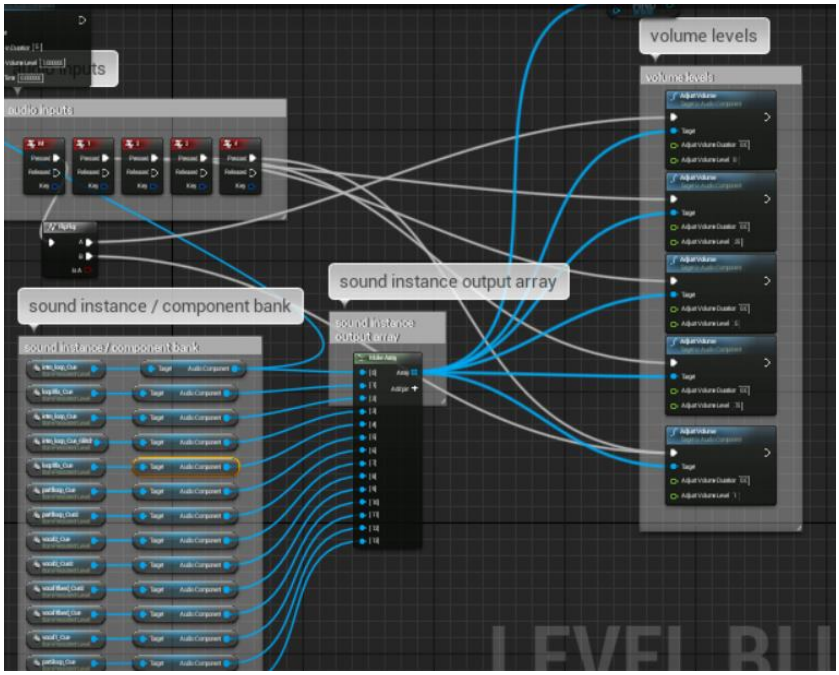

Figure 31: Sound cue instances database with volume controls and input keys in the level blueprint - Screenshot from the project

Figure 32: First example sound cue instance's attenuation visualized. - Screenshot from the project

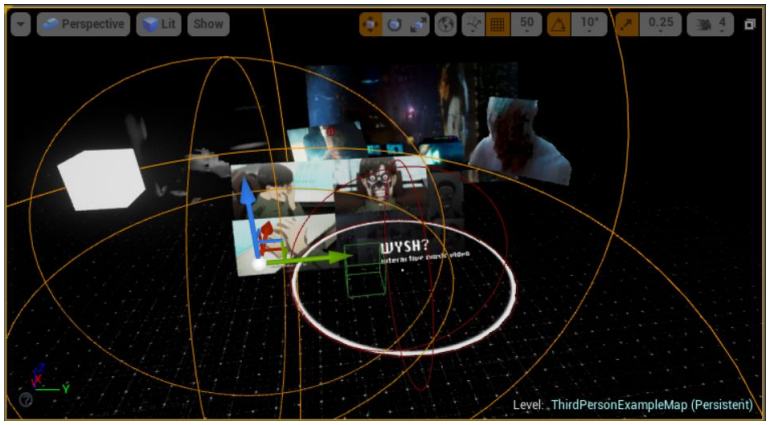

Figure 33: Second example sound cue instance's attenuation visualized.

