

Game jockey as an intermediary between DJ practice and video games

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ABSTRACT

The game jockey is a new practice between DJing and video gaming. This study underlines the difficulty to hybridize these two creative cultures. Game jockey implies a person, who will mix games during a live performance, by adapting to the players' feelings. We will present key concepts of the DJ practice and the similarities to the game universe. Based a Jockey – Game – Players triangle, we offer a creation research that tries to evaluate the possible figure of the jockey and the use of game samples. Our triangle model opens on cultural practices that are to invent.

Keywords

Disk-jockey, video games, mix, samples, live performance, research-creation.

INTRODUCTION

The research context relies on an artistic practice, inspired by the disk jockey practice (DJ), to develop a similar case on video game creation. At the origin of the project, the fastness of the DJ musical production has motivated the hybridization with the video game, in order to create a new game live performance. Based on the DJ expression, we will present its equivalent applied to the video game and name it “game jockey”.

Starting with the desire to link together DJ and video game creation, it is important to underline that this association isn't easy, due to numerous music concepts that need a context definition and technological difficulties. How to define the game jockey activity, which is at the crossroad between jockey practices and video games? Can the concepts that apply to music can be directly used for a video game?

The article aims to formulate the elements of the game jockey model definition, presented at the end of the article. In order to define this model, it is necessary to, in a first step, identify the key concept of the DJ practice that we want to emphasize. These concepts will also put into perspective the game practice, in order to underline the similarities and put aside possible confusions (especially in situations where the term « jockey » has been used in a different way than ours). However, as we will see, the game jockey asks a lot of questions regarding its feasibility. That's why a series of personal creation will be described and analyzed, based on a research-creation study, precisely a “research-from-creation” (Chapman and Sawchuk, 2012). These creations helped to emphasize the first person experience of an operator close to a game jockey. Finally, it is based on creations and backgrounds that the game jockey model will be given.

Proceedings of DiGRA 2019

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DISC-JOCKEY CULTURE AND CONCEPTS STUDIED

The practice of the game jockey we would like to describe is inspired by video gaming, DJ sets and live show practices. However, before explaining the model, it is necessary to define the specificities of the DJ practices and put aside possible confusions with the similar video game process. This background will emphasize the DJ strong concepts, in order to define it and facilitate the understanding of their use in video game creation context.

Origins and specificities of the jockey practice

It is difficult to age the first appearance of the DJ practice, depending on the technical, sociological or esthetical approach, the origins can vary. Furthermore, we can assume that the presentation we will make can surprise people used to the DJ figure behind its turntable, with the headphone on one ear, scratching a vinyl, with no one understanding why. Indeed, its origins can be surprising. For example, Bill Brewster and Frank Broughton talk about a correlation between music and religious, spiritual dancing, where the shaman or priest entertain a tranced crowd (Brewster and Broughton, 1999). Of course, we don't talk about it in terms of disc jockey, but the performer in the center of the creation, is important in DJ practice. Even today, Ulf Porschadt describes it as a cultural character or a character of culture (Porschadt, 1997): its objective is to entertain its auditorium by the music, the dance through the evolution offered by the DJ.

On more technological bases, the DJ figure has appeared progressively following diverse innovations. We can identify at the beginning of the previous century, Reginal Fessenden, Eunice Randall or Christopher Stone, as radio waves listening pioneers. The DJ practice has evolved through different artistic movements that develop this rather idea, to make people listen to a playlist chosen beforehand. Through the radio, disco, reggae, hip hop, house, techno music, and so on, have brought their own ways of using technologies, and even inventing others. This profusion of various types of music leads to a constant confusion between technological devices, sometimes estimated minimal with a double vinyl player and a tool to mix a track with another (Broughton & Brewster, 2003). Other devices come join the initial device with different potentiometers, sound capture devices, sound modification, sound filters, etc. The DJ practice continually evolves with time, and its own ways and constraints.

