

**“Without music
life would be a
mistake”**

Friedrich Nietzsche.



THE MUSIC VIDEO IN THE NEW MEDIA_

Music as integrated
experience.

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The music video in the new media:
music as an integrated experience

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01.

INTRODUCTION_

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01.1 PROBLEM STATEMENT

The Cambridge Dictionary defines the music video as “short film made to advertise a popular song” (2011). However, a music video is a concept that goes way beyond that. Music videos are a significant part of our culture as a great expression of the music representing the sound with motion pictures; music videos are art, entertainment and the fastest way to make audience experiment the music as an integrated experience.

After decades of history, the music videos have experienced an incredible rising and a massive fall; I will expand this success in the further chapters; all this history has one common factor: technology. The technical improvements allowed musicians and artist to create the very first music video having their first great peak in history with MTV, the revolution of the music television started and the rise of a concept changed the industry forever, but the technology never stopped evolving, and the huge thing created thanks to it, almost disappear thanks to another technological development: Internet killed the tv star.

In 2005 Youtube interrupted into the scene and changed the game, all the videos that a user was waiting for ours to watch on MTV were available 24/7 online and on demand in youtube, the viewers moved fast from television to desktop, and that’s how the music television was declared dead.

In 1999 the four basic cable music channels: MTV, VH1, BET and CMT, played around 200,000 music videos between them, by 2012 the number had fallen to less than 70,000. [1]

With the youtube incursion, the views and revenues have increased, but

the budgets have mostly stayed low, in the 90's was common to spend around half of million dollars on a music video, according to James Frost: "Nowadays I rarely see a budget that comes in over \$15,000 to \$20,000. And that's for established artists." [2]

The Internet not only changed the music industry, but it also changed the world our cultural codes, behavior, and language as well; Artists across the scene are breaking the rules and making the limits of the established frame more blurry and undefined, from website video to music documentary interactive pieces. Despite changes are not new to the music industry, the innovations are expanding on several ways the concept of the video., which has lead me to my research questions:

_What is the future of the music videos?

_What are the production challenges for music videos in new media?

_What is the impact of new media channels in the audience?

To answer these questions, this project is divided into two main sections: Theoretical analysis and design development; in the first one, I will establish a theoretical base for the matter, going across the history to show the development and the impact of music videos in the culture. On the second step, I will establish a new media channel, and I will design and develop a music video project going across the entire workflow process, the aim is to specify this step by step and compare its impact with a regular video based on a study group.

01.2 TARGET_

The target group of my project is a comprehensive combination of people; the music video is a media that involves different professionals and an audience. This thesis explores the development and possible future of the music video and is destined to designers, film directors, musicians and all the creators that are constantly trying to go out of the canvas, to the explorers and for all the people that see in technology a tool of empathy and a way to create new experiences to the society.

The music is an experience, and its impacts on the culture have no limits, this thesis aims to give to the music lovers a new way to enjoy the music, a way to expand our senses and for all those who think that there is no life without music.

01.3 PERSONAL _MOTIVATION

My interest in this topic is a natural succession of personal experiences and professional work. I can say that I'm part of the 'MTV generation' so I grew watching music videos, listening music and enjoying the 56k internet. Music culture and video-clips were a strong influence during all my life, and I experienced the power of the media in the way of how can this defined an entire generation.

Although I enjoy the music performance and sound, my personal skills don't allow me to perform music; that's how I decided to represent it with the creation of visual Joking clips. After making some experiments with some friends I had the enough experience to take to the next level: I joined the Bogotrax Festival, one of the biggest indie electronic festivals in Colombia.



Fig. 1. OWL project in the Bogotrax fest, 2013. Daniel Baron.

During three years I worked with local and international DJ's and musicians from France, Brazil, Argentina and the USA, my job was to create visual sets for the artists presentations depending on the music style, art direction, and concept; represent music is not about play random clips is a delicate art that can change the impact of a performance and the experience of the audience. In that direction I did some installations of projection mapping in which I was trying to expand the borders of the regular audiovisual square canvas, keeping the concept of audiovisual but into a physical level where surface and content have the same critical in the production process.

I testified the biggest changes that internet has produced in several industries and medias; the MTV generation got over in front of my eyes, but I had the chance to experience the reborn of the music television but on the Internet: Internet killed the video star!

Music on demand, viral videos, views, shares, live streams, interaction, control; all these features are part of the new generation of the videos that are on the web, the technology is giving infinite tools, and the possibilities are unlimited; On this thesis I want to explore the opportunities and define a scenario for the music videos and how this new media will affect the way music videos are made in terms of production, workflow, tools and concept.

01.4 THESIS _OBJECTIVES

This thesis will aim to propose a possible methodology for the creation of music videos inside a technological and theoretical frame; the analysis of the behavior of the users in the past and the influence of technology will define a hypothetical scenario for the concept in which the rules might change the way music videos have been made.

My objective is to conclude a possible new media for the distribution and creation of music videos, based on my conclusion I will create a workflow of development under specific guidelines and apply them into a robust and real piece of audiovisual production.

_Propose a possible scenario for the future of the music video as artistic and communication piece.

_Develop methodologies of production for videos made under the frame of new media.

_Open a new space for musicians and artist that see potential in the new media to communicate their projects.

_Explore narratives under new media channels.

_Produce and prototype a music video under one specific new media channel.

02.

_RESEARCH

02.1 Methodology_____	19.
02.2 Music Video_____	22.
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02.1 METHODOLOGY_

On this chapter, I will explain deeper the methodology I will use to solve the problem statement and how the thesis structure is designed. The aim of my thesis is to go into the understanding of the music video as a cultural component and how the technology will define it's future development and impact as a social tool. I want to make a contribution to the field creating a theoretical and technical framework to allow musicians and artist to keep developing concepts in new directions to push out the boundaries of audiovisual storytelling.

Due to the way I see the new media universe as a complex group of communication channels that together with technology can create experiences and empathy I decided to work using the qualitative methodology to understand it impacts on the viewers.

The structure of my thesis will follow a cascade diagram which is a linear method of development that will follow specific steps to achieve the final objective of this process but with the feature of receive feedback from one stage to the other when the situation require it.

- STEP 1** Problem Statement.
- STEP 2** Theoretical base.
- STEP 3** Case analysis.
- STEP 4** Model conceptualization.
- STEP 5** Design and prototyping.
- STEP 6** Conclusions.

As it appears on the diagram, this project will have six steps: The first step consists of the statement of the problem and the research questions.

The second one I want to establish a strong theoretical base before continuing with the development of the process. On this chapter I will explore the history of the music videos, the impact of it in cultural and economic terms showing examples and manifold statistics. On the other hand, I will explore the new media channels that are available to share audiovisual material and how do these channels have been interacting and changing the way we consume music and videos.

On the third step, my plan is select different music videos made under the new media frame and evaluate them using determined criteria, on this way I will be able to take decisions on the way to define which media is the best for the development of music video and test the model. This step will guide the starting point of the Design section of this project.

The fourth step of the thesis will use the evaluated models to define which one will be the next channel for the music videos field, the theoretical understanding of the context will give me the knowledge to adjust and propose a hypothetical and accurate scenario for its development.

Using the data of the previous steps on the fifth part, the design process will be defined; here I will conduct an experiment to evaluate the model I selected as the most viable. On that way I will emulate a real situation of music video production, from the band and music selection, going through pre-production, production, and distribution. This section of the thesis is the application of the gathered theory into a real project; going on that direction I will be able to define a framework to every step of the production that can be applied to a real situation. This part also contemplates the evaluation of script, storyboarding, scripting, software and hardware and how to adjust them into a field where the rules are not that clear like in the film production.

In the final part (sixth), my aim is to share the final application into a group of study subjects, this with the purpose of receive feedback and evaluate the model again using an external perspective. With this step I want to start a discussion regarding impact, usability, and empathy perception; using all these information I will be able to get the final answer to the problem statement and get the last conclusions of the thesis.

The way I have chosen to work with has certain limitations that I want to share. The direction of this methodology has several restrictions involving the audience into the entire process because I am not gathering empirical data from the public, this could affect the chance to find answers during the process to specific questions regarding the experience. However, I will support my insights based on statistics and numbers that can actively support the decision making and to have accurate perspectives.

02.2 THE _MUSIC VIDEO

The starting point of the process to answer the problem statement is gain insights about different concepts and terms into a conceptual perspective that is connected to the Music Video concept. Going through Music Video will be the first part of the theory base that I will start with the fundamental question:

_What is a Music Video?

A music video is defined as “ a short film made to go with a popular song”[3] by the Cambridge dictionary. On contrast to this basic definition, the one provided by Goodwin: “Music video is one of the most important emergent cultural forms in contemporary popular culture. It has had a profound impact both on music, fashion, and youth culture and on the codes and forms that operate across television, film, and advertising.”[4]

This more accurate definition makes easy to understand why the music videos have become that popular, it's a concept beyond film or advertisement, for some authors the diversity of the music video is not attached only to music, the music video has several applications inside the audiovisual language and production. A music video can be political, musical, promotional, didactic, cinematic, tell a story and start an entire revolution.

There are two positions about the way music video works as an audiovisual piece; the music video is either narrative or anti-story, those descriptions reflect the technical and aesthetics of the concept. “Music videos do not embody complete narratives or convey finely wrought stories for numerous reasons, some obvious and some less so. Most important, videos follow the song’s form, which tends to be cyclical and episodic rather than sequentially directed.” [5]

Since its creation, music has been one of the most important parts of the human culture, its has faced several changes over the years, and it is one of the human expressions that can evolve and adapt depending on the current situation and context. Nowadays, a top music chart is full of songs that have a visible part: the music video. How the music video started and became such important and almost necessary part of the music expression? Let’s take a look at the history of the music

02.3 _ HISTORY

_ From light lanterns to MTV

“Musicians are not modest, and the first one who saw a camera in operation probably suggested, -Hey, why don’t you point that thing at me while I play?” [6]

Track the first music video on the history is not a simple task, especially because there is not an agreement about the first one. For some writers, one of the first motion illustrated project made for a song, was created by George Thomas who was hired to use a magic lantern to project images on a screen for the live performance of the song: “The Little Lost Child”, this was made in 1894 as a promotion work, those “illustrated songs” designed for public view, rapidly became a popular, and turned into high profit for music publishers.

The next year (1895) a young inventor called Eadweard Muybridge went to Thomas Edison’s lab with the idea of creating a new device capable of reproducing sound and image at the same time, his concept was merged the Zoopraxiscope with the Phonograph, this idea never turns into reality. However, Eddison started to work on an idea to create something that could reproduce pictures in motion; he called this concept as kinoscope. Unfortunately, this invention wasn’t successful due to the problems of sync between the film and the sound; at this point, Eddison realized that the future of the pictures in motion was in the projection.

1920's

The rival Theatre in New York City presented the first motion picture with sound; it had a system that synchronized the films with the soundtracks. After this presentation, several production companies used the system to create films presenting opera, vaudeville stars, bands and traditional musicians of the time; those musical shorts were included in the main film presentation until the 1940 decade. In the middle of the decade, the brothers Max and David Fleischer created a cartoon with a bouncing ball that jumped over the lyrics to promote the songs singing in theaters; this bouncing ball became an attractive element of the children's television programs later.



Fig. 2. Fleischer Screen Song: *Down Among the Sugar Cane* (1932). YouTube. <https://www.youtube.com/watch?v=FmW0pDxf5N8>

_1940's

“Soundies” are considered as active precursors of the music videos, they were a three minutes film showing music with a dance performance; it was designed to work as a jukebox with a projection for bars and public places. Its impact was that significant that most of the greatest artist of the time, musicians, and dancers, appeared in the soundies.

_1950's

The term “music video” was created. According to some historians, the artist Jiles Perry Richardson used the phrase “music video” in 1959 during an interview with a British magazine. The same artist has the credit of making some of the earliest rock music videos in 1958.



Fig. 3. Soundies: A Musical History (2007). DayliMotion. http://www.dailymotion.com/video/x1eclz_soundies-a-musical-history_music

_1960's

Scopitones edge closer to the music videos, this machine created in France used 16mm film to play music videos and became popular across Europe and America; the scopitones film styles were more provocative, showing bikinis and erotic situations due to its target: Bars; one of the biggest features of these films was the use of Technicolor, this keeps them vivid and colourful even today.

Although they weren't the very first band, The Beatles used the power of film to market and promoted their records and used it to show themselves to the world. In addition to that, they found the film a way to appear everywhere, with a clip that showed them playing apparently on live, they were able to broadcast in television their performance without being in the television studio.

As a result of their success, Bob Dylan, The Rolling Stones, The Who and many another artist of the time, began to make promotional clips; these videos become much more experimental, they included post production and direction, sort of the modern music video. In 1967 The Beatles presented the promotion film of the song "Strawberry Fields Forever", this movie is one of the most important in the history: "featuring reverse, slow motion, fades, camera filters and slow mixes, and a collection of unusual, slightly imposing camera angles." [7]

_1970's

In the 70s, live shows were more popular on the television, with several shows becoming more popular in the USA, UK and Australia the music was getting importance on the channels. Nevertheless, artists were making promo videos like David Bowie; the broadcasters preferred to present dancers performing on live if they couldn't have the band on the set.

Then the epic "Bohemian Rhapsody" by Queen changed the direction: this well-directed video featuring several VFX, technology, and good image sequences gave them the number one spot in the 1975s charts. The power of the video was pretty significant, considering that Queen kept the first position for nine weeks.



Fig. 4. Queen: Bohemian Rhapsody (1975). YouTube <https://www.youtube.com/watch?v=fJ9rUzIMcZQ>

_1980's

The first broadcasting of MTV (Music Television) was on the 1st of August of 1981 with the song “Video killed the radio star” from Buggles. This was the announcement of the new era of the music on the television, 24 hours of unstoppable music was an entirely new concept for the tv and it had consequences: the record shops started to sell more the artist featured on MTV, this created a necessity to be on MTV, without the music video an artist didn't exist in the 80's pop culture. Then Michael Jackson presented “Thriller” in 1983, a 14-minute music video made with a budget of \$800,000 and the entire industry confirmed the impact of the music video: Thriller sold forty million copies and generated 180 million of dollars for the record label.



Fig. 5. Michael Jackson: Thriller (1983). Digital Spy <http://www.digitalspy.com/music/news/a606874/michael-jacksons-thriller-is-spotifys-most-popular-halloween-song/>

_1990's

For the next 20 years, MTV would be in the constant expansion, more channels similar to MTV were created, and the music videos started to be part of the pop culture, directed by the best artist of the time, using the latest technology and trends and becoming the definition of generations. Perhaps this sounds like a “happy ending” of a story; something changed the panorama of MTV, music videos and music industry forever:

_2000s: Internet killed the video star

According to numbers of Nielsen Entertainment, in 1999 the four favorite music channels: MTV, VH1, BET and CMT played around 200,000 music videos; by 2012 the number fell to less than 70,000 and keep going down.

This fact doesn't mean that music videos are disappearing from the scene, this means music videos are going out from the television. Music videos are growing online, especially on Youtube: a video sharing website and the second with more visits in the world. With the popularization of the Internet, music videos continued evolving to changed the channel and the way they are broadcasted. New features like a watch on demand, share, access and control move viewers from TV to the screen.

With the “YouTube” resurrection record labels had to adapt to the situation and discover new ways to get profits from the online videos. In 2009 a couple of big names in the industry launched Vevo, this channel was created as the official license of music videos.

“Before Vevo, music videos were online, but there wasn’t any money being made,” says company CEO Rio Caraeff. “They were available, but there was no business.” Vevo now dominates the YouTube charts and pulled in 41 billion extensive views across all platforms in 2012 from a catalog of about 75,000 videos.[8]

02.4 YOUTUBE _AND MUSIC

“The number of clips streamed on YouTube stretches to the sublime—1.2 billion videos a day, enough for every person on the planet with Internet to watch a clip each day.” [9]

Youtube has become the new home of the music videos since 2005 the views are increasing every year, and the impact of a song is getting every time stronger. This phenomenon is happening due to several reasons. On the first place, the internet is a medium of distribution that is present around the world, the brevity of clips and how easy they can be shared make them more attractive and the chance to interact with artists in the comments section. YouTube has turned into a discussion field where a viewer can express his reaction, feelings and emotions about a video, the feedback is instant and can measure the success of a song and even an artist.

In the ‘MTV age’, months and even years were necessary for a song to become popular, this life cycle included several factors like people, communities, local radio, TV channels, etc. Just after this trip a song was saturating the pop culture.

Nowadays, it takes for a song just a few weeks to make one billion views and be spread around the world, according to Youtube Statistics it took around 6 months to the music video ‘Gangnam Style’ to reach the billion of views, this was the first video on the platform’s history in accomplish that amount and still in the top one of the most viewed videos.



Fig. 6. PSY: *Gangnam Style* (2012). YouTube <https://www.youtube.com/watch?v=CHIXGdu-hzQ>

This means that the video is becoming an important aspect of our lives, and the people are watching more videos than ever. A sign of this is the fact that videos are reaching the one million mark faster. The music video for the song 'Hello' from the British artist Adelle has come to the million of views in just 87 days, according to YouTube statistics.

The music industry cannot deny the importance of the music video despite off the polemics about the incomes per view for the artist and the business model that is considered by some of them as unfair. Streaming services are taking the control of the way people is listening to music, and the only solution is adapt to the current context instead of fight against it; the music television and tower records era are over.

02.5 THE M.V. INDUSTRY

The U.S. market is one of the biggest in the music industry, the analysis of the consumption trends of Americans is a great example to have a context regarding numbers and statistics.

According to the study made by Nielsen Entertainment [10], the audio and video streaming continued to gain popularity in 2015, showing growths of 83% and 102%, respectively; this represents the importance of the music videos for the industry and the internet as the primary distribution channel.

ON DEMAND MUSIC STREAMS

(Includes audio + video data from AOL, Beats, Cricket, Google Play, Medianet, RDIO, Rhapsody, Slacker, Spotify, Xbox Music, YouTube/Vevo - In Billions)

	2015	2014	%CHG.
_STREAMS	317.2	164.5	+92.8%
_AUDIO	144.9	79.1	+83.1%
_VIDEO	172.4	85.4	+101.9%

Fig. 7. Nielsen, "2015 U.S. Music Year end Report", 2016, URL: <http://www.nielsen.com/us/en/insights/reports/2016/2015-music-us-year-end-report.html>, 2016.