- Screenshot from the project

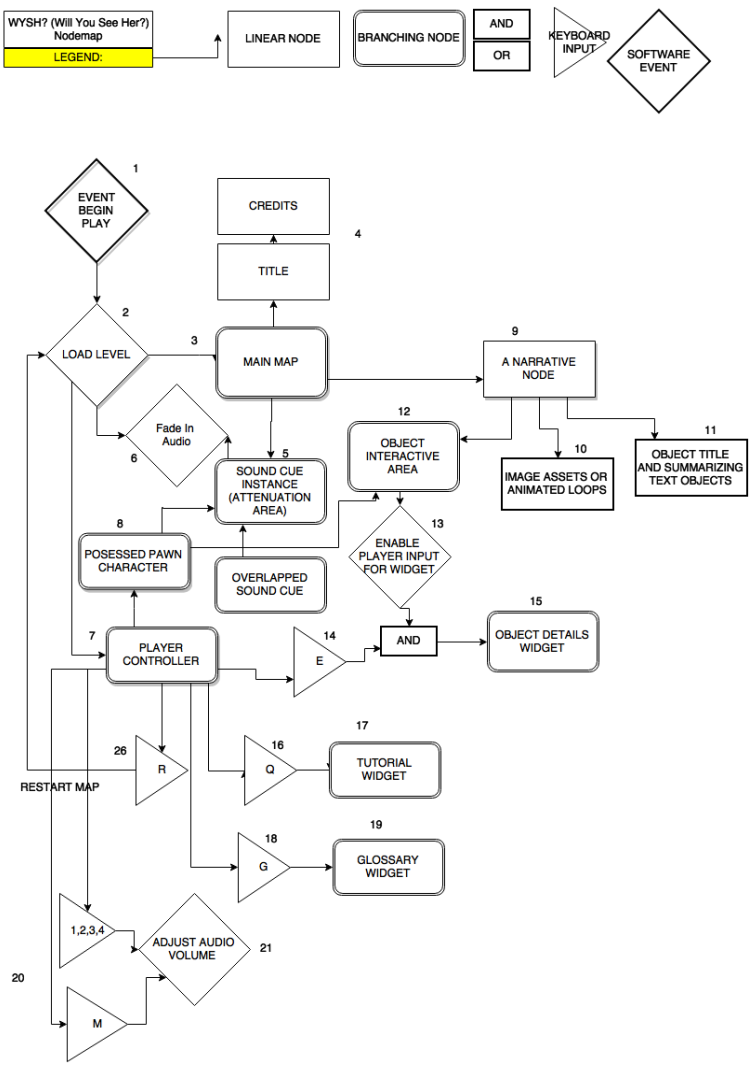

Figure 34: The nodemap of the project - Screenshot from the project

1- Event Begin Play:

This node is a software event, which indicates the software has started and ready to be used.

2- Load Level:

This node is a software event, which indicates the level has been loaded with the assets inside it, and time starts to tick.

3- Main Map:

This node is a branching node.

4- Title and Credits:

These are linear nodes. They include “WYSH? (Will You See Her?)”, “Hong Kong Express” “Broken Hearts ft. (V I R T U E)”, “Interactive Music Wunderkammer", “by Doğa Uslu”

5- Sound Cue Instance (Attenuation Area):

These areas are found throughout the map, they are invisible, spherical triggers where the assigned sound cue play as they are overlapped by the player character. The attenuation works with volume levels. As two nodes overlap, they create a crossfade between two sound nodes.

6- Fade In Audio:

This node is a software event. The first audio loop (introduction) fades in slowly when the level is loaded. This interpolation takes three seconds.

7- Player Controller:

This is a branching node. Player Controller is loaded, with functional controls and it enables interaction with the pawn character (the avatar).

8- Possessed Pawn Character:

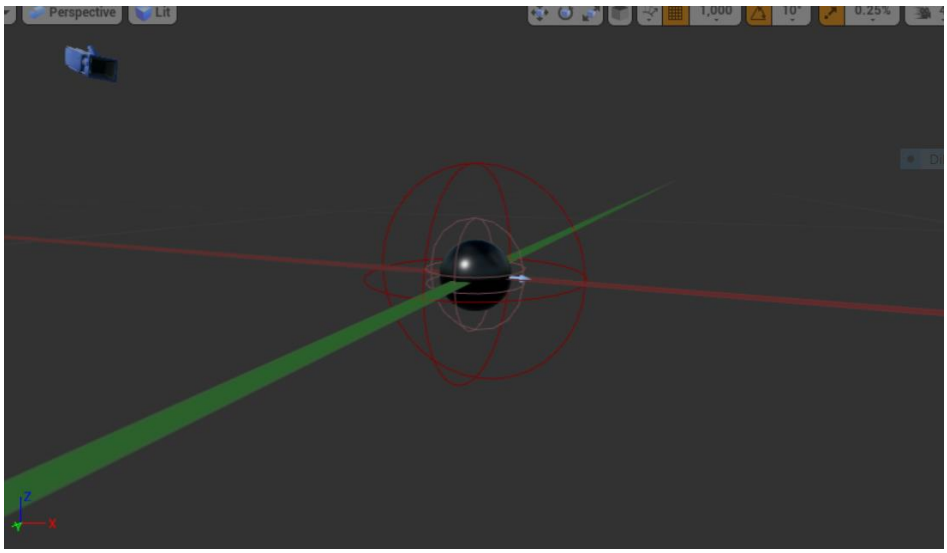

Figure 35: Possessed Pawn Character / The avatar – Screenshot from the project

Branching node. When the controller is loaded, the pawn character (the avatar) is possessed. The avatar is the visual representation of the player character, and the overlapping interactions are determined according to the trigger area around the pawn's mesh. Whenever the trigger area of the pawn overlaps an object area, an interaction prompt appears anchored to the bottom left part of the screen.

9- Narrative Node:

This is a placeholder node for the following 10th, 11th and 12nd nodes. Therefore it is represented as a linear node. Narrative nodes are clusters of nodes, and a collection of image assets, object interaction areas and text image assets.

10- Image assets or Animated Loops:

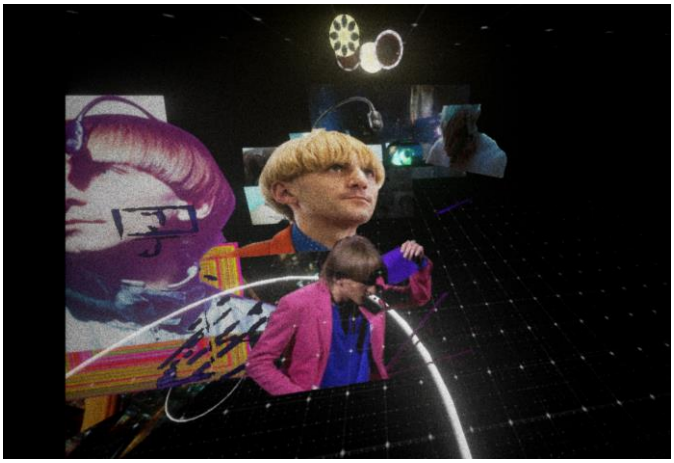

Figure 36: Image assets & animated loops - Screenshot from the project

These are linear nodes, acting as a dominant part of the main visible actors in the storyworld. They are the visual representations of the displayed objects.

11- Object title and text objects:

These are linear nodes, acting similar to image assets, they convey the basic information about the narrative node, while forming a typographic composition. They are a part of the visual assemblage.

12- Object Interactive Area:

This is a branching node, consisting of a large white glowing ring, and a spherical invisible trigger area (same radius as the ring). This node enables player's interaction with the details widget. If the avatar enters inside this trigger, a prompt widget will appear (see. node 8).

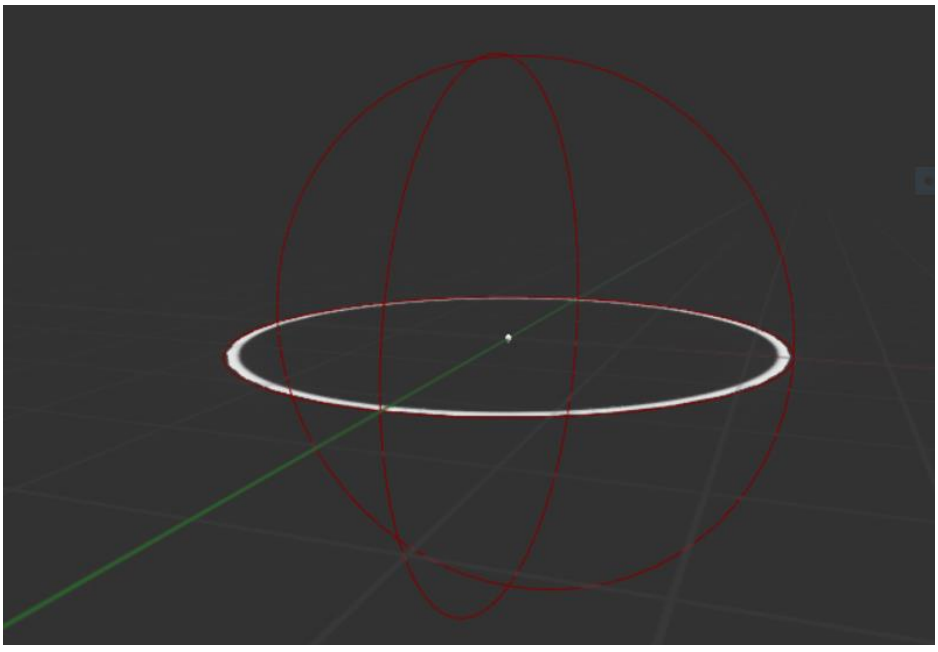

Figure 37: Object Interactive Area – Screenshot from the project

13- Enable input for widget:

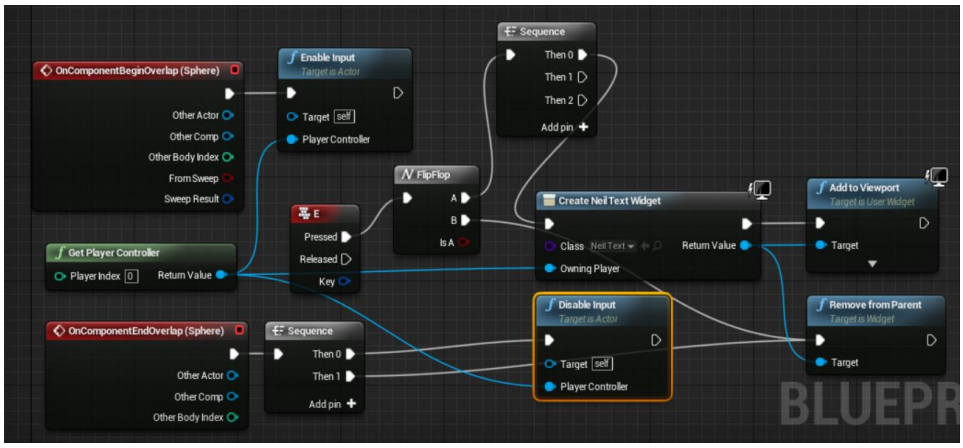

Figure 38: Enable input for widget interaction - Screenshot from the project

Software event node. This is the event that enables the controller's interaction with the object interactive area (see nodes 8 and 12).

14- Keyboard Input node: "E"

Input node. If the avatar is inside the area and the player presses the "E" button, the player will call the Object Details widget.

Figure 39: Interaction Prompt - Screenshot from the project

15- Object Details widget:

Branching node. It's a HUD (Heads Up Display) widget that provides detailed information about the context of the narrative node.

16- Keyboard Input Node: "Q"

Input node. Anytime during the gameplay, the player can toggle the Tutorial widget.

17- Tutorial Widget

Branching node, when called upon, Tutorial widget displays the key-bindings of the software. This widget aims to help ease the learning curve of the interactions, and make them more intuitive over time.

18- Keyboard Input Node: "G"

Branching node. Toggles the Glossary widget.

19- Glossary Widget:

Similar to the tutorials and widgets, the Glossary widget acts as a part of the HUD and can be toggled. This widget aims to provide information about frequent terminology the user may encounter throughout the experience.

20- Keyboard input nodes: “1”, “2”, “3”, “4” & “M”:

Input nodes. They adjust the volume of the audio to 25%, 50% 75% and 100% respectively. “M” mutes all audio.

21- Adjust Audio Volume:

Software event node. When the node 21 is executed, the software adjusts the volume of all the present audio cues to input value.

CONCLUSION

A new media artist can convey narratives and data structures through found objects, and contemporary cultures like remix and vaporwave grant a deeper understanding on organizing found information.

My project had mixed reviews from the test users; while some of them had difficulties adopting to the controls, even though they were of a digital native generation, some had issues with way-finding. These valuable feedbacks also kindled my interest in studying gestures, which will hopefully grant new possibilities to study human computer interaction on a further level.

This thesis and my artwork was an attempt to propose an alternative medium for the subject artist, *Hong Kong Express*, to display assets and vision of his art. This way, it is has been possible for me to gain an understanding of production techniques and culture of new media objects, hypernarrative and remix culture, as well as an insight on creation process of an interactive *wunderkammer*.

I hope to further my studies on interactive design and computational media while finding new artistic positions to study and adopt.

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