But this technological approach still is insufficient to underline an essential point that characterize the jockey practice. The heart of the DJ practice is the sample culture, plus the musical knowledge. By proposing a DJ Set, the jockey doesn't just select a playlist, and play one track after another: it makes us discover extraordinary samples, puts them together in a unique way and create a new musical experience. Also, being a DJ is beyond playing tracks, it is a constant research on past and current music, to build an artistic expression with the audience. We also would like to underline that our conception of DJing is focused on the live performance itself and excludes, in the context of this study, the studio recording process of a DJ music.

Let's summarize the essentials points of the DJ practice that we will use in our study:

- A central character communicating with its audience (focusing on the live performance).
- A strong knowledge of the musical culture, leading to the discovery of tracks, and how to put them together.
- The technological use of devices in order to allow this discovery and communication.

What we mean is that the DJ practice is much more complex, especially due to its variants contributing to different types of music. This narrowed down approach of DJing must lead us to a first clue about the connection between video games and the DJ practice.

Approaches and concepts studied

Before getting back to video games and determine the connections with the DJ practice, it is necessary to focus on the key concepts that have framed the research on defining the game jockey. This definition will allow us to facilitate possible connections with the video game application field.

The DJ performance can be describe as a Set, which is a mix between several samples. In its own way, the DJ inevitably produces something new with its performance. First, the Set represents its DJing, it is the results of its research and its musical knowledge; it is what you feel during the Set through our senses. Secondly, the Mix is a notion that we can describe in the music field as : “a process in which multitrack – whether recorded, sampled, or synthesized – is balanced, treated, and combined into a multichannel format (most commonly, two-channel stereo)” (Izhaki, 2018) ; in the DJ practice, the Mix can vary depending on the referring DJ culture and define a new process where two or several tracks are modified live, sometimes with audio effects, superposition (Mash-Up) or other technics. Thirdly, the Sample, as presented previously, is in the heart of the DJ practice, defines tracks or parts of tracks that can be mixed together (we underline the fact that samples are often created by other authors than the DJ itself). Finally, it is important to distinguish Re-edit and Remix. Remix is necessary in the today dancing musical production, or clubs, as the normalized format of CDs, and radiophonic diffusion of tracks inquires limited duration or inappropriate sound mix to the DJ’s performance (Brewster and Broughton, 1999, pp 181-184). The following definition seems then very clear: “If you think of re-editing as making a patchwork version, then remixing is where you actually separate the sonic fibers of a song – separate the bass track from the drum track from the vocal track – and weave them back into a new piece of musical fabric” (Brewster and Broughton, 1999, p. 183).

The key points that we have highlighted in the DJ practice and the described technical terms have inspired other practices than the musical. Indeed, the practice of video jockey (VJ) doesn’t just follow DJ practice, because it has its own culture of visual works with an audience, including color concerts, club video or video art (Spinrad, 2005). VJ offers complex audiovisual mixes, that can sometimes include remix, re-edit, mash-up, through superposed layers... The practice of VJ doesn’t hesitate to underline its correlation with the world of DJing through its will to make the audience vibrate (Faulkner and D-Fuse, 2006). So, if the notion of jockey can be adapted on music and videos, why not using it for video games?

FROM GAMES TO JOCKEY: PROXIMITIES AND CONFUSIONS

From the summary of the cultural origins of the DJing and the key concepts that interest us, we can ask us about the proximities with the game, however we can ask about the proximities of the game, by putting aside the confusions. As we will see, it is possible to find several games and video games experiencing the aspects of the jockey practice. The central figure of the jockey and the sample culture can find equivalents in game and video games, even though some differences are worth emphasizing.

In this section, we will put aside all allusions to gameplay and sound, which are very interesting (Nelson and Wünsche 2007), however they cannot describe the function of the DJ in live performance context, which coordinates the evolution of the game or

the sample culture. Another example that we will like to put aside in order to avoid confusion is the use of the term jockey in the horse races. Of course, our use of the term jockey will define an operator like a DJ making its performance evolve. Finally, we also put aside the video game *DJ Heros* (FreeStyleGames, 2009), which, despite of the explicit connection to the jockey practice, this game offers to play as a DJ, but this has nothing to do with a mix of games or a live show performance for an audience. We note that a previous study shows it as “game jockey, Acting as the intermediary between the artists inside and the public” (Pfaff et al. 2018). However, the game jockey figure is not developed in correlation with the DJ practice and the sample notion is not included in the reflection, so we won’t refer to this definition any further.