According to IMVDB.com, there were 8,343 music videos released in 2014 by both major labels and independent labels/artists.

This trend means that recently, more eyes are over the music videos and several industries have noticed it, brands and companies are getting more involved into the advertisement possibilities, and this goes for 30 seconds ads before the video until product placement and commercial music videos.

Kerstin Emhoff, co-founder of PrettyBird says:

“It’s a pretty amazing time to be in music videos,”

or “music content” as she calls them. “I’m very excited about the innovation happening in the field because there is no one way of doing music videos anymore.” Many of today’s bigger artists are using videos to “make a big statement, which puts a priority on the content.” It also means bigger budgets, for these select circumstances. [11]

Collaboration between an artist and brand can be more fulfilling than stamping a live performance with a brand’s logo. “To be a part of the content creation and potentially deliver a strong message with a longer lasting impact is a small investment for a big brand, with a big payout.”

02.6 THE NEW _MEDIA

According to Lev Manovich, the most common categories of new media are the Internet, Web sites, computer multimedia, computer games, CD-ROMs and DVD and virtual reality. [12] While this thesis is being developed (2016), the CDs disappeared almost by complete, the DVDs were replaced by the Blue Ray technology and the term 'Computer Multimedia' hardly can define a particular media. This is an example of how fast the New Media is changing and at the same time how hard is reach a perfect definition.

For the objective of this project, the definition that suits better into the current context is the one provided by Robert Logan on his book 'Understanding New Media'. He claims that the term usually refers to all the media that is interactive, that provides a two-way communication and involve some form of computing. On that sense, new media is the opposite to 'Old Media' such the telephone, radio, TV, and newspapers.

Under that definition, the music video did its big step into the new media around the year of 1997 in the website 'shareyourworld.com' [13]. One of the first sites that allowed people to upload videos in different formats and shared them. 20 years have passed since that moment, and the development of the technology has open the possibilities to the music videos on several ways.

During the music television era, there was an invisible fence between the video and the viewer; the video was played on a TV screen, and the only function of the person on the other side was observe. Through the new media, artist have been trying to break the invisible wall, giving the viewer a roll into the video and making him part of the experience.

In the fall chapter, **I will show examples of music videos made for new media**; each one is a remarkable example of its type; this shows the different channels that creators are using to explore the possibilities of a music video.

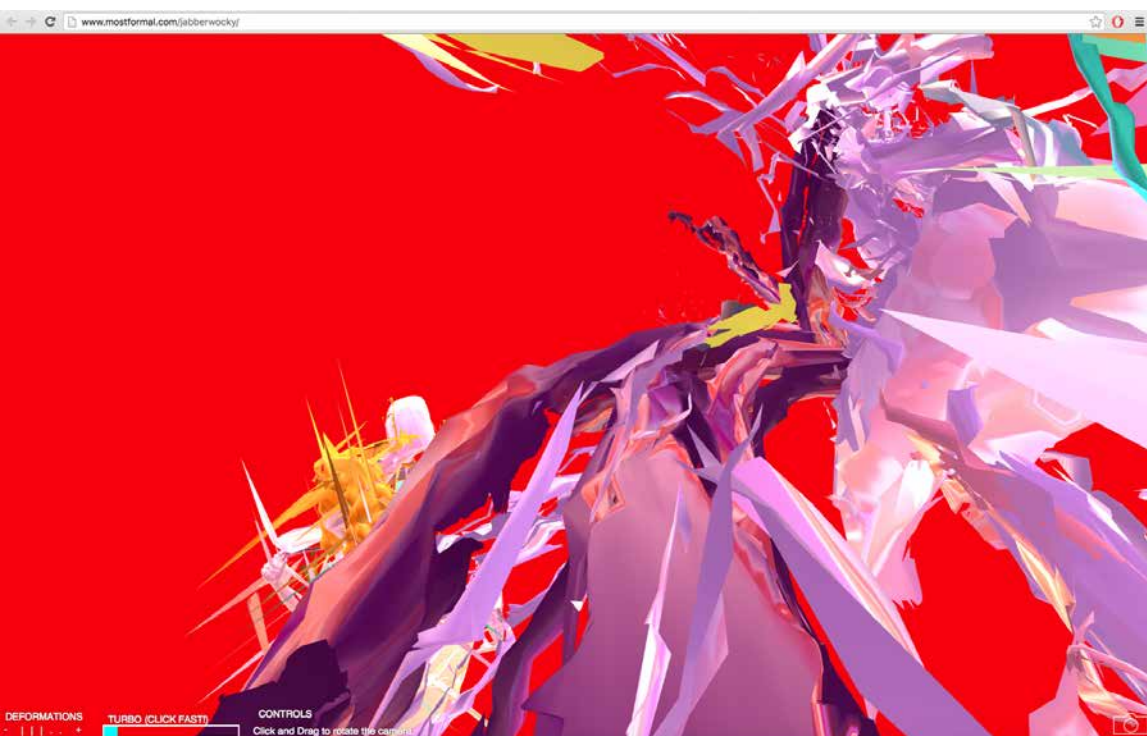


Fig. 8. Jabberwocky: Holding Up Wild Edit (2015). Chrome Experiments URL: <https://www.chromeexperiments.com/experiment/jabberwocky>

_1

Song: The golden touch

Artist: Namie Amuro

Directors: Masashi Kawamura, Kenji Yamashita

Platform: Web video, digital video

Year: 2015

URL: https://www.youtube.com/watch?v=h_UhKcAy6xc

‘The golden touch’ (2015) is a recent music video from the South Korean artist Namie Amuro; although it was released under the joint video streaming platforms like YouTube and Vimeo, this video has a feature that gives a new level of interaction to the viewer.

“Namie Amuro and the record label reached out to me, to create something more than just her singing and performing in front of the camera, which is the case for most of her videos,” Kawamura told Dezeen. [14]

At the beginning of the video a small credit asks the viewer to put the finger on the middle of the screen, over the mark in the video, then the audience appears to affect the scenes that are happening in the video. This includes play instruments, push buttons, pull elements, pop bubbles, and more optical illusions. Even the bouncing ball over the lyrics (Explained in the history chapter) appears on the video but controlled by the finger.

The South Korean video, is an example of analog interaction into the new media frame; creativity can be more stunning than the use of great technology and complicated setups.

KEEP

ここをタッチしながらご覧ください

TOUCHING  WHILE WATCHING

Fig. 9. Namie Amuro: *The golden touch* (2015). YouTube URL: https://www.youtube.com/watch?v=h_UhKcAy6xc

2

Song: Pigments

Artist: Elohim

Director: Chase O'Black

Platform: Web video, smartphone

Year: 2016

URL: <http://icantmakeuloveu.com/>

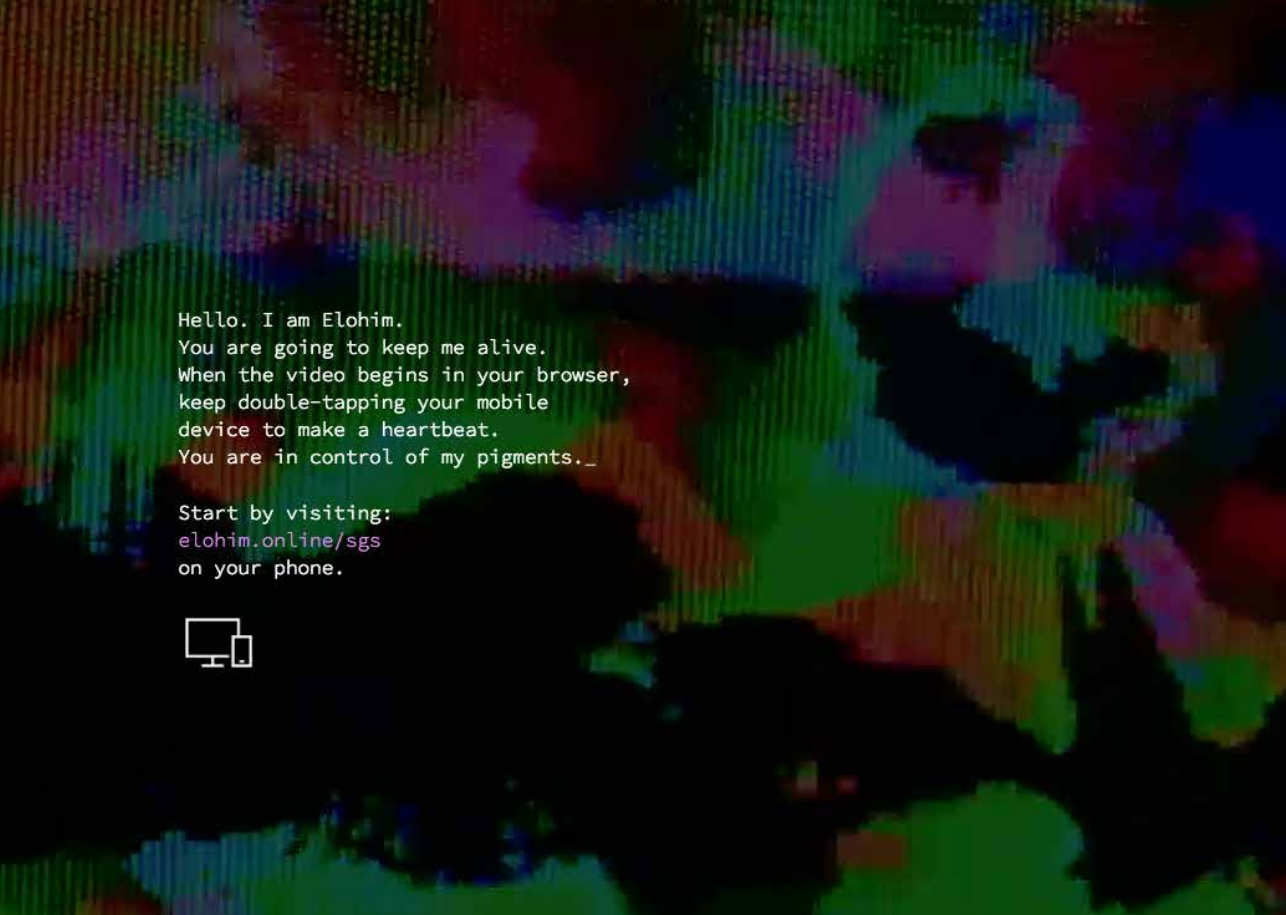
One of the best examples of the cross-platform music video. Available only on the artist's website, this music video is a digital representation of the artist; the site creates a unique URL address that users can use to connect their cell phones to the desktop, once the two devices are connected, the user has to tap the screen of the phone to keep the heart of Elohim beating as simulation.

"You can't make someone love themselves, but you can help them see life through different colors and perspectives," said Elohim to Nerd-ist. "Perspective can make all the difference. I created "Pigments" to bring that thought to life. This video is an extension of that. Expressed through interactivity and analog art, the video allows you to control my pigments and realize your own." [15]

The interaction between user and artist is not only about beating; users can change the colors, textures and pigments during the video. Also, if the user stops tapping the video will start to die, you have to keep the heart alive to watch the entire video.

At the end you get a unique pigment pattern based on your taps, this model can be shared with several social media websites.





Hello. I am Elohim.
You are going to keep me alive.
When the video begins in your browser,
keep double-tapping your mobile
device to make a heartbeat.
You are in control of my pigments._

Start by visiting:
elohim.online/sgs
on your phone.



Fig. 10. Elohim: Pigments (2015). Elohim <http://icantmakeuloveu.com/>

_3

Song: *Searching / The future of music*

Artist: *Polar Youth / HelloPlay*

Director: *Greg Barth*

Platform: *YouTube 360 / Cardboard*

Year: *2016*

URL: <https://www.youtube.com/watch?v=Tf0aU4RKCmM>

‘The future of music’ is a one of a good 360 film that follows Carré Bleu, a fictitiously famous music producer who can modulate time, space and gravity to create the music of the future.

The project created by Hello Play is not a traditional music video, the aim of this project is not only the promotion of a song, according to Hello Play, the creators of the clip, is “a ground-breaking 360° experience immersing you in a surrealist musical universe.” and can be explained as a mockumentary about the future of the music. [16]

This is not the first music video made for 360°/VR platform, but as the difference from the majority of them, this one doesn’t feature a band playing around the camera. On the video directed by Greg Barth, the experience is going one step beyond, with the use of postproduction, this project shows a fantastic playground with the gravity and physics of the scene.

The experience has several details around the stage, and it’s experimental nature, creates a different atmosphere and shows the potential of virtual reality to create new worlds and experiences, instead of just place a camera to show motion pictures in 360°.





Fig. 11. *Polar Youth: The future of music* (2016). YouTube <https://www.youtube.com/watch?v=Tjf0aU4RKCmM>

4

Song: *Happy*

Artist: *Pharrell Williams*

Director: *We Are From L.A*

Platform: *Website / YouTube*

Year: *2013*

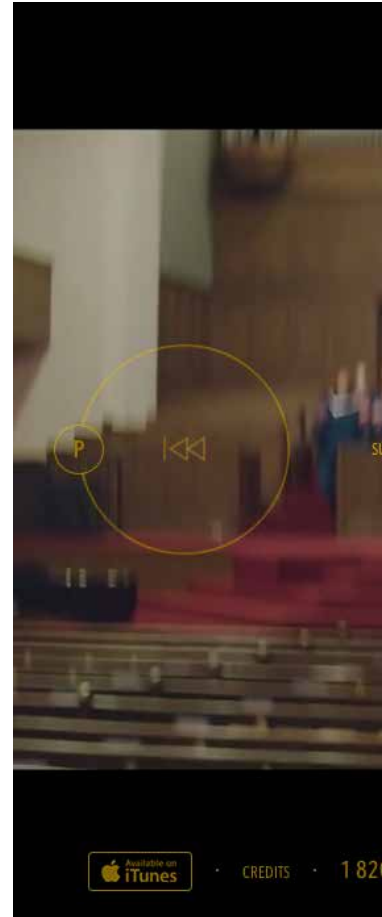
URL: *<http://24hoursofhappy.com/>*

‘The world’s first 24-hour music video,’ with more than 463 millions of play on YouTube, Happy is considered as a global success in the music and media field. Available for streaming on 24hoursof happy.com, the video shows different performers dancing and singing the song of Pharrell through the course of a 24 hour day in Los Angeles. [17]

The song is played as an infinite loop, with each cycle featuring and introducing new dancers at different locations, a controller interface over the video, allows users to forward or go back into the time to pick a precise moment of the day. Users can share this moment to Facebook or Twitter and every hour Pharrell appears dancing his song, 24 times in total.

The song has a YouTube version made with different segments of the 24-hour clip but in that sense is just a regular music video.

‘Happy’ is an excellent example of music videos working on new media, this video can be considered as a custom experience, the viewer has several options of music video for the same song and in the same format, but also gives the chance to share them around the web, this feature provides the power to a music video to multiply its impact and reach more viewer by offering more interaction and a better experience.



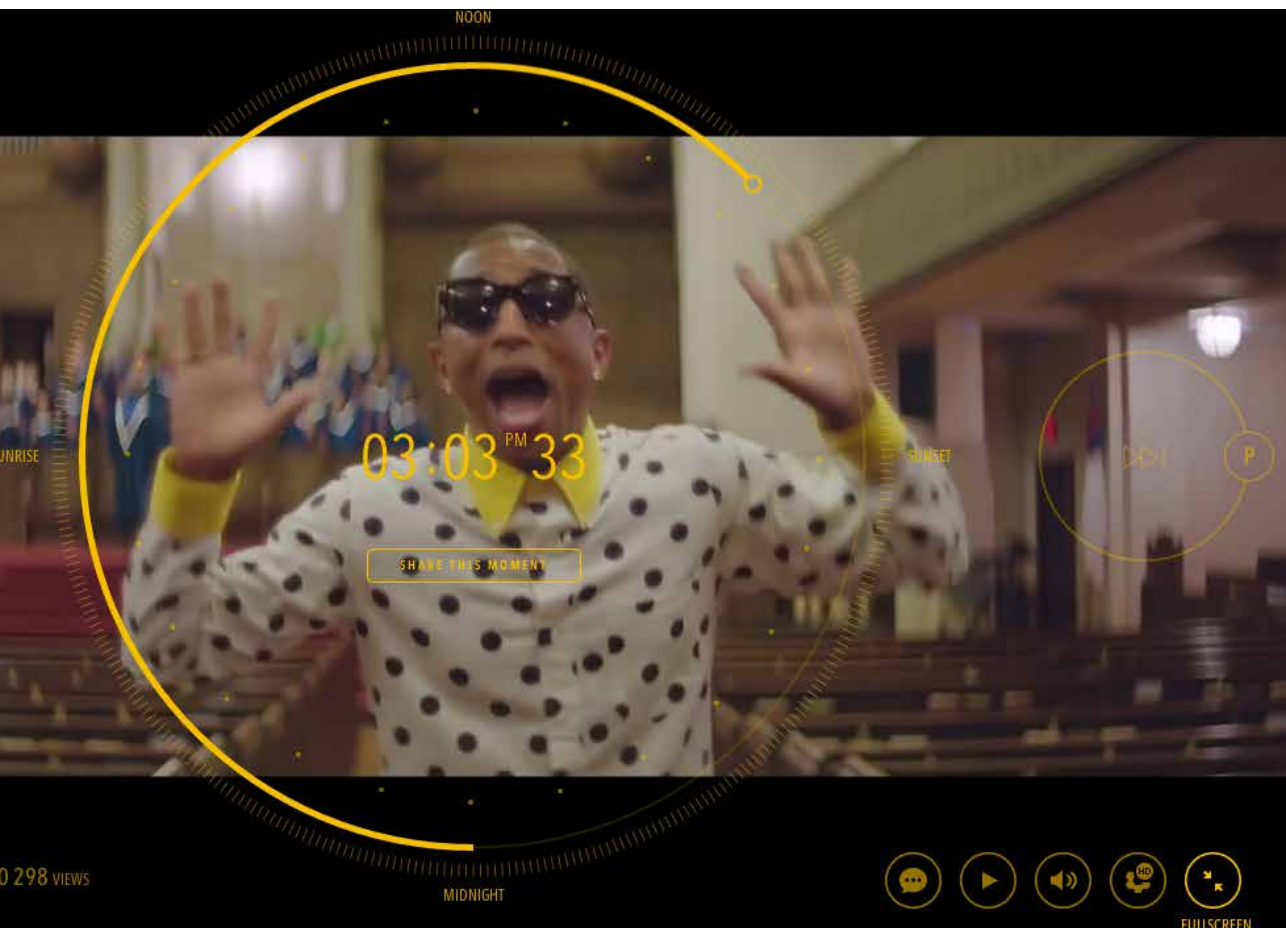


Fig. 12. Pharrell Williams: *Happy* (2013). 24 hours of *Happy* <http://24hoursofhappy.com/>

_5

Project: PolyFauna

Artist: Radiohead / Universal Everything

Directors: Radiohead, Nigel Godrich, Stanley Donwood and Universal Everything

Platform: App

Year: 2016

URL: <http://universaleverything.com/projects/polyfauna/>

Polyfauna as a free, exploratory audiovisual app, born out of Radiohead's The King of Limbs sessions and the sketchbooks of Stanley Donwood. [18]

"It comes from an interest in early computer-life experiments and the imagined creatures of our subconscious," Yorke describes.