Sport referee, TV host and game master: looking for a central figure close to the jockey

Based on the jockey central figure described before, we can list several characters in the game universe close to it: the sport referee, the TV host and the game master.

The referee can be found in different sport games (Football, soccer, rugby, tennis). Its task is central and multiple: “including evaluating and judging the actions that take place during the match, making fast decisions, managing the game, paying attention to multiple aspects of the game, keeping order, and solving disputes” (Guillén, Feltz, 2011). Let’s add that its intervention can lead to stop the game or that it can decide on the key steps of a game (e.g.: the rounds of a match). In certain way, we find this central figure close to the one of the jockey, but the referee limits itself to the game rules, that are to be respected and that are known from the crowd. A game jockey should be able to surprise the players with the rules, to, indeed, change the game.

About the game changes, Tv games and Tv hosts could be an interesting track. We find this figure in many Tv games or on indoor/outdoor game shows. The host has the entire attention, because it introduces and announces the games the players will have to exercise. It will also make the event lively by commenting and even sometimes participating too. In the case of Takeshi’s Castle, a TV game broadcasted between 1986 and 1989 on the Tokyo Broadcasting System channel, where Takeshi Kitano (the TV host) was the last obstacle to fight to win the game. In this TV game, the players play several games, selected beforehand, sometimes inspired by video games. However, behind this central appearance, we can find a scenario made by the production, which isn’t a live mix communicating with the audience. Let’s note that the mean of such productions are huge, contrary to the DJ that had sometimes to innovate with cheap means, which led to an underground and controversial practice. Indeed, the model offered by the television is held by an industry made of a large audience.

A third central figure, which interest us in the game, is the master game. A study (Tychsen and al. 2005) shows that the role of the game master (GM) evolves regarding the game specificities, if it is persistent or physically played. Five characteristics are important to understand its action: it is coherent, it is responsible of narrative flow by creating the scenario and guarantying its coherence, it makes sure of the players emotional and cheerful commitment, it checks the environment; meaning the game situation coherence and the experience lived by the players, then the GM can make sure of the virtual world coherence linked to the digital use. Regarding the jockey activity, we can observe important proximities in the nature of the GM activity. Indeed, the creation of the game, of the content and the rules remind of the music track and video choices of the jockey. The import lure of the players experienced flow recalls a will for an artistic mix. The responsibility for the rules can also be linked with the jockey’s interaction with its viewers. Let’s now list the

important differences: in the GM activity, the rules are definitely set, but the creativity of players can produce an infinite possibilities of situations in communication. We can't change the game, but we can change the way we play it. In the game jockey model we are seeking, we could change the rules and the games, like a DJ would change the music samples with its mix.

In regards of these three game figures, we would like to mention Nando Sarmiento's work with ToughCoded since 2013. He describes his work as a "Massively Multiplayer Online Shoot-em-up¹". He calls his approach "video game jockey", even though he defines himself as a "Game Master". The experience consists in inviting several players on stage or online to play a shoot them up and face the different situations that occur through the decision made by Nando Sarmiento. As he is also a VJ, he also perpetuates the jockey practice through the central figure that controls the game. It is a musical, visual, playfull experience and it is accurate to consider him the pioneer of this videogame jockey practice that we wish to theorize. Nevertheless, ToughCoded's approach explores the jockey performative dimension, but it puts the sample culture aside, where the DJ isn't necessarily a music producer: the videogame jockey that we wish to describe in this article explores a mix of different games that would have a jockey central figure.

Video game and a possible sample culture

Some game figures seem to be close to the jockey figure. However, we have underlined numerous limits that can come from the lack of power in the game transformation or from the fact that the sample question hasn't been solved. In Hip-Hop, the sample culture is regular, as well as using other people's music to use them in other production, ready to commit a crime by stealing them (Said, 2015). How can that be applied to video gaming? Several examples of game can resolve the game sample problem.