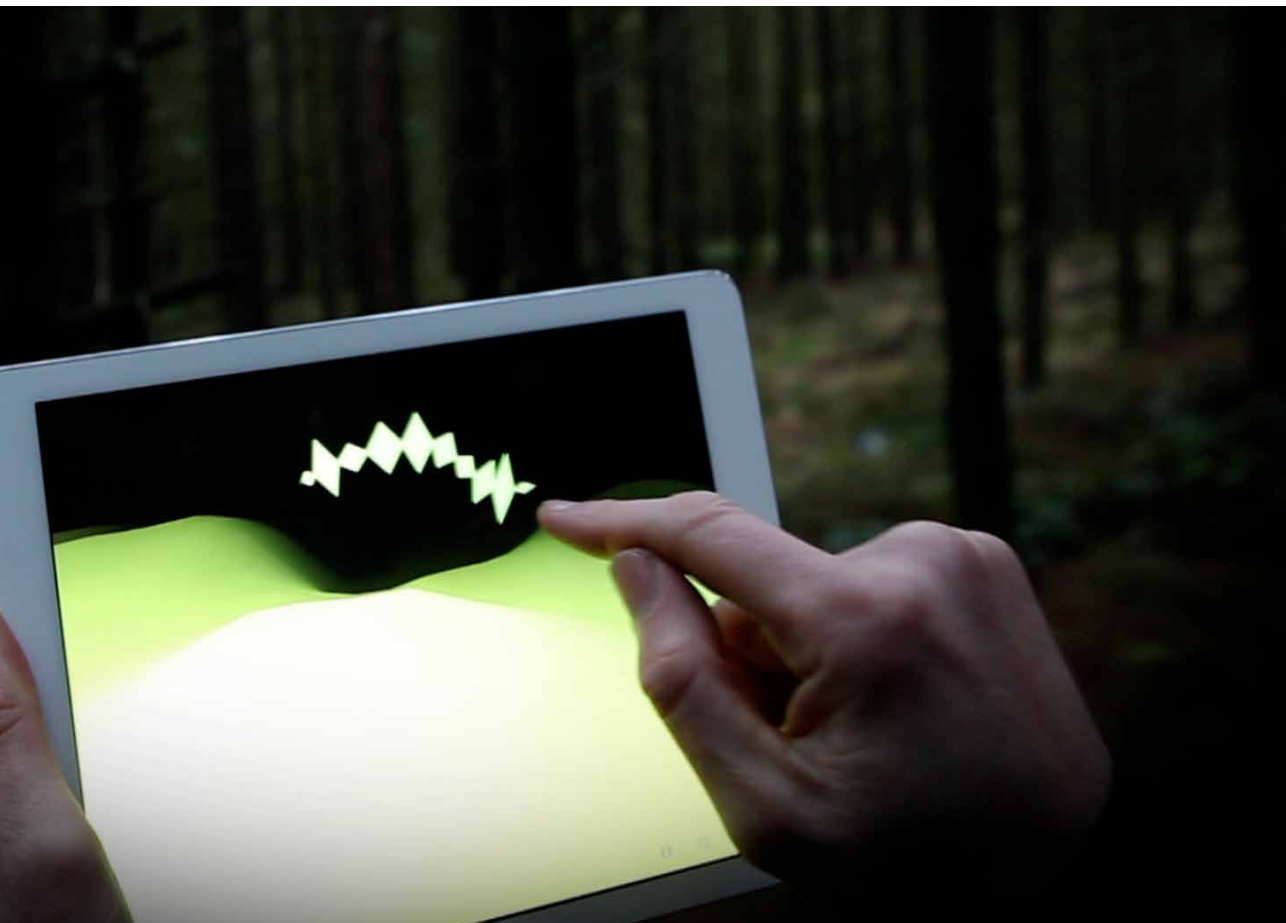
The interactive App, available for Android and iOS, is a project that pushes the boundaries of the music video into a new level, was difficult to put into a category because is not a music video with particular length or a specific song, actually doesn't have a visible commercial aim. But this project shows the interest of musicians of exploring new fields in what develop music.

The application works as a surrealistic world that can be explored moving the phone around, and the objective is to find different black holes into the landscape, this portal are a bridge between new worlds and new music, this melody will be part of the new sound of the band that actually is exploring the electronic and ambient music.

With this example is evident that music is not only about sound, the music is an experience and music creator are aware of it, technology is involving more artists together and the borders are getting every time more blurry.



Fig. 13. Radiohead: Polyfauna (



2014). Creative Applications Network <http://www.creativeapplications.net/featured/radiohead-polyfauna-an-immersive-expansive-world-of-primitive-life/>

6

Song: *We Used to Wait*

Artist: *Arcade Fire*

Director: *Chris Milk*

Platform: *Website*

Year: *2010*

URL: *<http://www.thewildernessdowntown.com/>*

More than a video, the project developed by Milk can be described as an experience, the use of Google Street View and the Arcade Fire's music turns the audiovisual piece into a nostalgic personalized video.

The requirements for it are quite simple: Google Chrome and Internet connection, then the user just need to type into the box a childhood home address or city, then a multi-browser movie will show up on the screen with the band music video happening in the specified place. The experience of watch it can be described as a highly personalized music video, then the video culminates with the chance to write a letter to the younger version of the viewer. [19]

This was an early example of the power of HTML5 and the data of Google, and also an example of the empathy that technology can reach a user, music videos as personal experiences are a stronger media to connect artists and fans around the world.



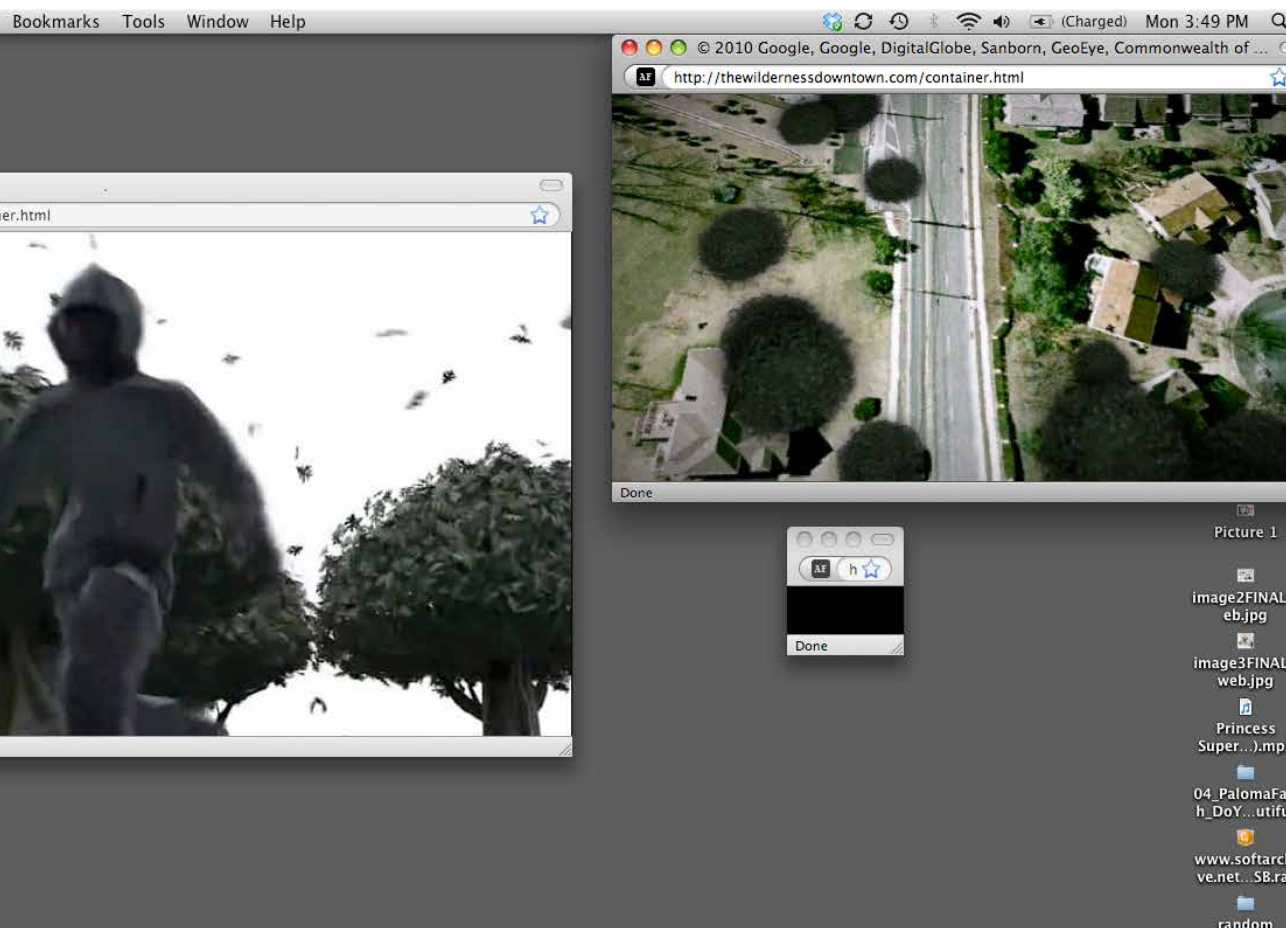


Fig. 14. Arcade Fire: We used to wait (2010). Byczek <http://www.thewildernessdowntown.com/>

02.7 EMERGENT _CHANNELS

The study cases were a review of the most outstanding music videos, made using new media channels, analyzing those examples and more available on the internet, I created a list of the most representatives channels to innovate in the creation of music videos:

_Video-Website

The website-based music videos are a great alternative to developing experiments on different levels of interaction, with the use of HTML5, and other languages, artists and creators can control and customise until certain degree the experience for the viewer; color, textures, rhythm, and speed are the most common variables of these videos, that are gaining popularity as a custom alternative for a music video. Usually, these experiments are running on the band website and following an entire promotional work since art direction to the concept; web-based music videos are a strong conceptual piece. The further interaction between devices like smartphone-laptop can be part of the experience to give tasks to the viewer or expand the experience out of one screen.

Perhaps most of the desktops and mobile devices are connected to the internet; not all the websites can run properly. Due to the different browsers, coding languages, pluggings, screen sizes, internet speed, and hardware restrictions; create a website available to all the users is a real challenge.

In the infographic made by Kissmetrics, the 50% of the visitors abandon a website after 10 seconds of loading time [20]. If we combine this with the fact that an external video has fewer chances to be visited than a video in YouTube; the impact of a website video in the internet ocean with around 1,000,000,000 active internet sites. [21]

YouTube

YouTube is the most popular platform to share music videos. With over one billion of users, the website has the position of the second most visited in the world; in addition, the number of people watching YouTube per day is up 40% since March 2014, it has local versions in more than 88 countries, and the website is available in 76 languages, this covers the 95% of the internet population. [22]

For all these facts, YouTube is the best showcase for artists and musicians around the world. The requirements to upload a video are insignificant compared to the impact of the website. According to the website Statistic, in February 2016, 63% of the entire U.S. population used YouTube to watch music videos or listen to music. This is translated in billions of views, social media interaction and the flexibility of the website to be visited using different browsers, devices and applications increases the effectiveness of content into the audience.

Vero is the biggest official music video platform in youtube, according to numbers from the company, the monthly viewers of Vevo are 12 billion over an HD library of around 100,000 videos; this huge amount of music videos on demand decreases the chance for an artist to be viewed. That's why creativity and high impact content (viral videos), is the key for a music video to be successful; this is a hard field for a new and independent artist with a small budget and less experience.

_YouTube 360

This category is part of the YouTube world, it has the same features than regular videos but with a new characteristic: YouTube 360 allows users to upload videos filmed in 360 grades; this videos allow viewer to experience the content scrolling around the scene with the mouse, moving the smartphone or tablet around or using a VR headset to get an involved experience.

The new feature has one year already working on a concept that is not new, 2D/360 videos have been around for more than two decades, the key point is in the distribution; YouTube 360 is making this material more accessible for consumers and more easy to produce as well.

But according to Dan Rayburn, a VR industry veteran, the challenge for VR is keep the users of the technology: “I think a lot of people do it once and think, oh cool, and then never come back.”

Although software and hardware are getting better and tools are being more accessible, VR still in an early phase of development. Most of the material available on the web is labeled as VR when they are just monoscopic 2D/360 videos; this is giving a wrong concept for users about what VR is. [23]

The challenge for the 360 video keeps the attention of the people while improvements to the experience are being made, YouTube 360 is the perfect transition between the regular format of videos into VR videos/ experiences.





Fig. 15. 360 Camera - Wingsuit Balloon Rope Swing (2015). FullMag <https://www.youtube.com/watch?v=0RPurvYriHI>

_Facebook

Facebook is the biggest social media website at least at this point in history (2016), with around 1,500 billions of users in 2015, according to statistics from the site. Although this social network has several uses apart than music, it has the feature to host videos. These videos are inserted into the website which makes them easy to share with the world but with the lack of specialized audience, accurate statistics, and earnings per play.

But the famous website has a great advantage: in Facebook different contents can be shared, this means that is a multimedia platform that can host material from other sites. In that sense, a user can stream a song, watch a video and read the text without abandoned the same website.

Mostly of musicians and bands have a presence on the social network, in a form of the fan page, in this page, fans can follow the band, get information about tours, news and even talk straight to them. On the other hand, Facebook hasn't yet struck deals with any major record label, which make it unattractive for the music industry regarding earnings and business models

_Facebook 360

This new feature for videos on the popular website gives the chance to experience 360° videos with the same character of the regular ones, including live streaming; Facebook is showing its interest in VR videos with new developments like custom cameras film them and the development of new technologies to experience virtual reality.

According to Mark Zuckerberg, we are right now in the golden age of video, claiming that this medium is the perfect way to create interaction between people. He also revealed that the company wants to pursue other interactive video formats beyond what Facebook offers: live streaming and 360 videos. [24]

In that sense, Facebook has developed the ‘FacebookSurround 360 camera’, which was designed to create more immersive and detailed videos, this is an open source project to encourage other companies to build this out to increase the VR market.

This is turning Facebook as one of the biggest rivals of YouTube, in 2014, a number of uploaded videos increased by 75%; in that way, videos are taking the control of the social network, increasing the views and the relevance for the platform users. [25]

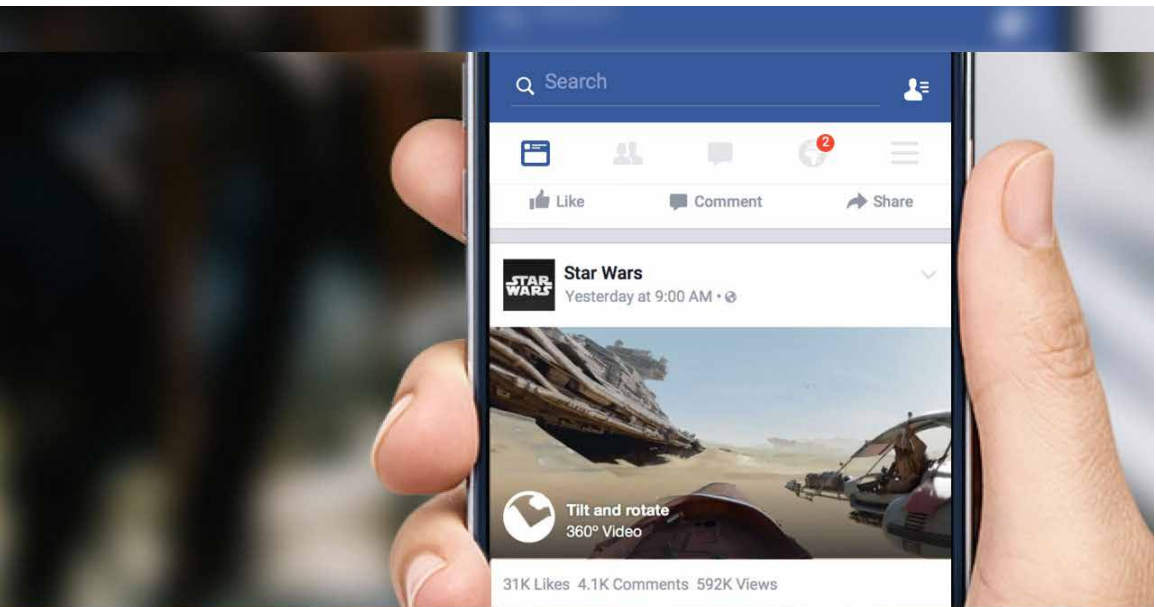


Fig. 16. 360 Inferno Media (2016). <http://inferno.media/facebook-360-degree-videos-and-how-theyre-made/>

_ Mobile Apps

Mobile applications or just Apps, are small software developed mostly for smartphones or tablets. The most common operating systems are Android, iOS, and Windows mobile. Usually, these applications are available in a virtual shop of the operating system, where the user can download and install them in the device.