The video game that has contributed the most to motivate the reflection is *Wario Ware: D.I.Y* (Nintendo, 2009). In this game we are invited to play on game playlists on a precise theme. The specificity of this game is to allowing to create your own game and uploading them online (when it was still possible because of server shutdown). It is possible to produce games, but also to research others gaming creations, in order to offer your own game set. *Wario Ware: D.I.Y* is also inspired from the DJ practice by offering to create music pieces or to make music Sets with a user interface representing a DJ mixing device. Despite these qualities and similarities with the DJ universe, this Nintendo game doesn't imply the figure of the jockey that we have described before. The game is essentially based on a production activity or samples mixing, without imagining a live performance. Let's note that the produced samples are limited to the game possibilities, based on a touchscreen, with strong creation constraints.

In the same spirit, we can also present *Super Mario Maker* (Nintendo, 2015). In this game, the player can create levels in the Mario Bros universe. It is possible to recreate existing levels (which would be a remix) or add elements that weren't included in the original level (which would be a re-edit). We underline the same differences with *Wario Ware: D.I.Y*, such as the nonexistent live performance or a sample practice limited to the Mario Bros universe.

Concerning the samples and the idea to gather game sources on different places to mix them together, it wouldn't be possible to go on with the reflection without mentioning modding, machinimas and hacking. Modding will imply the modification of an existing game by adding new functions, sometimes new rules; machinimas will exploit the characteristics of a game, by adding audiovisuals elements in order to

produce an animated sequence. If these different practices often imply a kind of remix, re-edit or mash-up, they don't offer an experience with a crowd (or a simple played experience for the machinima) or are limited to the frame made for the original program. Some example of mash-ups such as *Rom Check Fail* (Farbs, 2008) are particularly intriguing for our reflection. In this game, we play a succession of games from the 80's, where environments, avatars and obstacles are mixed together producing difficulties with variable experience games. If some hacks can display a mix of two games (e.g. Sonic in Mario), this practice could be described as a bootleg, which is unofficial, and asks the legal question of gathering protected game sources.

The chosen examples are mostly found in the video game culture. In the board game case, we can point some creation examples by the change of ruling, in games such as *Nomic* (Peter Suber, 1982), *1000 blank cards* (McQuillen, 1995). In this kind of game, blank cards are given to the players, on which they can add a rule. Depending on the game, the writing conditions, their accessibilities, or their actions, are pre-defined. Another example is *Fluxx* "the cardgames with ever-changing rules" (Looney, 1996) where each round has a new winning objective for the players. These game explore our ability to produce rules that change the game goal and implies our own game culture, our ability to sample the abstract game ruling.

Following the presentation of the proximities between the jockey culture and the game, it isn't possible to determine a satisfying practice that would relate to the game jockey. The different examples of games that resume the principal of the game jockey figure are convincing, in terms of performance and communication with the crowd. But they strongly lack expression possibilities with samples. To the contrary, the different examples of game sample mixing possibilities between one another are fascinating. However they fail to offer a live performance of this modification. On the base of these various similarities and differences, we can consider the conception of a hypothetical game jockey model.

MIXING VIDEO GAMES TO EXPERIMENT GAME JOCKEY FEASABILITY

Hypothesis for Game Jockey practice: a triangle model

Based on our background, we can make simple assumptions about the design of a game jockey experience. We will use a triangular DJ device: Jockey – Music – Listeners. On this basis we propose: Jockey – Game – Players. From this simple diagram, several questions arise: How many players can play a game jockey experience? What is the exact action of the game jockey on the game? What experience will players have with a game involving a jockey game?

To answer these questions, three creations were successively carried out over a period of 6 months: *Avoid* (Alineaire, 2018), *Starship* (Alineaire, Cosmodule, 2018) and *Rez-jockey* (Alineaire, 2019). For each project, the needs and constraints were the same: experimenting the validity of the triangular Jockey – Game – Players model; creating a local multiplayer experience; allowing fast player turnover; and experiencing what happens when you are the jockey. In the first two experiments, the research and use of game samples in order to mix them together was discarded, as the technological difficulties were already significant. Nevertheless, the third experiment offers a first draft on the sample mix through the design of a modular game composition instrument.