These applications can use all the software and hardware features of the device, and it has no limits regarding development. Applications can easily stream video, connect to the internet, generate interaction by movement or tapping, real-time rendering, process information, etc. This option provides to artists the chance to explore the possibilities in several ways. On the other hand, applications are not that easy to get for a new user because it requires extra steps to have it working on a device and additionally they can require additional permissions to function properly.

Mobile devices and therefore apps are earning a huge part of the tech market year by year, according to the report of comScore the number of mobile users had reached the number of desktop users by the year of 2014. This statistic means that people are consuming media using mobile devices more and more.

But more users means more applications available for download, and this is affecting the behavior of consumption: the average of smartphones users download three apps per month. According to the Analytics company App Annie, by the end of 2014, the number of Apps available in the App store were 1,250 and in the Google Play store around 1500. Considering this amount the chance for an application to be downloaded is only the 0,2%.

This probability affects the impact of a content and the potential of a mobile App is overshadowed by the distribution model.

_Independent video

There is life out YouTube. It is not a secret that YouTube is the number one video streaming website in the world, but it is not the only one. There is an enormous amount of options to host and stream videos with new and exciting features. These platforms cannot compete for face to face with the Google's company, but some of them are gaining ground in the scene.

In a huge ocean of billion of videos, YouTube has an excellent catalog of videos but also a considerable amount of low-quality and irrelevant content videos. For an artist this could be a problem when the aim is professional, a good music video surrounded by low-quality ones could affect the impact and the perception to the audience.

There is where Vimeo comes up, this platform is the favorite channels for artists, directors and creatives around the world, with a more specialized and serious audience, Vimeo is the best place to showcase a great film with features like high-quality clips and useful feedback.

IAC revealed in 2013 that Vimeo passed the 100 million users, this is just the 10% of a number of YouTube's viewers; Vimeo and the other alternative websites, are an option for all the artists that want to expand their video universe and explore the options of a video world, controlled by Google and Facebook. [26]

Media Evaluation

The aim of the follow qualitative criteria, is evaluate the different new channels in order to filter them and select which new media channel would be the most effective for the creation of music videos.

The criteria to evaluate each new media channel is the following:

(High: 3, medium: 2 and low: 3.)

Criteria	<i>Hardware</i>	<i>software</i>	<i>Interaction</i>	<i>Impact</i>
Media				
<i>Website</i>	2	3	2	
<i>YouTube</i>	2	3	1	
<i>YouTube 360</i>	1	2	3	
<i>Facebook</i>	2	3	1	
<i>Facebook 360</i>	1	3	3	
<i>Mobile App</i>	2	1	3	
<i>Indie video</i>	3	3	1	

The qualitative scoring of the new media channels evidences the importance of individual platforms as content host. YouTube 360 and Facebook 360 are projects running under a similar concept: Virtual Reality. The immersive feature of this media is getting explored, and the potential is only being discovered by different sides of the field and communication and entertainment industry.

	<i>Social</i>	<i>Immersion</i>	<i>Availability</i>	SCORE
2	3	1	2	15
2	3	1	3	15
3	3	3	3	18
2	3	1	3	15
3	3	3	3	19
3	1	3	3	16
2	1	1	2	13

Fig. 17. New media chart. Daniel Baron

03.

_CONCEPTUALIZATION

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03.1 THE FUTURE OF THE MUSIC VIDEO _

The next step in the chronological sequence of the music video, would be something with the immersive power of Virtual Reality and the advantages of social media;

In the further years music videos will keep crossing the limit between the screen and the viewer to provide an active roll and turn the act of watch into an experience of sound, pictures and interaction.

Taking a look at VR market concerning numbers and projections reinforces the theory that is only growing: the number of active VR users is forecast to reach 171 million by 2018. According to recent studies, the revenue from virtual reality head-mounted displays is expected to grow from 685 million U.S. dollars in 2015 to 3.89 billion U.S. dollars in 2018. [27]

This exponential behavior will affect the large websites like Facebook and YouTube that will still be the best platform for music artists. However, due to the graphic power of the new devices, they will be able to host VR content with more interaction than just look around a pre-recorded video. All this demand for content will turn the platforms into host new media material. On the new catalog, music will be one of the large cores of the offer, with music videos going to the blurry limit between a film and video games.

On these experiences, the viewer can modify in real time several characteristics of the look and feel of the video and even can share the custom experience in real-time with more viewers. Share a song won't be sent a link or a file, share a music experience will be an immersive VR world created by the artist, but customizable in certain levels.

Music videos with the regular format of a band performing, storytelling, documentary, etc. won't disappear, even the square 2D format will stay as a big media for the music, with more unusual features regarding resolution and visualization. But the VR experience will be an essential part of the diffusion of a music project. With more and more VR devices, the demand for content will be only higher, and the music will be there to keep being the soundtrack of our lives.

03.2 VIRTUAL REALITY_

After the analysis of the current new media channels, virtual reality was selected as the media with more potential to continue the growing and the evolution of music videos. Defined as

“Computer technology that enabled a user to look through a special display called a Head-Mounted Display (HMD)-and instead of seeing the normal world, they saw a computer-generated world.” [28]

Virtual reality is one of the most powerful empathy media, capable of immersing the viewer into virtual worlds and creating experiences on many sensorial ways; VR has the power to connect with the audience in a way that still unexplored but with one of the biggest potentials in the field.

VR is not a new concept related to music, music videos are already being produced for that channel and the music industry is including the technology as part of the music promotion; the challenge is to reach the way in which virtual reality can be a massive communication channel for artists and audience and discover the power and limits of the tool in the upcoming years.

_Content

Currently, there are three common ways to produce footage for VR headsets: the first one is using a 360 degrees camera, these cameras have several objectives aiming to different angles, after shooting, all the footage is merged with specialized software to create a spherical video of real locations. [29]

On the second hand, we have the 3D software, which allows to create virtual CG worlds, animate them and with the use of virtual 360 cameras, generate a spherical render of the scene, it has several options about the render quality, the animation style, and the production pipeline.

In the last position, we have cross-platforms such Unity 3D and Unreal, the primary target of these powerful engines is game development, but due to their flexibility and convergence feature, can be used as VR footage production with much more features than the previous two.



Fig. 18. A time in the space VR (2015). 1080 Plus http://1080-plus/A_Time_In_Space_VR_Google_Cardboard_3D_SBS_1080p_gameplay_Virtual_Reality_by_cTa_VR_Play/5Zw5J7dySn8.video

Interaction

The Virtual Reality experience is interactive in several ways. The fact that the viewer can move the head around the virtual world actively to discover different elements is already physical interaction. But the boundaries of VR are going further, and extensions of hardware are part of the interactive catalog. These extensions are virtual representations of the hands, with the controller, the user has the control of tool in the scene, and the possibilities are many: move objects, create meshes, modify the world, control and make actions.

Channels

The current industry of Virtual Reality is a boom in many ways, this have brought big names in the development of the technology creating different distribution channels for the VR content. On this long list, we have producers of headsets with exclusive content for each goggle, social media websites, mobile applications and video games platforms. Although this promotes the increasing of content at the same time is creating several restrictions and obstacles; the main loser is the final user who is not available to enjoy all the content due to the several differences in compatibility, software and hardware requirements.

_Social Features

Share content is an act that can be described in two ways: digital and analog. On the digital way, a consumer of content can use social media to share it with a social circle or send content to another user using urls. This action is the reason why a regular music video can be spread around the world in hours. Unfortunately, VR is at a stage of development in which the social features still under development and is a matter of study to discover the best way to do it.

On the other hand, the analogic way of sharing is on real interaction; this means that a group of people can share and interact with content in the same place. Interact with virtual reality content could be a social act similar to the way we used to play video games on the early stage of them.

In the upcoming years, VR will be easier to reach, and the challenge is on find the best way to do it..

_Hardware

Virtual reality is a technology with specific requirements, one of the most important parts is the headset, the VR headset is the physical interface that connects the user with the virtual world. With the massification of the VR industry, the options for hardware are only growing with the pass of the time. Currently, the market has big companies behind the production and distributions of headsets.

Google, Samsung, HTC, Microsoft and Sony are just a few examples of the names. [30]

Moreover, the VR hardware is not restricted to the headset anymore, additional equipment like Bluetooth controllers and motion sensors are gaining more terrain as a tool to expand the immersive experience. On this sense, the features of interaction are only growing, and the limits for the interfaces between real and virtual reality have no established rules.



Fig. 19. Digital Glue (2016). <http://www.digitalglue.eu/virtual-reality-future-marketing/>

03.3 IN MUSIC _VIDEO

'InMusic video' (IMV) is the name that I created to cluster the experiencing of music into the virtual reality framework. This concept embraces the way music videos can break the square-2D frame and take the viewer into an immersive experience of the music. On this way, IMV are a tag with no attachments regarding software or hardware; doesn't follow a particular workflow or determined technique of development. IMV is a visualization of the sound, is an immersive way of listening and feel the music, is a tool to take a listener into the music concept, is the materialization of the music into experiences. IMV is hearing music with more than one human sense and is the creation of alternative realities with the power of connection and empathy using technology as a media instead of a replacement of the reality.

IMV is a concept created to open a new door in the communication field, is a new line of development for artists, designers, and musicians. IMV Is another way to share and experience music.

On this way, I decided to openly, describe the components of the concept as a modular conglomeration of different characteristics, with the objective of keeping the limits open and avoid the establishment of a model that for its experimental nature must be organic and evolve regularly depending on the current state of the media.

—The 4 Pillars

A visual representation of music in the frame of new media, on this case an Immersive Music Video, is produced with the combination of four main pillars: Interaction, Immersion, Motion, and Narrative. This combination provides the features described in the concept of IMV and is the method I used to generate a workflow and define the requirements that the production of the prototype project should achieve. Every pillar has a particular part on the pre-production stage and is a way to plan and describe the characteristics of a project before the final execution.

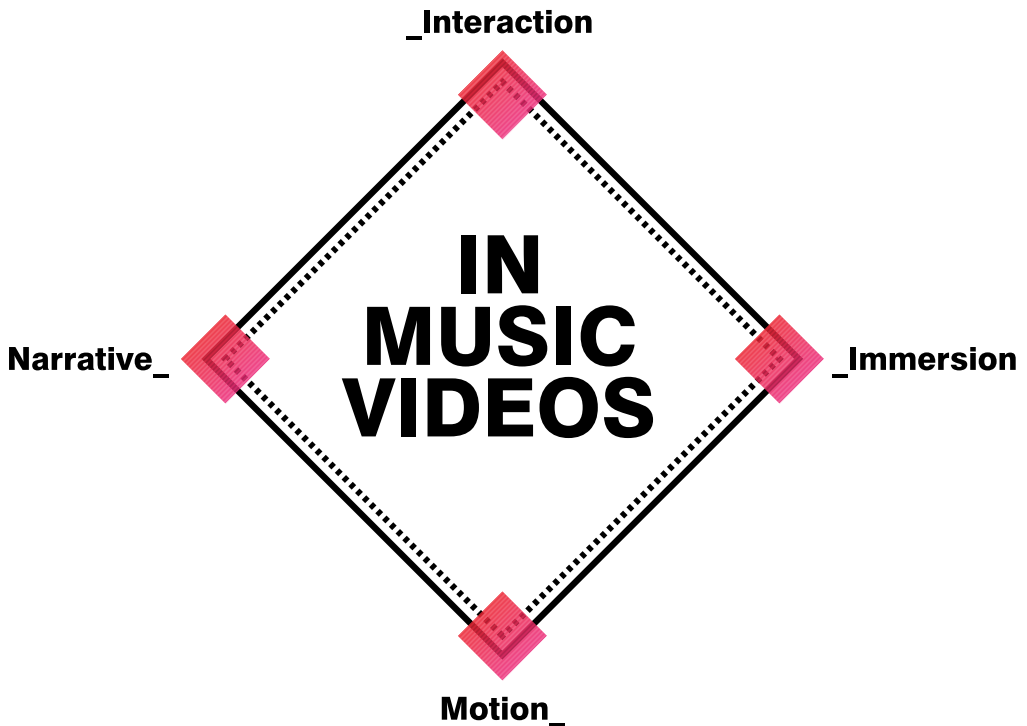


Fig. 20. In Music Video. Daniel Baron

03.4 INTERACTION_

Interaction is a feature that is not necessary talking about traditional music videos, in the regular consumption of them, the role of the viewer is restricted to select, listen and watch. One of the objectives of the IMV is changing the way a Music Video is viewed; for this reason, interaction is a complex group of elements that can increase the experience and are the tool to improve the connection between music and pictures.



Fig. 21. Interaction. Daniel Baron

_Sound

On this pillar, the first item is sound, the heart of a music video and the spine of the entire production. Music and sound if we speak in a simplified way are a media regarded to the ears, listen music is a passive act that doesn't require extra work by the listener; if we take traditional music videos as an example, the music is limited as the background of the combination of audio and visual. Usually, change or modify this channel is not part of the audiovisual language. Nevertheless, in IMV, the sound can be an active actor in the virtual world and can be used as a trigger of position in the virtual scenario.

_Physical Interface

A link between the content and the viewer is required, although there are not restrictions on the way, the most popular interfaces are VR headsets and goggles. Usually described as a display or screens, headsets are much more sophisticated devices, and it has several functions. The first one isolates the person from the real environment, blocking the external light and sound, on the second hand, it reproduces the visual content using high-resolution screens or mobile phones; thirdly, provides the sensors to track the body movement and send the data to the application or the graphics station and finally, reproduces the sound using headphones or other devices. The physical interface is the access to virtual content and is an essential aspect of the experience.

_Pictures

Computer generated images are the visual complement of the content, by the use of them, the sight will be able to see the 3D world and interact with it. On an interactive level, this world can have interactive elements on it, the change of geometry, colours and physical factors such scale, rotation and position, are the visual variables for interaction but also, the movement of the point of view, in this case the camera, could be a way to provide control in the scene for the viewer and making the visual experience more personal and unique.

_Body Tracking

The virtual representation of the body movement gives to VR the power of simulate a real experience. Tracking the head movement using physical and digital sensors on the hardware, allows the user to look around freely and decide which part observer of the digital environment. Due to this feature, the framing concept of the video does not apply for VR content; as visual producers, we are providing a digital world instead of a sequence of shots and the body tracking is the power of the viewer inside the scene.

_Network connection

Be connected to the internet is a powerful feature: the content can be downloaded or even streamed in real time, turning the Internet into the largest catalogue of VR. Additionally, the internet provides the capacity to connect users on the same experience at the same time; sharing is not about send content to someone else, is the chance to enjoy the same VR world with someone else and even modify it in real time. One pre-produced experience can be extremely different and customized every time with every single new user.

03.5 IMMERSION_

The Immersion on Virtual Reality is the perception of being physically present in a digital world; the feeling of being immersed is usually generated by the use of different interfaces in order to disconnect one sense from the reality; surrounding the perception of reality and replacing this with computer generated content is the way one person can experience a virtual world. [31] Seeing that, the immersive quality of an In Music Video is the key to increasing the perception of music over the senses.

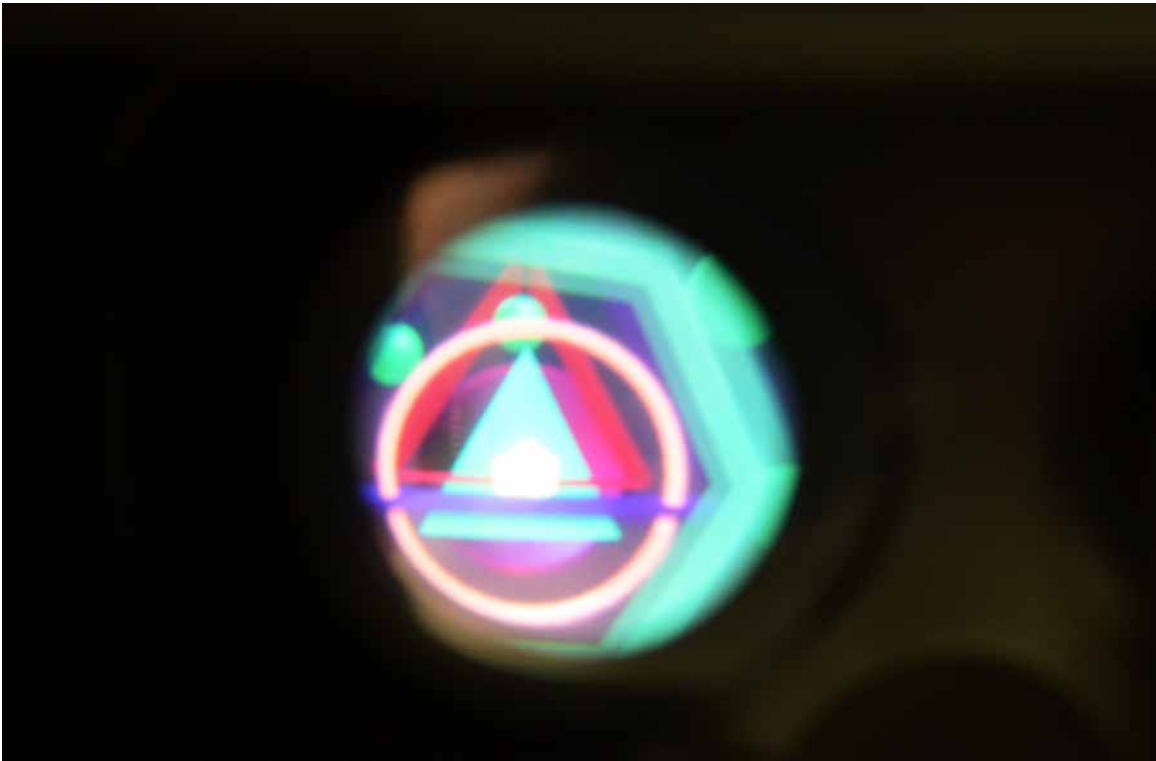


Fig. 22. Immersion. Daniel Baron

_Virtual World

The virtual scene is a digital world generated by computer graphics; this definition although accurate doesn't collect the different aspects of it. Talking in audiovisual terms, the virtual world is the film scene of an IMV; this means that the virtual world contains all stage characteristics like art direction, props, color grading, actors and visual elements. The main difference is that while in a conventional film the stage is setup regarding the shots and scenes, on VR the world must be opened, there is no way to frame or control what the viewer is watching. This means that the entire world is relevant, and every detail is important as the next one.