We highlight a point of vocabulary in the next presentation: the use of "operator" to designate the figure of a person modifying the game live, without being part of the group of players. We could have talked about it in terms of "game jockey" or "game

master”, but since the devices does not seem to fully invest DJ practices in the game, the term “operator” has been retained.

Avoid: Experiment the human difficulty adaptation

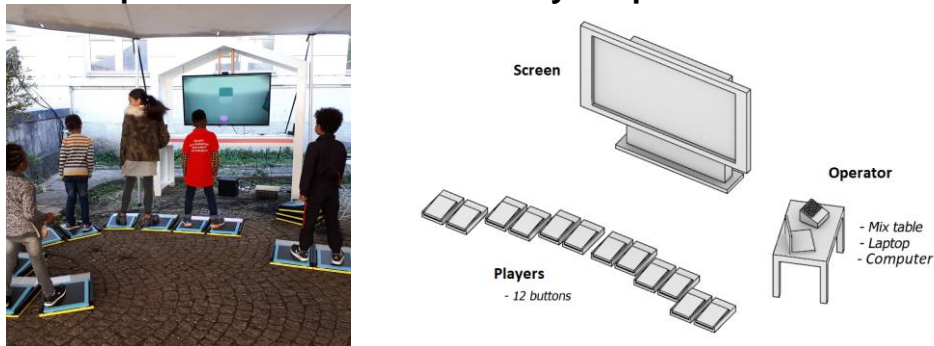


Figure 1: *Avoid* Game (left) and installation with an operator (right).

The first experiment is called *Avoid*² (see Figure 1, left). The objective of the project was to experiment the modification of the game difficulty by an external operator. We wished to determine if the operator's intervention was sufficient to designate it as a game jockey. For this purpose, the device consists of several elements (see Figure 1, right):

- A game screen for players.
- Several ground input buttons that can change color, to allow 1 to 6 players to play.
- A separate table with a second screen to preview the game and a mixing table to adapt the difficulty.

In terms of game design, the game is kind of a runner game in local multiplayer: the goal is to avoid obstacles that can hit the character and make the player lose; the last survivor wins the game. The controls for players are as follow: each player has two buttons to move the character from left to right, corresponding to the color of its ground button. With these buttons, you must avoid obstacles that come in front of you from the horizon.

From our initial creative questions to produce a game jockey device, *Avoid* tries to consider the impact of the operator, whom can modify the difficulty of the game. In fact, the experience does not question the mix of different games, but focuses on the device and the communication situation between jockey and players.

The mixing device allows to modify the parameters according to two categories:

- Visual modifications (which can affect the perception of the elements).
- Modifications of the behavior of the obstacles.

Thus, it was possible to modify the appearance frequency of the obstacles, size, rotation, movement speed or even to change the shape. The more complex was the situation, the more difficult the game was. Visual modifications concern the variation of color hue, brightness or the display of animated visual lines. From the jockey's screen, it was possible to preview future obstacles, thanks to a virtual camera placed

above the scene. In this way, the operator mixes the difficulty of the different situations, but does not offer a Set of different game samples.

Operator and players could communicate: exchanges of glances, oral solicitations, body expressions, questions... These different communications and feedback allowed the operator to adapt the game directly to the players' reactions. However, each group of players was different: either by their age, their sex, their general experience of video games, their intentions to have fun or not... As a result, the operator's role is close to an intermediary able of adapting the difficulty to the different players. So the experience was custom-made. Therefore, it is impossible to adapt randomly to the situation: sometimes players would ask for situations where it was impossible to win; sometimes we would have to pause the game or to slow it down, to make sure that new players understood the controls. On this point, our operator is very similar to the jockey figure described in DJ practices, but we underline the lack of game samples.

The approach to the mix between difficult situations is consistent with questions about Dynamic Difficulty Adjustment (Hunicke, 2005). Also, the situation of interaction with a human at the center refers to the Machine-In-The-Middle-Interaction scheme (Plessiet and Jégo, 2019). In relation to our background on DJ cultures and proximity to the game, we can understand *Avoid* as a sort of endless live remix of the original runner game. The central figure of the jockey is expressed by its power to modify the rules, which is not available to the players. This change in the rules takes us away from the pattern of a game like *Numok* where each player participates in the change of the ruling. In *Avoid*, the operator must anticipate the future game situation, which is similar to the DJ concept of "cueing", i.e. anticipating the next step in the mix.

The *Avoid* experiment is a first step in confirming that the triangular Jockey – Game – Players scheme seems possible. Nevertheless, we did not consider the mix of different games, preferring to focus on the mix of difficult game situations. This point will be addressed with the third project.

Starship: Make players vibrate as a DJ would make people dance



Figure 2: Photos of *Starship* game while playing (left), ingame screen (center) and detail of game screen (right).

The second experiment is *Starship*³ (see Figure 2, left). It aimed to extend the question of the Jockey – Game – Players communication, initially raised with *Avoid*. In *Starship*, we focused mainly on the stage set-up with a much coherent universe (see Figure 2, center) and more tools for visual and game modification. For this purpose, we worked on a tool to save and replay gameplay sessions with basic instance of monsters in rhythm (see Figure 2, right). Thanks to this work of deepening the tools, the game was intended to facilitate the observation of what happens when one tries to “make people play” as part of a GJ performance, as one could say of a DJ that it tries to make its audience vibrate and dance. Does a more complex game modification tool for the operator make him a game jockey? Does a custom-made modification for players help create an interesting experience?

The first difference with *Avoid* concerns the device: in *Starship*, player and jockey are physically distant. They communicate less verbally, but rather through their involvement in the game and the mix. The jockey was therefore focused on:

- The rhythmic changes of the game with the music.
- The body expressions that seemed to mean more or less involvement.
- The successes and failures of the players.
- Their playful experiments.

Another point of difference concerns the game itself and its universe:

- It is a shoot-them-up in a science-fiction universe with a retro-futuristic neon graphic chart.
- Players have buttons that allow them to destroy enemies that appear in depth and get closer to the position close to the avatars.
- It is possible for the jockey to decide when a particular monster appears and thus control the difficulty of the situations more.
- The sequences of appearance of monsters of the jockey are also recorded and can be played in the loop, saved and reload for later.

As a result, *Avoid* allowed some simple playful and visual modifications, but *Starship* is designed as a VJing experience where the image and dramatic intensity of the game can change significantly through the jockey's interventions.

The original idea was to record a gameplay session (appearance of monsters, travel speeds) related to one or more music and visual changes in rhythm. Based on the produced scenari, the operator loads gameplay sessions successively, like a mix of samples. As a result, the operator's action is close to a DJ's sample mix. Nevertheless, we would like to point out that this mix remains within the framework of a predefined game that does not foresee any other games than itself.

We were able to observe some interesting situations of the Jockey – Game – Players relationship. Through the progression of the music and visual evolutions in rhythm with the basses, we could observe that the player gestures evolved: while players were well versed in the rules of the game, we tried to make them lose by making many opponents appear; despite our vain attempts, we noticed from their body posture that they were no longer dancing, smiles were fading and we had to find a solution to engage them again. By chance, a player made a fatal mistake breaking their ability to destroy everything and they found themselves with an army of adversaries due to the accumulation of appearances. So they lost very quickly and the defeat was a moment of surprise for everyone. Another example concerns a visual effect that we intended for defeat: it is possible to cause glitch the screen to make the image hard to perceive; this effect was thought at the beginning to signify the death of the players, but the chance of the mix operations led to the appearance of the visual effect, during an already difficult situation with many opponents to win; rather than underlining the increase in difficulty, the players' feedback was an increase of anxiety which took part of the situation's tension.

Starship takes full advantage of DJ and VJ techniques to thrill its audience: the visuals evolve in rhythm with the music; the intensity of the sounds plays on the range of shapes, colors and animations; the whole is modified by a reading of the crowd. Before even being a game, the device participates in the immersion of the players. Nevertheless, the game does not constitute an added value, it is the evolution of the game by the players that serves as a framework for the visual and sound atmospheres.