Surrounding environments are the best way to describe them, applying this definition into the design process, the virtual scene will be suitable to provide an immersive experience in the sensation of the music and video.

_Lighting

If we consider the use of lights in the regular audiovisual production again, light is a key element in the narrative of a story; light can be used to emphasize an item in the scene, create a psychological mood and even change the aesthetics completely. Lights in the development of In Music Videos have no restrictions, from the global illumination to spotlight on specific areas, lights can be even controlled by the viewer and can be a dramatic element in the narrative of the story.

_Visual Elements

Although the virtual world could be taken as the core of the visual construction, the graphic elements in the scene are the items with the function of creating narrative as well. The list of this computer generated elements in the production are: 3D geometry, unanimated objects, 3D characters, particles, textures, materials, colors, 2D elements, 2D sequence of images, etc. On the other hand, we must consider the inclusion of 360 videos as part of the visual composition; those videos are filmed footage using 360 cameras in order to capture a spherical video of a real location, 360 videos can be explored around with the limitation of the depth that the generated 3D geometry can offer for the viewer. However, the use of several visual sources is only an option with more potential if we apply video concepts like post-production, VFX, 3D composition in the video, etc.

Is important emphasise that pre-made material is not the only way to develop visual experiences, techniques such generative design, particle systems, and reactive geometry, are a way to create on real-time visual elements using the physical data from the viewer; turn numbers and algorithms in visual representations can be a way to create entirely unique and single experience for every user avoiding the repetition of the same visual content in every reproduction.

_Render Capacity

The reproduction of digital graphics in real time requires real-time rendering, a technique that process and creates graphics simultaneously with the interaction with the virtual world. Usually, a graphic card in the computer or device has the work to load and generate the content. The render is necessary because has the power to give a look and feel to the scene; in general terms, the render represents many of the physical characteristics of the objects in the real world: shadows, textures, materials, light simulation, frame rate, etc.

The conjunction of this aspects determines how realistic and immersive a the world can be in visual terms. A high-quality render requires a high process of information and higher hardware configurations, also, the resolution of the screen of the headset or device can affect the final quality of the reproduction, in that sense the more resolution on the screens the higher level of immersion the user gets.

03.6 MOTION_

Life is in motion, the world around us is constant movement in several ways; using this simple observation, we can determine how important is the motion to represent an appealing virtual world representing music. Talk about motion in In Music Videos, is speak of representation of the sound visually, this image can be made making use of the primary three variables of the 3D space: Scale, Position, and Rotation. In a world created 100% artificially, there are no limits and everything can be animated and modified with a pass of the time; opacity, geometry, colors, dynamics, physics, lines, and points. But also, the inclusion of characters with personality and behavior is a way to use the real-world dynamics in a virtual representation.

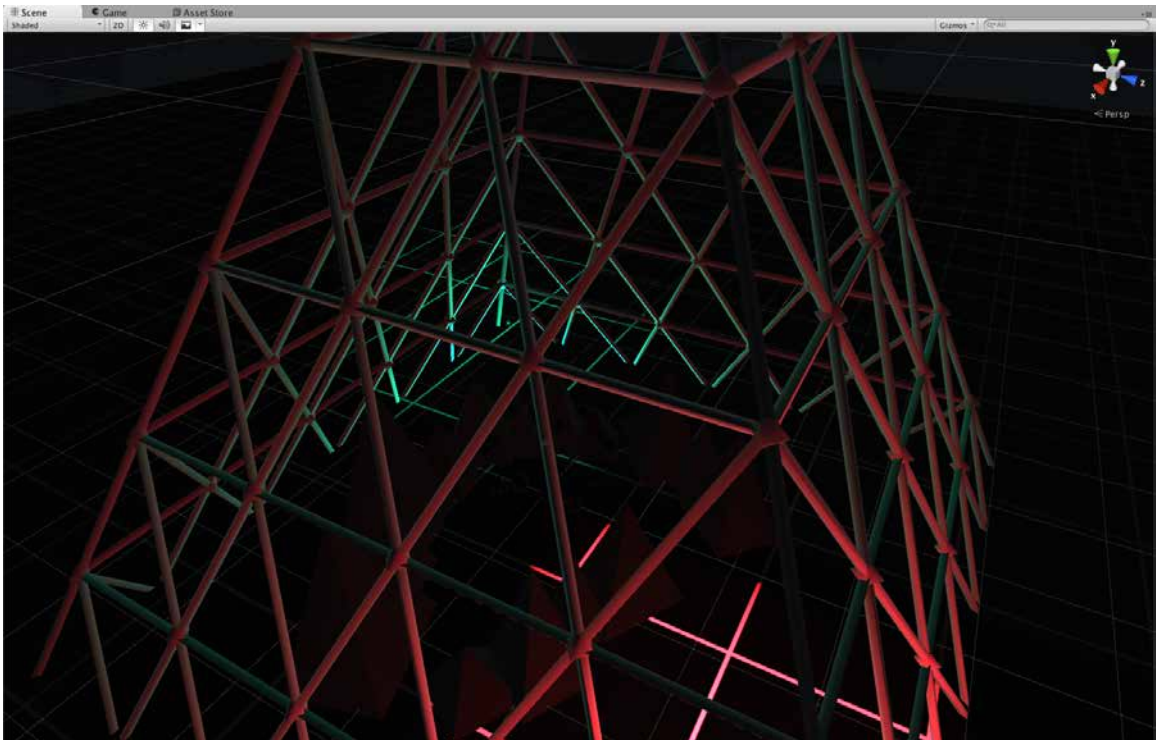


Fig. 22. Motion. Daniel Baron

_Camera

The cameras and the position of the user are part of the creation of movement, move a camera towards space is another way of representing displacement and in general are the way of creating direction in the story. However, the camera is also the point of view of the headset and is the window to look around in the scene; that's why to apply cinematic movements of the cameras is a restricted resource to keep the freedom and the free will to interact with the world for the user.

_Characters

In films, characters are a major factor in the development of the story; characters are also important in an IMV project, but not essential. The representation of music is not attached to the use of protagonists and can be an experimental use of graphic resources. The inclusion of animated characters in the virtual scene can be made through several ways. In one way, characters can be created and animated on 3D software to be imported in the stage; the use of motion tracking and sensors is a way to add realistic movement to the digital bodies and performance. On another way, a character can have a loop animation which can keep the constant action but without development on the story.

_Motion Graphics

The inclusion of animated graphics either 2D or 3D, can determine the entire direction of the virtual world, with the use of 3D software, three-dimensional objects can be moderated, animated and textured; the animation can have a higher level of complexity and the tools of animation provided by the software are a plus in the development. It is important to consider that many of the traditional techniques of animation might not apply correctly for VR. Animation must be conceived regarding getting a virtual world alive, having the point of the viewer as the centre of attention but considering the freedom of observation and movement on it. On this sense, animation can not be orientated to a particular area or space; the animation is a compilation of multiple sub-animations which in conjunction can represent in an organic the experience.

_Motion Pictures

360 degrees cameras, GoPro grids, panoramic lenses, etc. The equipment to shoot 360° videos is growing making more affordable the possibility for filmmakers to venture into the VR production. IMV are not limited to computer generated pictures and digital artwork. By shooting the real world, the visual resources are unlimited and the audio-visual experience is richer. The improvement of the cameras and the generation of new postproduction tools will determine the future of 360 videos as visual language; in addition, the filmmaking rules need to be rewritten in order to define a tool that is almost unknown at this point of the history.

03.7 NARRATIVE_

Visual narrative is a story told through the use of media. [32] When we talk about stories, there is always a time, a length; on the case of traditional music videos, the story is determined by the duration of the song, although this rule can be brake as we noticed in the new media examples. In the field of In Music Videos, we can divide the storytelling into two subgroups: Story and experience.

The story as a link of events is a sequence of actions that narrates a situation, starting with a setup of the story, a confrontation or climax and ending with a resolution; following this basic structure will ensure the correct development of a narrative in combination with audiovisual elements. On the other hand, we have the experience narrative; with an experimental narrative, in which the 3 parts of the traditional narrative are not clear. On an IMV experience, the viewer can be immersed into the world that communicates out of a sequence but following a pattern, the unplugged sequence makes the narrative hard to follow but ensures a custom experience and the use of visual resources much wider and open.

_Screenplay

The screenplay is a literal tool to describe the narrative of a story, commonly used in film, television, video games, etc. [33] This document is half stage play and half technical; describing with detail every characteristic of the story in terms of dramaturgy and visual language: location description, characters dialogs, actions, camera movements, camera framing, lighting, sound description, visual atmosphere, etc. When we transcribe this for In Music Videos, some of the sections are useful and applicable but others don't. The screenplay for IMV is a flexible document that can be separated into modules that together conform the main audiovisual project:

(Story/Dialogs/World description/Camera movement/Interactive elements/Sound/User interface)

On this way, the direction of the narrative is possible losing some control over the interaction user-story but keeping the story line and the way the immersion turns into the narrative for the viewer.

_Storyboard

This graphic tool has the function of organising and present the sequence of the motion pictures using illustration and draws; it can also provide the user journey and sequence through and interactive sequence. The storyboard has a standard format of square frames with under text to describe additional details of the sequence and provides the timing of the action; framing a VR sequence requires extra canvas to represent the 360 view of the world without specific camera framing. Inspired by the way geographers represent the world map as a flat surface, I developed this style of the storyboard which can show the environment and show the upper part, central and lower of the simulation.

This format also helps to the direction to control the content on the main view of the user and makes the planning and the stage design, easier to understand.

Camera

Move the camera is the way we can conduct the audience to a specific aspect of the experience, the VR headset allows the user to control the rotation of the virtual camera on the three axes which can restrict the direction of the sequence. [34] However, doesn't mean that is not possible, move the camera around the scene and even change the position or the scene is an effective way of add dramaturgy to the story and create a visual intention of it.

The camera is located on a 3D free space with no restrictions more than the user experience, actually is a combination of two cameras in order to create a stereoscopic projection with each camera as representation of human eyes; be immersed into the virtual world requires a certain representation of the natural human motion, exceed in fast movements and abrupt transitions could confuse the viewer and even create physical effects such dizziness. The camera is a stunning resource that requires being used carefully in function of the story and the narrative of the In Music Video experience.

04.

_PROTOTYPING

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04.1 BRIEF_

The aim of this part of the development is to create a functional prototype of an InMusic Video. Simulating a realistic situation of production, I will produce two IMV capable of fulfilling the characteristics and requirements regarding aesthetics, software, hardware, and experience.

Also, this IMVs should end in a hands-on product that can be tested with a group of users to get feedback in a qualitative way. Furthermore, these VR pieces can evidence the workflow of production and the challenges in a conceptual and technical sense; such proof can encourage directors, designers, and musicians to get involved in an audiovisual content generation that goes out of the resolution square and that takes music into virtual worlds.

To test the prototype properly, I will produce two videos for two different songs to show the potential and the adaptability to different music genres and visual approaches. Each one will have specific requirements in the way of visual representation which make every video a distinct and independent audiovisual project.

_Software

As mentioned before on the project, the software offer to develop VR projects are diverse, after make an evaluation of the requirements for IMV, the software that suits to the project is Unity 3D with the inclusion of one additional feature: Google VR SDK. The American company is betting on the development of VR market, with the software development kit created for Unity3D, the generation of VR content is more affordable due to its “open and free” nature.

The Google VR module, provides stereoscopic cameras, user head tracking, stereo rendering, spatial audio rendering, user interaction with the system, plus many other technical features to improve the experience of unity. [35] In addition, the combination of these tools with Unity 3D is a powerful platform for VR development; the visual integration, user interaction, and coding development are strong features to explore the possibilities of VR.

For the creation of visual elements, I will use cinema 4D to do 3D modeling and texture objects, this software has a feature to export 3D models into Unity, keeping many of the characteristics such materials and mesh geometry. The 2D elements are designed on Illustrator and Photoshop and the rest of visual elements are provided natively in the Unity software.

Hardware

Despite the amount of available devices for VR on the market, I considered the most affordable options, the prototype should be easy to experience for a group of users without depending on license or long protocols of implementation; Unity in combination with the Google SDK has the option of exporting to different mobile platforms, I decided to use Android due to its flexibility to accept applications out of the official market. Nevertheless, not all the Android phones are capable of reproducing VR content, there is an additional hardware requirement: the gyroscope.

In addition, to use the phone as VR headset, an extra case is required; the function of these cases holds the phone in the head and with the use of inner lenses, project the stereoscopic image to the eyes. I am using a €30 case called “Virtual elegant” available on Amazon. An additional Bluetooth control is part of the hardware set, to provide additional control to the user.



Fig. 23. Hardware. Daniel Baron

04.2 MUSIC_

_Music Selection

Music, a song, an artist; the base of this thesis and the reason of existence of this project. Although the selection of one song could be a simple process, I found two possible ways to do it: the use of a popular song or bring an emergent artist to the project.

A famous artist is a safe choice. Usually they have their work on the different music and video websites and platforms, the information about the music project is available online, and the songs can be easily remembered by a regular viewer; a remake of an existing music video into VR is an attractive way to compare the impact between two different contents from the same song.

Nevertheless, a new musician has an interesting feature: lack of support and strong marketing, this feature has the potential to represent the impact of an IMV into the general audience. The versatility and the affordability of this music videos are a powerful media for productions with the low budget and high impact.

According to the official website definition, 'Bandcamp Bandcamp makes it easy for fans to connect directly with and support the artists they love.' On this platform, musicians are launching their works and ask for a certain price, even zero. Although music is a free artistic expression, I limited my search on the website to the following criteria:

The cameras and the position of the user are part of the creation of movement, move a camera towards space is another way of representing displacement and in general are the way of creating direction in the story. However, the camera is also the point of view of the headset and is the window to look around in the scene; that's why to apply cinematic movements of the cameras is a restricted resource to keep the freedom and the free will to interact with the world for the user.

According to the official website definition, 'Bandcamp Bandcamp makes it easy for fans to connect directly with and support the artists they love.' On this platform, musicians are launching their works and ask for a certain price, even zero. Although music is a free artistic expression, I limited my search on the website to the following criteria:

Genre (pop, synth, electronic, singer)

Length (2:00 - 3:30 minutes)

Monthly amount of listeners (Less than 500.000)

Date (recent release)

Music concept (cover design, artist logo, color palette)

These criteria fulfill some of the characteristics of an original song that could require a music video as a distribution and marketing tool but restricting the search only to emergent and nonpopular artists.

04.3 REXXY LOST IN THE NIGHT_

After the evaluation of several music projects, Rexxy was the first winner. This is the description of her work on the official website: ‘Rexxy is the independent project of Brooklyn-based musician, singer, songwriter Monica Velasquez. While Monica’s early projects included sounds from disco glam to 60’s garage, it was in Los Angeles where she found her sound, and Rexxy was born. The Rexxy sound is a mix of seductive synths, moody bass riffs and inspiration from 80’s new wave and 90’s indie rock.’

Rexxy has released her recent LP ‘Talk to me’ in February of 2016; an album with 11 tracks and a high sound of synth pop. From this album, the song that I selected for my prototype is the shortest in length. The song ‘Lost in the Night’ has a duration of 2:18 minutes and many sound elements that can be used for visual representation. Also, the song has an environmental sound, that can be interpreted as an experience into the InMusic Video.



Fig. 24. Rexxy (2016). <http://www.rexxy.com>

_Concept

'Lost in the night' is a nostalgic song with synth pop sounds and ambient environments. In my design concept, the song represents a journey through different elements playing a game of simple shapes, color and motion. The aim of this prototype is to apply certain concepts of 2D motion graphics into a 360° environment, for this reason, I will restrict the design and the illustration to geometrical shapes in order to create an experimental look and feel and avoid the sensation of being immersed in a video game or a simulation of the real world.

_Key Words

_Travel

_80's

_Nostalgia

_Night Sky

_Trip

_Repetition

_Geometry

_Pop

_Pinkish

_Story

The narrative of the VR video is constrained to the music representation, showing an endless trip on the sky, through different surreal objects and colors. For the story, I divided the song into 3 main parts:

Setup: 00:00 - 00:46

Confrontation: 00:47 - 01:19

Resolution: 01:20 - 2:13

Every part was defined following the peaks and falls of the music to create visual changes and add a dramatic storytelling; however, due to the experimental situation of the project, reach a dramaturgic line is a new challenge regarding composition. To create dramatic changes in the visual narrative, I made scene changes making use of 3D elements; the viewer can experiment visible changes when the music changes as well. Also, the use of the visual repetition is increasing during the timeline of the video, adding more complexity to the narrative.

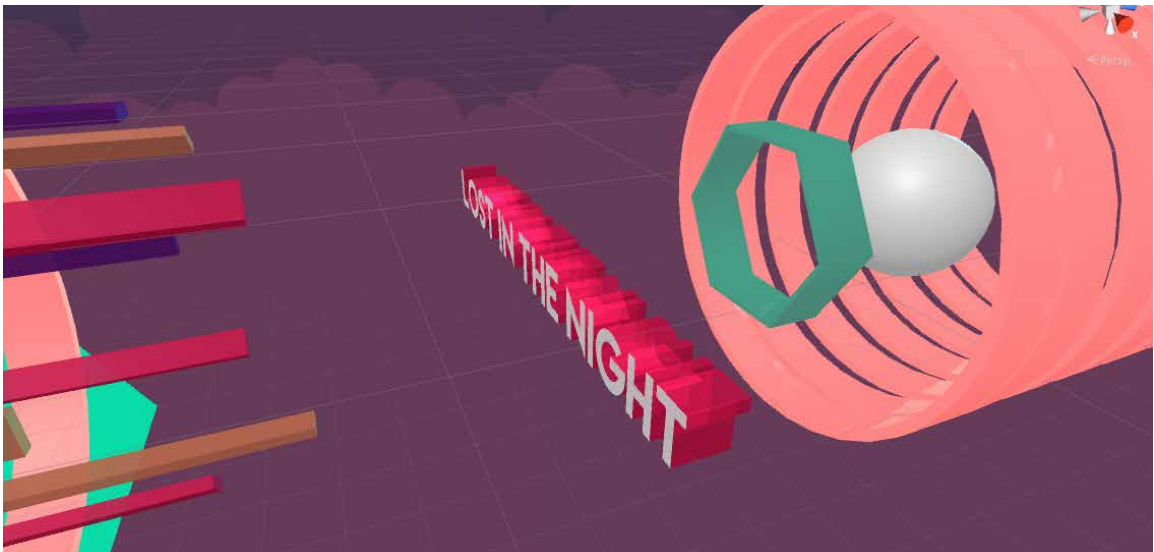


Fig. 25. Lost in the night . Daniel Baron

Art Direction

The scale of colors selected for the video is inspired by the pop aesthetics from the decade of the 80's; with a predominance of soft colors to create a vibrant environment in which the elements can be mixed visually and still keeping the look and feel of a commercial song. The following is the palette of colors selected for the 3D elements:

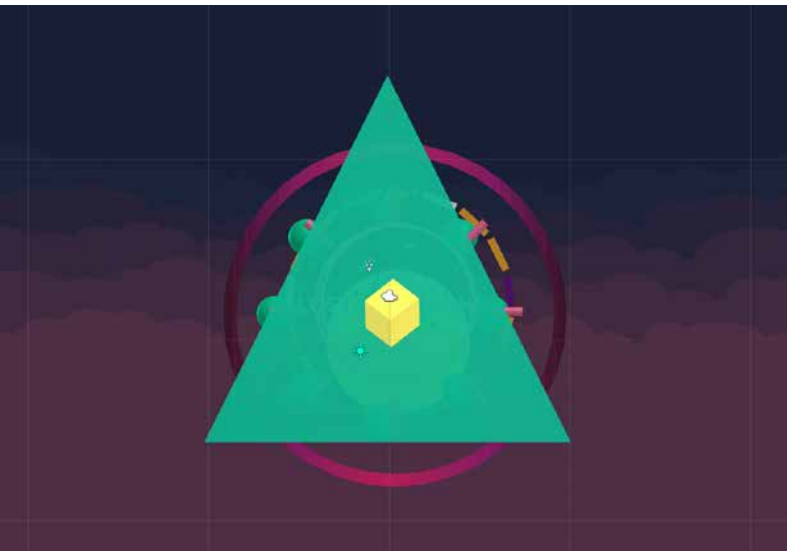


Fig. 26. Lost in the night Design. Daniel Baron

_World Design

Based on the concept of a nostalgic trip, the virtual world for the song takes place in the night sky, surrounded by clouds and using a linear tunnel for the camera perspective. This generates a direct flow of elements appearing and going from one point to the other, in the middle the VR camera is placed to provide to the viewer a 3D experience of items coming and going, generating to the camera perspective the feeling of moving and motion trough different 3D elements.

The 3D objects in the scene are simple majority geometry, using cylinders and circular distribution to maintain the tunnel look in the animation. On this way, the IMV for this song is a recompilation of different geometry standing in one point located in front of the camera position. There is no ground into the scene, this with the objective of keeping the feeling of flotation and keep the visual narrative into a surreal place.

After the sketching, I used Cinema4D for the modeling of the 3D objects, texturing and coloring; after this process, I exported them in a *FBX format, which is compatible with Unity 3D and can be easily updated and incorporated into the main scene.

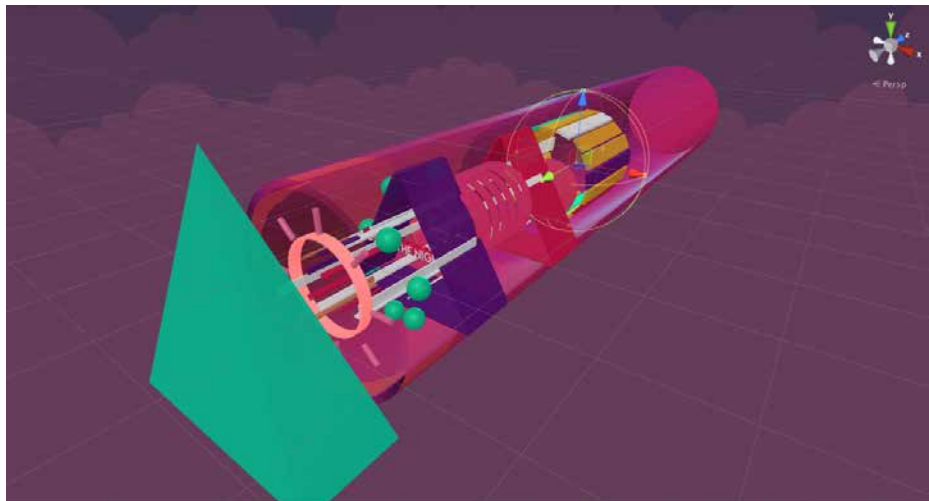


Fig. 27. Lost in the night World Design. Daniel Baron

_Lighting

Although the scene is located in the nighttime, the lighting of the world is bright, under these conditions, the vibrancy of the colours of the 3D objects is higher, and the scene looks vivid and colourful; the set up includes two white directional lights and one extra green directional light; the last one is used to control the temperature of the world and helps to keep the colours combination under the same parameters.

_Animation

The motion of the animation could be described as ‘repetition’. Loops in different timing are the core of the animation for this IMV, the beat of the song as repeat base and the convergence of loops on various keyframes are the animation model for this video. Other specific elements animated only on particular moments like longer tunnels and particles emitters are animated to have a presence on the video only during specific moments.

In the Unity software, the tool of animation provides an animation interface on certain parameters: Position, Rotation, Scale. Nevertheless, the control for the animation is limited and the options to control functional the motion of imported elements is not enough.

The use of the FBX format, allows to import animations pre-made on a regular 3D software, on this sense is possible to create an entire animated scene an imported as final animation, as consequence, Unity works only as exporting platform for VR projects with one negative result: the workflow is longer, and the steps connecting the software can make the process less practical.

_Sound

The sound is one of the cores of the experience and on the platform there are two ways to include it: as background music and as the physical sound emitter in the scene. On one hand, the background sound provides a constant and flat reproduction of the music while the 3D world is reproduced, this keeps the quality of the music consistent and unaffected by the actions of the viewer, but keeps the sound out of the experience and in a certain way reduces it's impact on the interaction

On the other hand, the SDK by Google includes an Asset for the scene called 'CardboardAudioSource.' This asset has the feature to create a source of sound within the 3D space; this source reacts to the movement of the viewer in the stereo channels of the sound. This characteristic emulates panning of the sound and extends the experience of listening connecting it to the virtual space.

For the Rexxy's song, the Googles option is more accurate and extends the power of the sound in the virtual space.

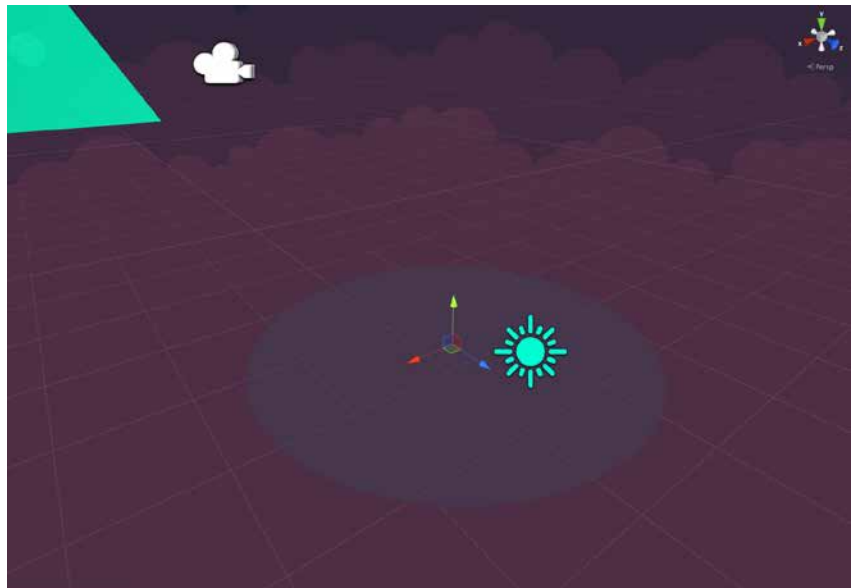


Fig. 28. Lost in the night Sound in the scene. Daniel Baron

Interaction

As trial for the interaction, I used an additional element in the whole scene, this simple cube is located in the middle of the animation tunnel, and it has a unique feature: can be controlled in the 3D space by the user; using a Bluetooth control, the user can modify the position on real-time and move it freely around the area. This feature is an example of the power of interaction and the level of control that the user can have.

The control was made using a basic coding line on C# which uses the inputs of the controller to modify in real time the nodes of the geometry within the space.

```
1 using UnityEngine;
2 using System.Collections;
3
4 public class control_cube : MonoBehaviour {
5
6     // Use this for initialization
7     void Start () {
8
9     }
10
11     // Update is called once per frame
12     void Update () {
13
14         if (Input.GetButtonDown ("Fire1")) {
15             transform.Rotate(transform.rotation.eulerAngles + new Vector3 (0f, 0.1f, 0f));
16         }
17
18         float h = Input.GetAxis ("Horizontal");
19         float v = Input.GetAxis ("Vertical");
20
21         transform.position += new Vector3 (h * 0.1f, v * 0.1f, 0f);
22
23     }
24 }
25 }
26
```

Fig. 29. *Lost in the night* Interaction coding. Daniel Baron

_Final Prototype Gallery

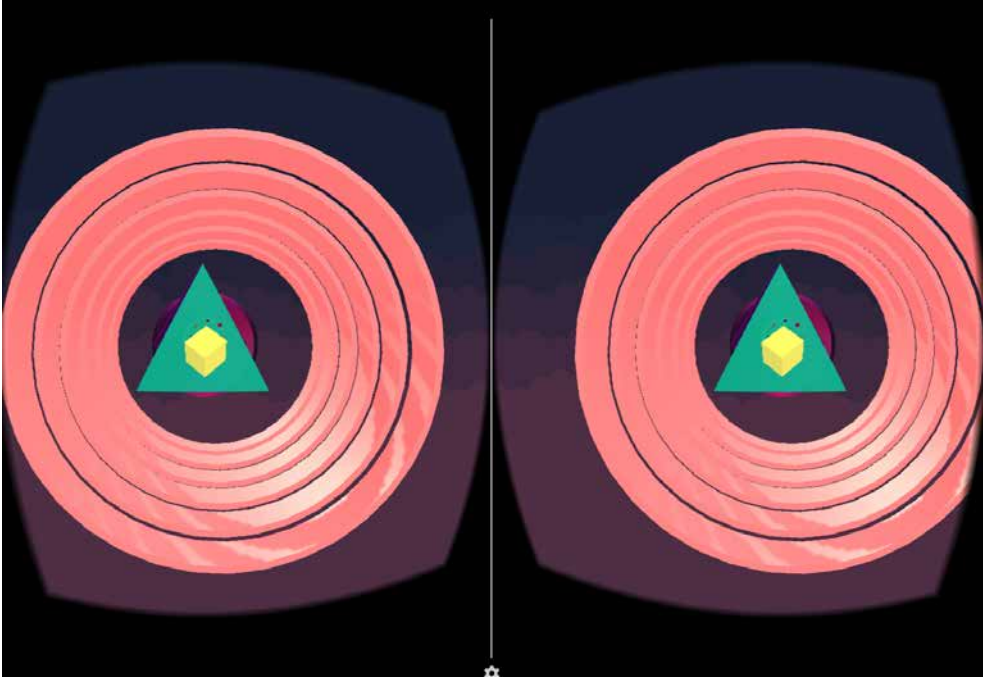


Fig. 30. *Lost in the night* - IMV. Daniel Baron

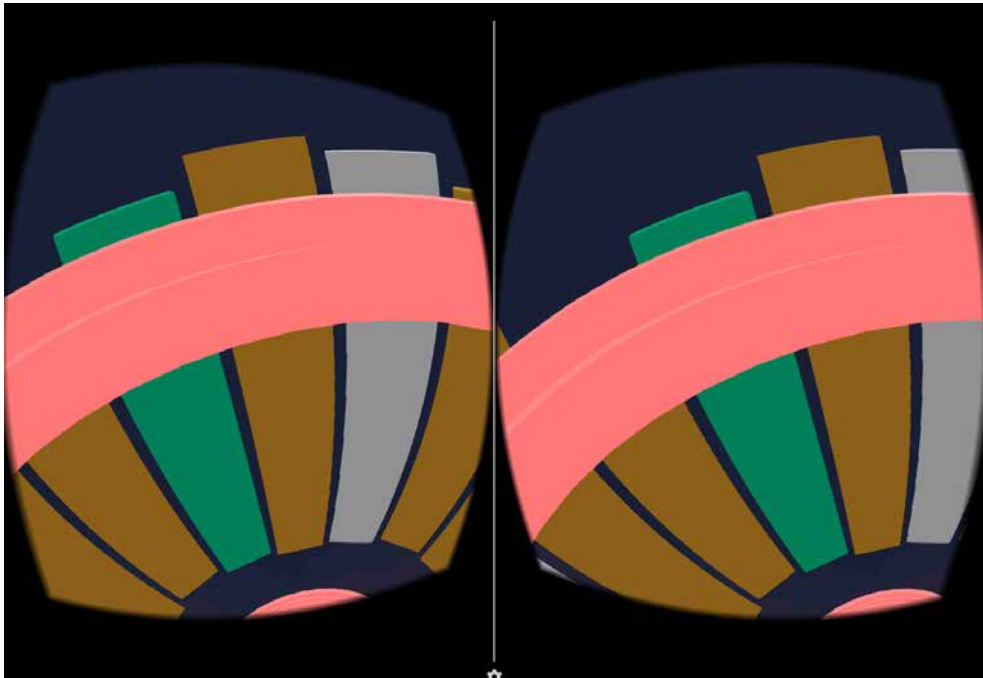


Fig. 31. *Lost in the night* - IMV. Daniel Baron

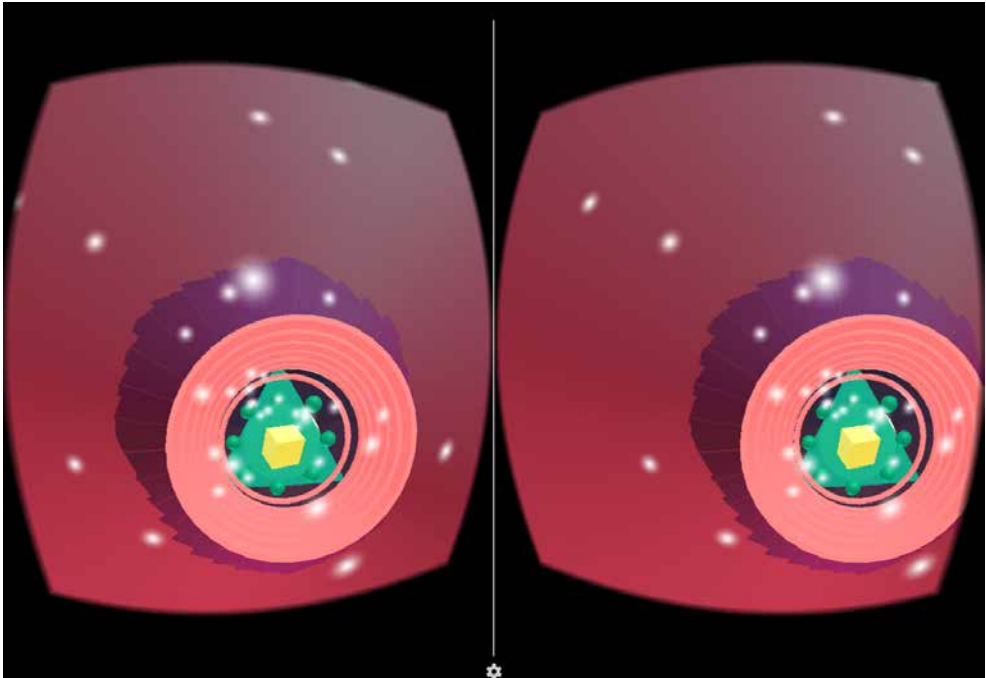


Fig. 32. *Lost in the night* - IMV. Daniel Baron

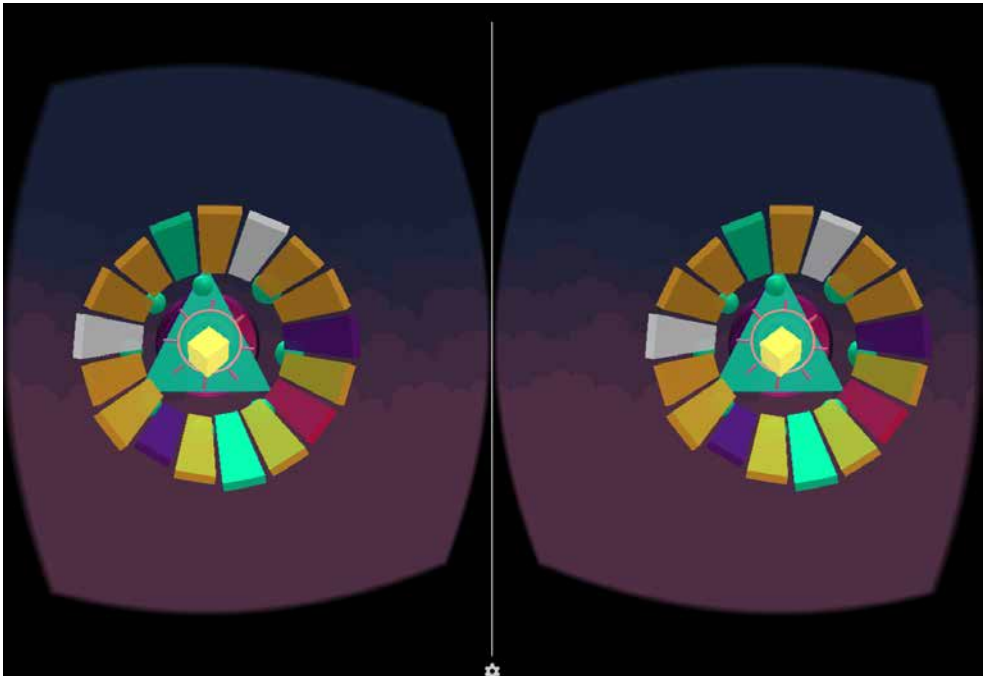


Fig. 33. *Lost in the night* - IMV. Daniel Baron

04.4 MACHINEVERSEMAN YOUR LIES_

In the search for a contrast between the two songs, I restricted the search to find an artist with dark and less commercial sound; that's how I found the band Machineverseman from Portland, USA. A band with strong dark ambient sound and electronic influences. The music project has launched three albums on the Bandcamp platform, but their presence on the web is almost zero.