Rez-Jockey: Modular instrument to simulate video game samples mix



Figure 3 : Game screen (left) and game jockey interface (right).

The latest experiment is *Rez-Jockey*⁴ (see Figure 3, left). We will focus more on its design and production stages, in order to highlight the reflections on game samples. How to design a video game sample? Which tool could we use with these samples? We have already discussed the relationship between operator and players, our previous conclusions being similar in this third project. We will focus instead on the relationship between the operator and the game it handles. In our conception of DJ or VJ samples, these sources are mainly produced by someone other than the jockey (but not necessarily). However, as we will see, still for reasons of technological complexity, we have chosen to simulate that samples come from other games, whereas they are well programmed in *Rez-Jockey*. We would like to observe the interest of mixing game samples before considering the creation of a sample format.

This last creation is inspired by the video game *Rez* (United Game Artists 2001): search for synchronization between the images, sounds and actions of the players; structuring the game in levels and bosses; wireframe aesthetics. The game invites each player to use their button according to the context: the rules change according to the evolution of the game. The operator proposes game situations, whose rules imply relationships of cooperation, confrontation, observation, speed, etc. In fact, the rules adapt according to the narrative framework and the evolution of the experience by the players.

We wanted to continue the reflection on the “game as a contained unit, to recognize that it is a sum of the relations of the entities, temporary and chaotic” (Lenhart 2013). Thus, in *Rez-Jockey* the video game sample is not a part of a game, but a set of characteristic rules of a game or a moment of a game. With this approach, we can consider a relationship of interchangeable rules.

Based on this work of interchangeable video game samples, we have developed a real-time game modification interface (see Figure3, right), strongly inspired by FL Studio Live Performance. It allows you to mix between clips. A clip is a sequence of sounds, or a sound file, or variations of a sound and effects. Each clip is structured in a track and the Live Performance consists of a series of tracks. Thus, each track will be able to play the clips with particular behaviors (play the next clip, play the clips

randomly, play the clip once selected, etc.). Thanks to this Live Performance system, you can activate the clips at any time and make the playback overlap like layers. It is thus possible to develop music in a complex and varied way.

Our interest in Live Performance and modular musical instruments was motivated by this observation: mixing music (DJ) or videos (VJ) may involve working with sound frequencies or colorimetric information (or especially music samples), whereas a game is not a frequency but a set of programmed instructions that is incomparable in terms of combination. The modular solution seemed to us to be a good hypothesis to be able to activate or deactivate elements from game samples.

The interface we have developed looks like a table in which the jockey can enable or disable clips, corresponding to game samples or visual events. In this way, each clip activates a game situation where, for example, it was necessary to: press at the same time to protect against an attack; press to attack; do not press to avoid something; keep the button pressed to collect force... The rules are also displayed by images, texts or oral indications given by the jockey. By simulating samples from other games, we were able to better understand our production needs and observe the feasibility of the project in real life. As a result, we can consider a mix with a series of game samples, or a mashup between different rules or ownership of rules. Nevertheless, we would like to remind that in the case of *Rez-Jockey*, the game samples are simulated and do not actually come from other sources.

With this tool, we had the feeling that our operator was the closest to the game jockey: it has the power to mix games in live performance with players. *Avoid* and *Starship* are simple to use for an operator, but are frustrating regarding the variety of games offered. In *Rez-Jockey*, the fact of being able to offer different rules according to the wishes of the game jockey allows a longer and more varied playing time. For example, it is perfectly possible to switch from a platform game to a racing game, then to continue on to other types of games.

THEORETICAL MODEL OF GAME JOCKEY

Based on DJ concepts and their proximity to the video game, with the help of the previous research-creation, our definition of the game jockey can be formulated. The game jockey is a person who performs a mix of live games for players. We distinguish two formats in performance: Set and Live. The Set (GJ-Set) is a mix of different games produced by the jockey game or from the market; the Live (GJ-Live) involves creating the different elements of the game at the time of the experience. The game jockey relies on its game culture to introduce well-known or little-known games, by using certain key passages in terms of rules, controls and game feel (Swink, 2008), linked to an audiovisual evolution. The goal of the game jockey is to make the players vibrate by mixing the games, like a DJ would make them dance. All of these makes a Jockey – Game – Players triangle (see Figure 4).