This discovery makes them more exciting and challenging as base for an audiovisual development; I selected the song 'Your Lies' from the latest album 'Maneuvers in the Dark'; with a length of only 1:33 seconds but with several detailed sounds and environmental music, is a challenge in terms of visual representation, using only the album art as brief, the artistic direction is a free and unexplored space.

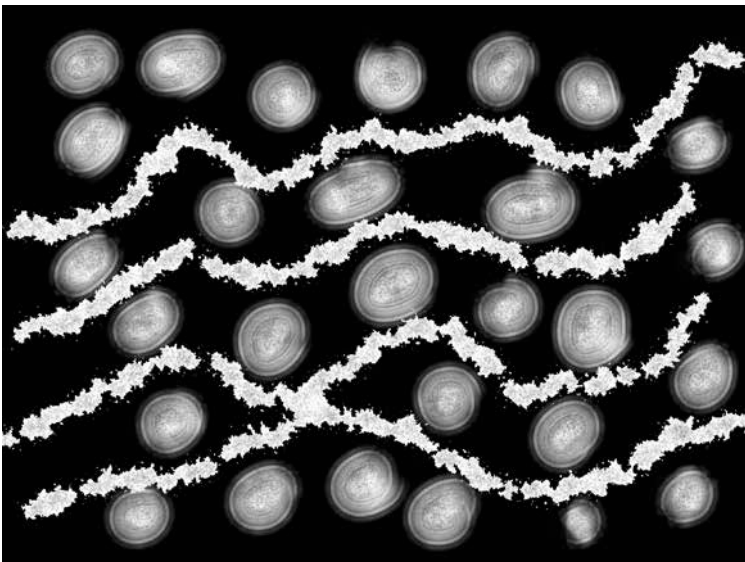


Fig. 34. Machineverseman (2016). <https://machineverseman.bandcamp.com/>

_Concept

'Your Lies' is dense and obscure, slow but continent sound. The visual approach for this IMV is creating a dark world, with less animation regarding motion and using the light as a dramatic element. The use of color is restricted to monochromatic to create an experience more experimental in which the viewer will feel lost and immerse into a surreal world.

_Key Words

_Dark

_Dramatic

_Obscure

_Monochromatic

_Ambient

_Trap

_Cage

_Light

_Story

The development of the story for this song was created from the use of light as central dramatic element and the modification of the virtual world using the different musical changes of the song; on this way, I decided the storyline in the following segments:

Setup: 00:00 - 00:07

First loop: 00:08 - 00:43

Confrontation: 00:44 - 01:04

Resolution: 01:20 - 1:33

The story takes place in a surreal world, with no ground or visible sky, the viewer is immersed in a surreal world that is hard to identify as a known place; the tension of the experience is base on the movement of the light and the story is having dramatic changes making use of visual modifications of the environment while the song is being played.

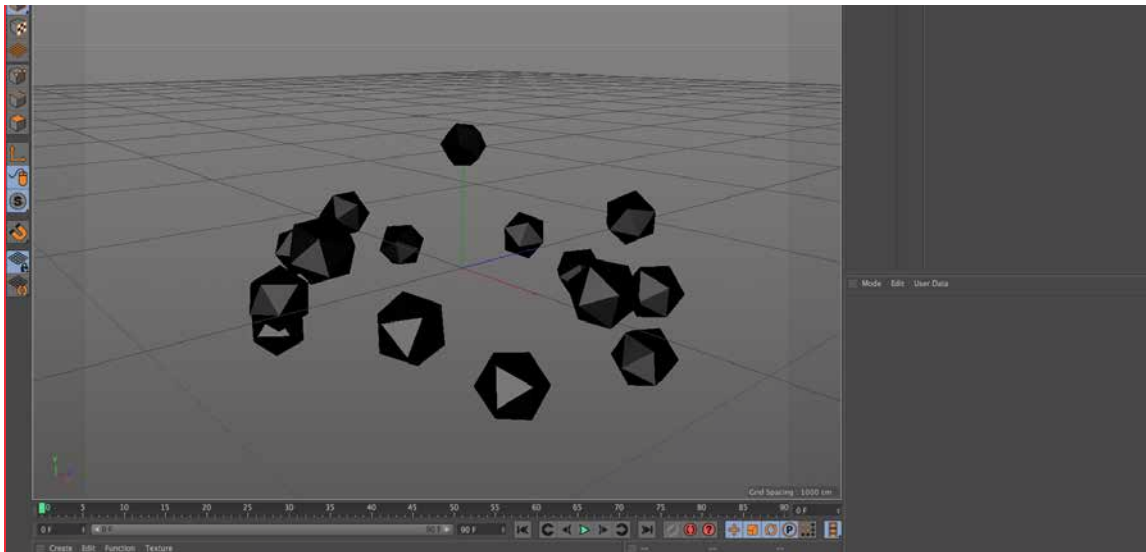


Fig. 35. *Your Lies* . Daniel Baron

Art Direction

The song is overwhelming in the sense the sound is changing and incorporating different elements as voices and noises, but also the repetitive beat is obscure and surround. I represent this atmosphere with the use of a spherical cage, with aggressive corners and shapes with the intention of creating the feeling of being trapped. The colors are restricted to monochromatic with a predominance of black and one rust texture in the main cage; the world set up is designed to interact with the light and to move around the camera perspective.

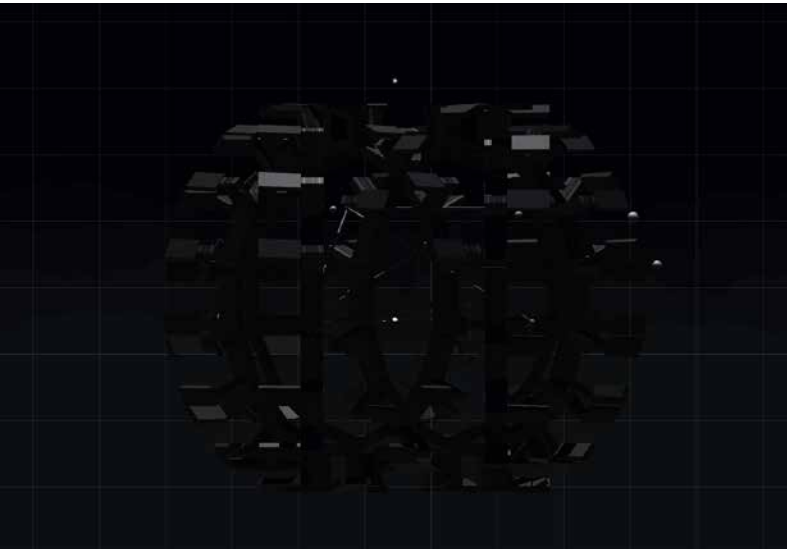


Fig. 36. Your Lies Design. Daniel Baron

_World Design

Using the repetition of the music beat as inspiration, I created a main module on the 3D software and using the cloning technique of repetition; I designed a spherical matrix of the same module that works as a 360 cage around the perspective camera. The world doesn't have any ground nor any reference object to some geographical position, floating is the word that best describe the environment.

Additional objects are part of the scene composition, each one of them are part of one of the song divisions, the design is developed under the same guideline of the cage and the visual function around the main camera point of view. I avoid organic shapes to keep a mysterious atmosphere and a synthetic environment. The world skybox is black, and the main cage has a rusty white texture on it, the rest of the meshes are in white which consists in a simple color grading.

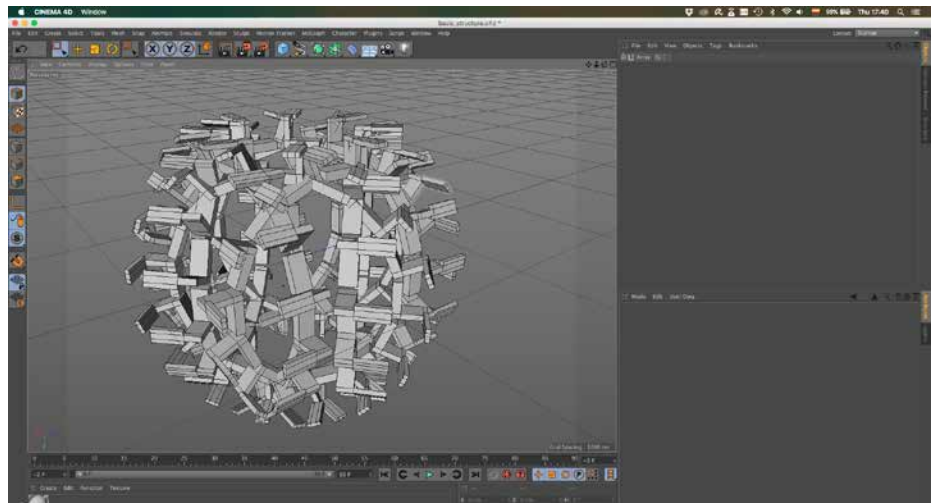


Fig. 37. Your Lies World Design. Daniel Baron

_Lighting

Lighting is the primary factor on this IMV in many ways. I used a directional light as only light source in the entire scene, all the objects are reacting visually to it and is the only visual reference for the viewer; the light is used as a dramatic element and guides the motion and the rhythm of the experience, changing its direction the objects react in different visual ways.

_Animation

The directional light from the scene is positioned on the top of the 3D structure and animated doing rounds of 360 grades on the y-axis from the 00:07 second which the main beat starts, this movement is synchronized with the core beat of the music completing one round in 3,5 seconds. This loop is used for the rest of the scene creating visual rhythm in conjunction with the song.

Additional objects are triggered on different moments of the song, a polygonal sphere that rotates around the camera and pulse cylinders moving over the Y axis are part of the visual transition; all of them were animated on the native motion graph of Unity and designed in Cinema 4D.

_Sound

As in the Rexxys IMV, I used the 'CardboardAudioSource', to reproduce the song in the virtual space. With this feature of the SDK, I applied the 'Cave feature' which simulates the interaction of the sound with a closed area similar to a cave, this feature increases the echo and the feeling of the sound more atmospheric. It keeps the spatial position of the audio source increasing the sense of the experience and being a perfect complement to the immersive experience of the music.

_Interaction

On the exploration of the interactive features of the elements, on the 'Your Lies' In Music Video; I created a code capable of modifying additional features on the scene regarding the light. The change of the position, the intensity and the color. However, in the final version of the project, I decided to keep away those characteristics to maintain the narrative and the dramaturgy of the video. By giving more power to the viewer, the direction is more challenging, and the interactive elements on the scene should have a particular function beyond the simple modification.

_Final Prototype Gallery



Fig. 38. *Your Lies* - IMV. Daniel Baron

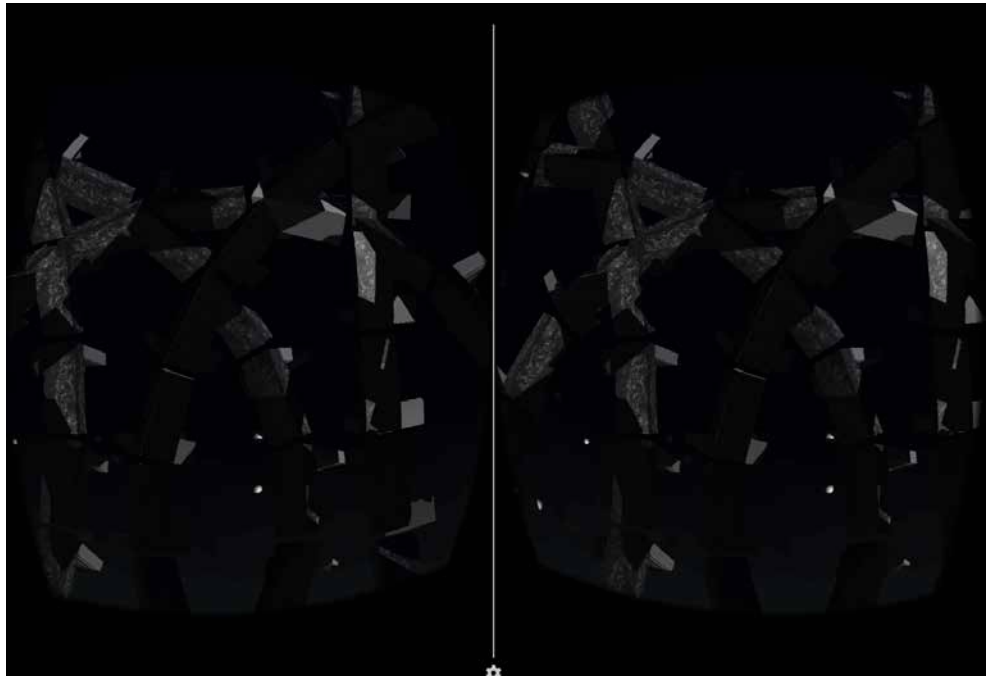


Fig. 39. *Your Lies* - IMV. Daniel Baron



Fig. 40. Your Lies - IMV. Daniel Baron

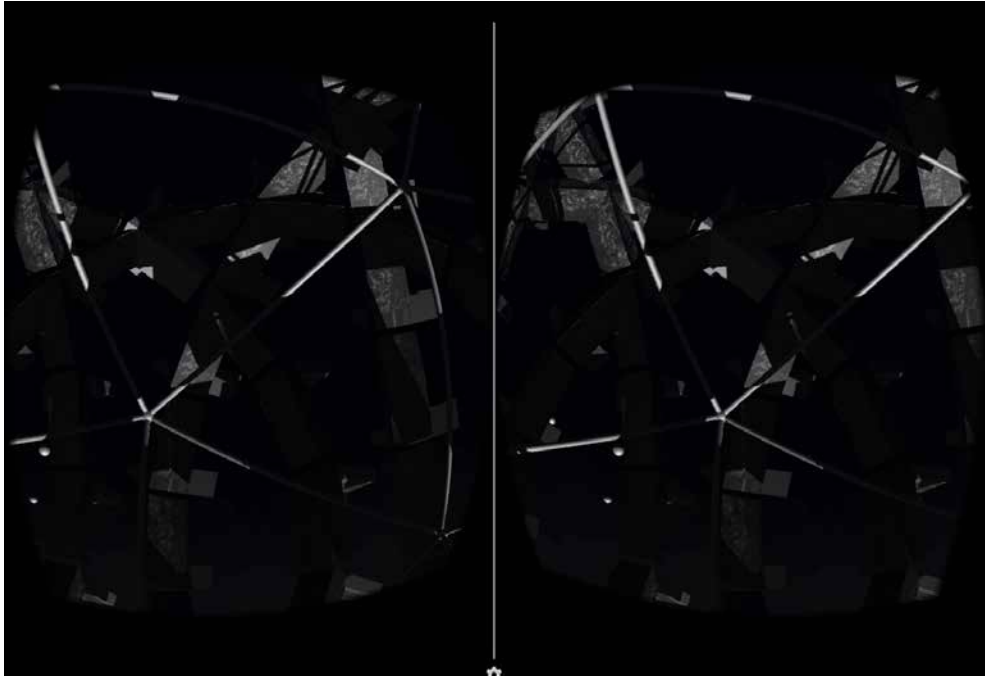


Fig. 41. Your Lies - IMV. Daniel Baron

04.5 THE EXPERIENCE_

After the production of two prototypes of 'In Music Videos', one the primary factors is missing: The viewer. From the Unity software, I exported each project as an application for Android, on this mobile platform, I can use the hardware features of the phone to reproduce the content generated. For the tryout of the experience, I selected a study group of people to test and measure in qualitative terms the experience of the watch and listen to music immerse on virtual reality.

The study group consists of seven people from different nationalities and diverse backgrounds towards the consumption of music.

The Group

Adrian Ramos, 24, Colombia, Industrial Designer

Samuel Sanchez, 22, The Philipines, Photographer

Natalia Garcez, 24, Brazil, Graphic Designer

Phing Natchayar, 27, Thailand, Graphic Designer

Andres Delgado, 23, Colombia, Industrial Designer

Marcela Gonzalez, 28, Mexico, Graphic Designer

Hammed Saleem, 33, Graphic Designer

I established three steps of the trial:

1

Before the viewers were able to experience the IMV prototype, they answered a short test about music videos to establish a base of use of music and traditional music videos to understand the interaction of the group with the music.

How often do you listen to music?

Daily: ● ● ● ● ● ● ●

Weekly:

Monthly: ●

Never:

How do you listen to music?

Internet: ● ● ● ● ● ● ● ●

Radio: ●

Television:

Concerts:

Streets:

Other:

Are you familiar with music videos?

Yes: ● ● ● ● ● ● ● ●

No:

How often do you watch music videos?

daily: ●

weekly: ● ●

monthly: ● ● ● ● ●

never:

How relevant are music videos for you?
(1: Irrelevant - 5: Very relevant)

Average: 3.14

How do you watch music videos?

YouTube: ●●●●●

Facebook: ●

Vimeo: ●

Alternative Websites:

Television:

Other:

How do you share music?