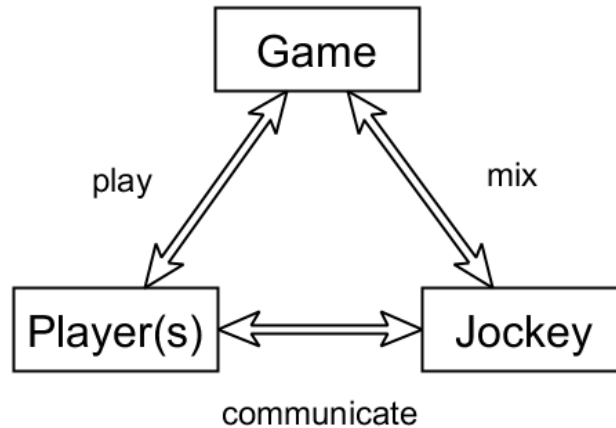


Figure 4: Game Jockey model triangle.

Based on this model, we also have qualification criteria to avoid calling any operator a “game jockey”. Exploiting cultural artifact of game isn’t enough, especially without taking into account the nature of the jockey performance. When one or more of these criteria is not respected, we exclude the operator to be called “game jockey”:

- The game jockey figure must be distinguished from players by its power of control over the game.
- The game jockey must mix games (successively or with mash-up).
- Mixing games in our game jockey model doesn’t only imply varying a predefined game (like changing difficulties or changing the levels).

Through these exclusive criteria, the reader will note that we do not consider *Avoid* or *Starship* as playing with a game jockey. It is why we prefer to talk about a game with an operator. Moreover, we do not wish to stop the notion of game jockey to a strict use, we prefer to give freedom to the artists’ creativity to invent new uses related to the culture of each one.

CONCLUSION

There are possible proximities between jockey and game, but also confusion to avoid. Many game practices can be similar to jockey practices (the sports referee, the TV show host, the game master), but this would mean removing the sample culture that is at the heart of jockey practice. Many video games have focused on the issue of samples, but often at the expense of an external operator figure who can make the mix. Thus, on this lack of game with a game jockey, we conducted a research-creation to determine a theoretical model.

Our three projects *Avoid*, *Starship* and *Rez-jockey* approached the creation from the angle of a game simulation with a game jockey. The figure of the operator seemed to us to be a good compromise in order to illustrate its ability to transform a game, without necessarily being in a jockey practice. This allowed us to question the relationship between the operator and the players and to highlight the complicity and creation shared by communication. Our research for game creation with a modular interface has allowed us to propose a first approach of game samples. This last experience is the closest to our conception of the game jockey: a triangular Jockey – Game – Player. The game is mixed by the game jockey, the game is played by the

players, the game jockey and the players communicate so that the experience evolves according to their feelings.

ACKNOWLEDGEMENTS

Many thanks to the Alineaire collective (www.alineaire.com) for their help in the design and production of the various creations that made it possible to reflect on the game jockey. Thanks also to Jérémie Cortial (<https://jercortial.com/>) and his Cosmodule team for the co-development of *Starship* game. I would like to thank Henri Morawski, Jonathan Giroux and Piers Bishop in particular and also Clémence Frechin for her important help with translation.

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ENDNOTES

- ¹ Cited from ToughCoded Press Kit (18 may 2017). <http://www.toughcoded.littlenando.com/>
- ² *Avoid* was exhibited in Sceaux (France) during the "Polarizon #01" festival on 29-30 Septembre 2018.
- ³ *Starship* is a co-production between Alineaire and Cosmodule collectives. The game was exhibited in Lyon (France) on 16 November 2018 and in Paris (France) during the "Cookie demo party" festival on 1 December 2018.
- ⁴ *Rez-Jockey* was exhibited in Cergy (France) during the Global Game Jam from 31 to 2 February 2019.