*Facebook, Youtube, Spotify, Facebook, Twitter, message apps,
sending content to a specific person.*

_2

Then, they used the headset to experience the two prototypes of IMV: 'Lost in the night' and 'Your Lies'. For many of them, this exercise was the first contact with virtual reality, which generated larger expectations on them. Every user watched and listened the projects only one time



Fig. 42. Apps- IMV. Daniel Baron



Fig. 43. Headset- IMV. Daniel Baron



Fig. 44. Group trial- IMV. Daniel Baron



Fig. 45. Group trial- IMV. Daniel Baron

3

In the last step, they answered a final questionnaire regarding the IMV experience; the questions were designed to obtain feedback from the users and generate a qualitative perception of the prototype.

How do you qualify the experience? ***(1: horrible - 5: fantastic)***

Average: 4.7

What did you like?

“Graphic style”

“New way of experience music”

“Vibrant colors, animation, geometry”

“Active objects coming from the front to the back”

“The change of the source of sound”

“You feel inside of something”

“The animation and the movement”

“The immersion”

“The different feelings of the song”

“Surrealistic worlds”

“I feel I am disconnected from my real location”

What didn't you like?

“The render quality was not the best”

“After certain point could be repetitive”

“Possibility of feel dizzy”

“Repetitive”

“Wear the huge headset”

“I want to move more my body”

“Hardware is not comfortable”

“Technical limitations”

_What is different in comparison with traditional music videos?

“IMV gives you an environment”

“You feel inside of the song”

“You are part of the video”

“The narrative is different”

“It was very interactive”

“I enjoy more the music”

“More dynamic and engaging”

“I felt closer to the video”

_Was the feeling of the music different?

“Absolutely different”

“It’s a new experience towards music because I am active”

“The media is more relevant than music”

“The sound is represented visually”

“It’s a sensual experience beyond than one channel”

“It increases the feeling of music”

_Would you like to find this content on regular music/social platforms?

Yes: ● ● ● ● ● ● ●

No: ●

“Not really, this content is not ready for the mainstream.”

_Would you share this content to your social circle?

Yes: ● ● ● ● ● ● ●

No: ●

“Only to specific people”

“No, but I would click on ‘like’ definitely”

The feedback from the study group was critical to understanding the perception of the concept on regular consumption habits. The first group of questions was useful to understand the strong connection between music and technology, the majority of the users are streaming music from applications or web platforms, the internet is the house of the music, and it's the particular place for music development. But more relevant is the importance of music in the daily life of people; the music has turned in a first-hand necessity in which the consumers have the power to decide and select the content in the way they want.

After experience two In Music Videos, the group provided some interesting outcomes. First of all, the hardware is clearly at an early stage of development, it is burdensome and uncomfortable to wear on the head, the adjustment with the body is not natural which makes people use hands to hold it even though is not necessary, in addition, for the users the hardware is something that is not reachable and easy to get, this creates a gap between technology and final users.

Secondly, the immersive power of the media has several consequences, the connection with the song is higher and the feeling of being part of the content increases the empathy for the experience, but this demands higher performance regarding graphic content and renders quality, summarizing: 'The more realistic, the better.' This empathy with the virtual world can make music more attractive for more audience, in a sense that music goes beyond the genre or music taste and turns music into retail experiences for new listeners. However, this could be negative, when the whole visual experience gets over the music, the concept of music video could disappear and send the sound to a second level or background.

Thirdly, the ability of using the head to interact with the virtual worlds makes the users want to use more parts of the body, the arms can be employed as well with additional controllers and interfaces, on the developing of the technology in the future the use of the entire body will be an extension of the immersive power of VR.

04.6 THE IMV NARRATIVES_

Virtual Reality as a medium has features and characteristics that make it unique and difficult to compare to other media; stories available on different media are not applicable to VR, for this reason, VR should be recognized as a new media with its particular narrative. However, VR experiences still in the 'infancy' stage of development and only towards its application as a narrative media will reveal the real meaning of it.

Starting from the concept of VR as an independent media, the way to define a narrative doesn't consist in the transcription of the cinema rules to virtual reality, and this means that VR is not a replacement for film or audiovisual narratives.

The role of the viewer in bought media is different and can be described as passive and active. On one side, the act of watch cinema is passive due to the way it interacts with the audience, the consumption of the film is limited to observe and process the audiovisual information perceived by the senses, the reaction from the public to it, doesn't have any direct consequence over the audiovisual piece.

Under this definition, the film narrative could be described as an author; the entire experience is pre-made and conceptualized under the vision of one director and developed by a team. On the other side, watch virtual reality content gives to the viewer an active role, the perception of the audiovisual information is connected to the use of the interface and the physical response to the virtual space, this narrative is described as interactive due to the nature of the content, the development of the story is relative to the reaction of the viewer.

Time and space are concepts around the narrative of a story that vary with the media channel, while in cinema and literature these ideas are manipulated always regarding the narrative flexibility; virtual reality is mostly in real time, and these constraints are linked to the nature of the medium, the immersion required a high level of believability and the dramatic intensity is handled using multiple, interactive or rich dramatic features. The challenge of real-time guides the experience of the user to those dramatic elements, the use of sound as attention trigger or the manipulation of the camera (viewer perspective) are techniques and resources used in some content. Real-time is incompatible with certain traditional forms of narrative; this observation can lead to the conclusion that is not possible to build and recreate a story in real time, but it is possible to represent a simulation of the real-time.

The camera is one of the fundamental narrative resources in film and video, cameras are under authorial control and are an extension of the vision and the narrative objective of the director, in a certain way, in traditional cinema, the camera is a representation of the narrator, and the viewer has a spectator role in a sequence of events and actions that develop the main story. In Virtual Reality, the camera is a representation of the audience who has a role of user within the virtual world, this removes the control of the camera and contradicts the use of it as a dramaturgic factor.

Participatory Narrative

Define a framework for storytelling in Virtual Reality is a complex task due to the nature of the media, VR is in constant development, and we are discovering its potential. Considering the viewer as a user in a 3D virtual environment, it's beginning to establish a narrative for the media. The user plays a central part in the construction of the story and his/her experience inside the narrative depends on the personal actions, reactions, and behavior. Lou chart and Aylett created the term 'SpectACTOR' [36] to define the role of the user in the development of these narratives; its function is created emergent narrative through the interaction of it and different actors inside the virtual world.

In participatory narratives, the role of the Director could be described as 'Drama supervisor', losing the control of the actions but providing a dramatic scenario for the user and creating all the material and media to promote the formation, development, and unfolding of the narrative. The virtual reality experience has a 'free will' structure in which every action has a reaction, the viewer is a virtual actor and all his/her actions might generate consequences in the world, in this sense, the VR narrative is similar to a navigation tree and the storyline looks like a connection of nodes and hot points instead a linear sequence of actions.

Under this concept, development of stories are similar to the creation of a virtual world and the dramaturgy is a collection of options in which the user is free to select and interact to; music videos on virtual reality are an experience and the act of listening turns into a multi-sensorial and evolving act of interaction with the music in a surreal and virtual 3D world.

04.7 THE IMV PRODUCTION TOOL

Production tools for emergent media is a way to open the channel for the creation of content and bring the different actor to the massification of the technology as promotion and representation of music. In Music Videos is a concept with specific requirements in the pipeline of production that can be fulfilled with the use of different tools and software. The extension of steps from the idea to the conception of the project is an obstacle in terms of attraction and affects the reachability of the media for creators and musicians while on the other hand, the VR industry is determining the best way to increase the use of VR.

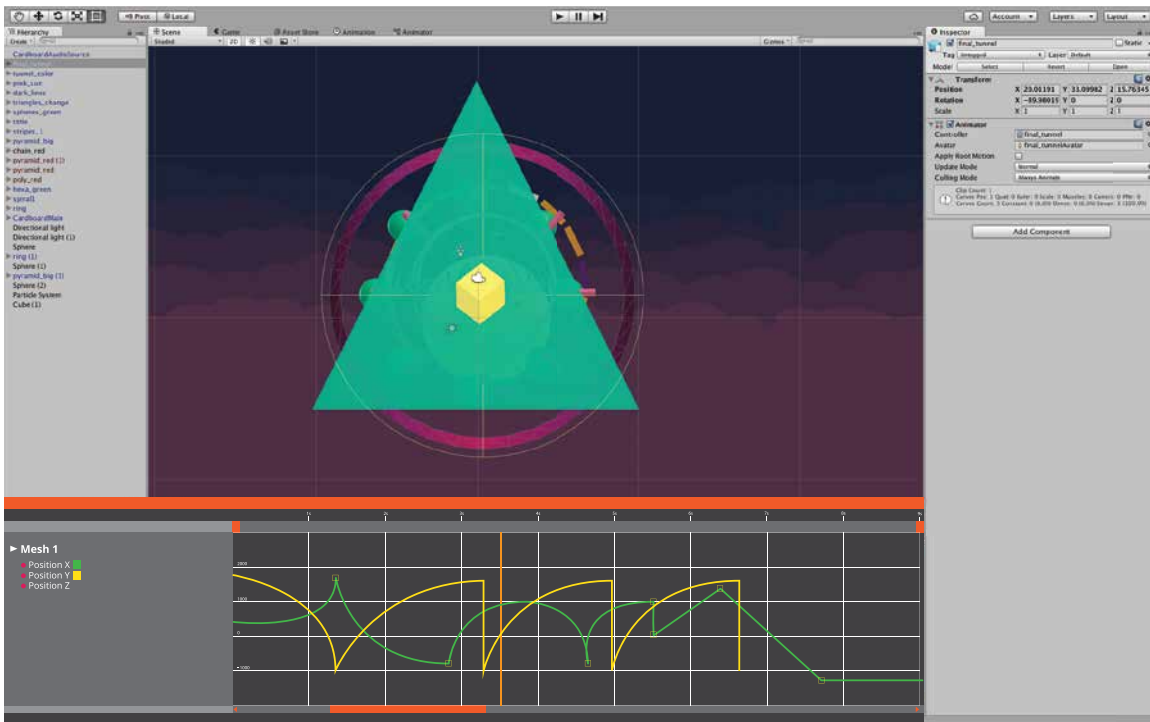


Fig. 46. IMV Asset, Unity Interface Daniel Baron

The IMV module for Unity is a integration layer between creators and the software. Unity is a complex tool, capable to generate content to different platforms and approaches. The IMV creator asset will have the following features:



Fig. 47. IMV Asset, Unity Interface, Screenshot from YouTube. Daniel Baron

- _Camera controlling*
- _360° video integration*
- _Sound / animation Keying*
- _Narrative navigator*
- _Mesh collection*
- _2D/3D motion controll*
- _Interaction generator*
- _Color correction tool*

Combined with the powerful SDK of Google for Virtual Reality, the IMV creator asset is a visual editor to create In Music Videos inside the Unity software. With a intuitive visual editor, a song can be imported and merged with visual content for Virtual Reality.

04.8 IMV FINAL _OVERVIEW

IMV as a new media channel is a conglomeration of different players; every players has a particular role in the way they interact together inside of the framework of the concept. The world of In Music Videos can be represented by the following diagram:

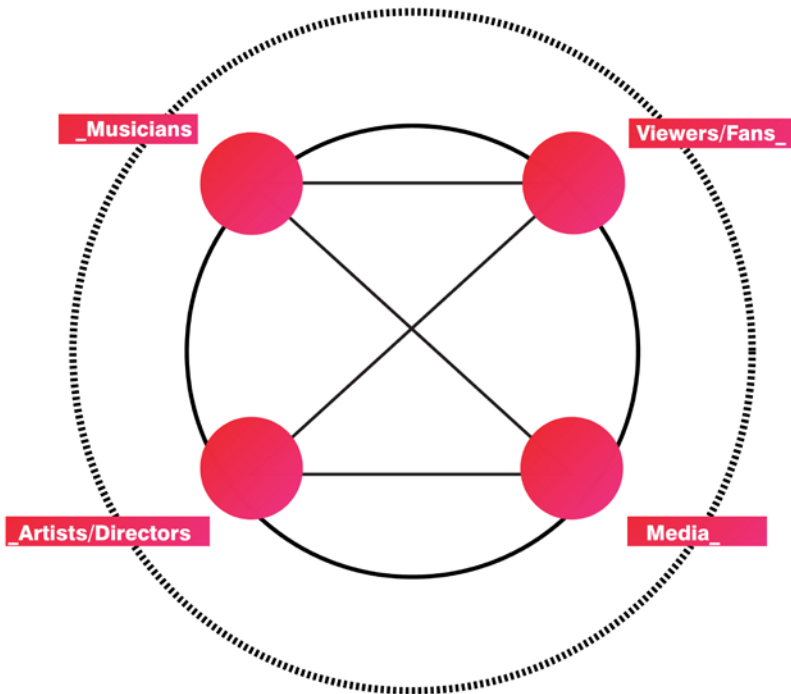


Fig. 48. IMV Diagram. Daniel Baron

The four top players are Musicians, Viewers/Fans, Artists/Creators and Media. All connected by different boundaries that shape the In Music Videos as a mediator concept.

Musicians and the music industry in general, are facing the implications of technology in the creation and promotion of music; technology has changed the way the audience consume music and them way we interact with it, IMV are an additional window to promote and express a musical project. The use of immersive experiences to spread music can be an opportunity to recover the concept of LP. Due to the commercial dynamics, from one LP project, usually 3 or 4 songs are going to the pop layer, this phenomenon is affecting the album as a solid creation and music are turning into hits and specific songs in the air.

The use of IMV could be a chance to turn one album into an entirely immersive experience with the narrative and visual concept. This perspective doesn't mean that music industry will change with this addition; IMV are a value added to the music project and is a way to bring more listeners and expand the artistic impact of the music industry. The launching of a new LP from a band could use the digital platform but also the inclusion of custom goggles and IMV as part of the whole promotion.

Inside of the IMV album experience, the immersive narrative can take the user into a trip trough different worlds inspired by a song or through a single story shaped by every single song. On the other hand, the fans are consistent consumers and supporters of music work, provide extra visual content for this group of people, can increase the connection and the empathy for the band.

Music is a platform of expression for artists, directors, and creators in general, the opening of a new media channel for it, creates a gateway effect of creation; no rules or constraints are established for the development of IMV, and the possibilities are unlimited and still unexplored. The generation of creative content benefits all the player in the media; by creating and producing experiences new connection channels are opened and the impact of music in visual terms goes beyond the limits.

The media platforms for VR content are increasing with the demand for it; In Music Videos are part of the global catalog of immersive experiences, its presence will promote the massification of the media and can produce the creation of new websites and online libraries for this particular content. Virtual Reality is an independent new media channel, and it requires the emergence of new ways to be spread and reach people and audience; music and its convergence with arts and technologies are generation new ways to enjoy music and feel it with the senses.

05.

_CONCLUSIONS

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05.1 _AWARENESS

Virtual Reality as media, it's at an early stage of development compared with traditional media, for this reason, the knowledge about the technology is limited and its impact on the society. Recently, the curiosity about VR is increasing among the users, the interest about the media is clear, but the biggest challenge is to make VR accessible to the people, to take the headsets from exhibitions and festivals to the mainstream field. "I think until you have the high-end computing power, and until you have slim form factors, you're not going to see glasses that people wear every day as part of their everyday lives." Mr. Lucked said in an interview for webforum.com. Although diversification is the key to the emergence of the media, virtual reality does not need to get billion of the user to be successful.

A common conception is considered VR as the successor of the film, this wrong perspective is removing the nature of the media and pushing features on it, features that VR basically cannot integrate as part of the development of the narrative and the technology. Music videos as an artistic expression and contemporary representation of sound and music, should not be considered in danger of extinction, new media in music is not a replacement, it's a new window for the expression and the promotion of music and artists around the world.

In Music Videos are a new media of music representation in which music is going to connect with listeners on a different level, when the act of enjoying music involves more senses, the connection with song and the artist is bigger, the empathic power of immersion is a unique feature that takes music beyond the limits; music artists and listeners are the key players in this interaction.

Music, art, film and technology together are a highly creative intersection, the implications for the future depends on the use of the tools we have in our hands, music as an expressive for will keep its position in the day life of humanity, and the task of technology is improve the experience and make the world more connected.

05.2 _CONCLUSIONS

Along this research, I can conclude that Music Videos are an artistic expression in constant expansion; the emergent new media is an open window that offers new languages and new connections between music and people. The internet changed the consumption of content, and its constant evolution keeps rewriting the rules of the Music Videos. However, the significant use of them still based on the biggest social platforms and streaming websites; with a high concentration of content and social media features, these sites provide the tools to create interaction and boost the power of one song among the audience.

Virtual Reality is one of the biggest new media channels, with several interactive features is growing fast as an industry. Nevertheless, VR is in an infancy stage and its implications in many ways are being discovered; the rules of VR production are not established and only the time will determine the real power as media channel; it is important to understand that Virtual Reality is not the replacement of film, that is why it required having own narrative and production techniques, only with the development of content, creators will discover the pipelines and the VR visual language.

Music Videos in Virtual Reality achieve turn music into an experience, immersing the viewer in worlds of music representation, In Music Videos can connect music and listeners on a new level, the empathy of the experience is a powerful feature that can expand the music to new sensorial level.

The production of IMV requires new tools for its output, currently, the production of music videos for Virtual Reality could require several software and steps regarding production, the development of specific tools could increase the generation of content and make VR reachable for musicians and artists.

The reachability of the media is an obstacle to its popularization, and the challenge is to achieve the democratization of the technology; on this point of its development, VR has specific requirements regarding software and hardware that make it difficult to experience. Once its massification occurs, we will understand how the audience interacts with it and what are the implications of the media in several disciplines of arts and technologies.

It is probable that in the upcoming years (or months), social media websites such Facebook and YouTube will host additional content, in combination with more powerful devices in terms of hardware; these sites could host interactive content, turning them in the future catalogue of VR and the way the media will be available on the internet.

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05.4

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“Dedicado a mi amada familia.”



Declaration

I hereby declare that this is my own work and effort, and have not used sources or means without declaration in the text. Any thoughts from others or literal quotations are clearly marked. This work was not used in the same or in a similar version to achieve an academic grading or is being published elsewhere.

Place, Date

Daniel Baron

