Hands-off Interactive Storytelling; Intuitive Agency in an Immersive Cinematic Film

Tobias G. Palma

TFTI, University of York, United Kingdom, tgps500@york.ac.uk

ABSTRACT

This demo aims to explore and test new forms of hands-off interactivity, based more on intuitive reactions than on conscious decision-making. A hands-off interactivity would allow a diegetic experience in which the user can avoid breaking the immersion, or a "pull-back" produced by the consciousness of the interactive device. This project uses immersivity, spatial storytelling and dramatic soundscaping to facilitate navigation through simultaneous acoustic and dramatic spaces, which constitute fragments of one linear story. Driven by a dramatically-purposed stimulus users can generate inputs with organic movements around the axis of the CVR (Cinematic Virtual Reality) perspective. This way, inputs are intuitive reactions to diegetic stimuli from within the virtual narrative. The freedom to navigate the narrative space provides multiple ways to perceive the linear story, facilitating interactive storytelling.

1 Introduction

"The Hunter & the Wolff" is a three minute live action adaption of the traditional folktale The Little Red Riding Hood. It is a piece of cinematic virtual reality (CVR) that allows interaction with a linear story through spatial navigation, giving the user capability to explore while preserving the author's original narrative structure. It was designed with the aim of experimenting with the uses of interactivity for narrative purposes. A proposal for a hands-off prototype of interactivity lies on the challenge of more cinematic interactivity, specifically in the consideration that most interactivity heavily relies on making interaction rather explicit, whether through the use of hands-on devices, non-diegetic interfaces or both. This type of interactivity is not ideal for cinematic narratives, which rely on the capability of the user to be immersed in the diegetic world and their suspension of disbelief, which are frequently broken by the explicitness of interactive devices (for instance, in "Black Mirror: Bandersnatch" [Netflix, 2018], the decision-making device pops-up producing a pull-back from the immersive narrative, breaking it, even if it is for a short time).

This prototype explores a possible way to avoid that pull-back and break of diegetic immersion, relying on both a hands-off interactive mechanism and a more intuitive decision-making process, in which choices are not made explicit by the system but rely on diegetic stimuli to drive the user's navigation in the dramatic space.

2 Hands-off Interactivity

To facilitate a deeper narrative immersion, the storytelling should avoid any disruption of the diegesis, so spectators – or users – can maintain a constant suspension of disbelief. Interactive devices have, on the one hand, the capability to transport us into narrative worlds and allow such interactivity through

modelling our decisions into inputs for the system. On the other, the explicit nature of the both the device and the interface work as a constant reminder of the virtuality of the story, interrupting the diegesis and establishing a distance between the user and the storyworld. As Janet Murray states. "immersion (…) requires clear boundaries between the real world and imaginary domain, encyclopedic detail within the imaginary environment, and transitional objects that help the reader, viewer, or interactor to move from one to another." (2007:86) She calls interactive devices "threshold objects", since they "takes us across symbolic and often literal passageways" (Ibid), and argues that these objects stand in between the user and the storyworld with more or less presence. The bigger and more explicit the presence, narrative immersion would be more difficult.

Apart from threshold objects, non-diegetic interfaces can also obstruct narrative immersion, or in some cases, generate a "pull-back", an interruption of immersion in order to address a request for interactivity by the system – e.g. like in Bandersnatch, short films such as "Choices: an interactive short film" (2015), a cautionary tale about drug abused made for the Scottish police, or "Possibilia" (2014) where the director couple Daniels explore narrative in a multiverse, present non-diegetic interfaces that, on the one hand, allow interactivity, but on the other, make the presence of the threshold object and interaction itself – and thus, decision-making – more conscious, possibly undermining narrative immersion.

In both cases, interactions are made explicit and require conscious decision-making, which is executed through the device, usually through an inorganic action – an action that doesn't correspond to the one in the storyworld. In this prototype, hands-off interactivity in a cinematic virtual environment aims to propose a type of interactivity that doesn't interrupt narrative immersion, by avoiding the explicitness of decision-making through inorganic actions in threshold objects. Hence, inputs would be generated through organic actions that correspond to the navigation within the virtual environment; the movement of the head while wearing a VR headset.
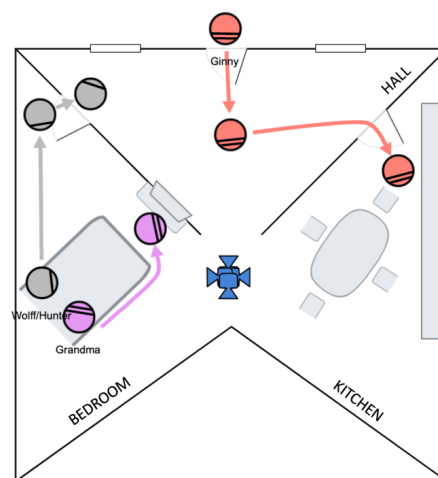
Figure 1: Layout of the immersive space with the camera positioned in the middle, with view to the three subspaces Bedroom, Hall and Kitchen, each of them counting with their own sound mix, manipulating the overall soundscape.

3 Intuitive Decision-Making

If interactivity is defined as a loop of inputs between user and the system – "a two-sided effort that creates a feedback loop" (Ryan, 2011:35) – then both system and user have to be able to react to each other, in order to provide agency that is significant to the narrative. Intuitive decision-making is based on the notion of generating immediate organic reactions in users, instead of requesting them to make a conscious decision towards the story. To achieve this, the immersive environment provides diegetic stimuli to influence the user's navigation, which is itself the input for the system. This way, both the user and system interact organically within the diegesis of the immersive environment.

In "The Hunter & the Wolff", users are motivated to navigate within the constraints of cinematic VR: the point of view (POV) only rotates around its axis and can't affect the storyworld contained in the pre-rendered assets produced in video (Mateer, 2017). However, through adapting the traditional cinematic technique of "on-screen and off-screen sound", navigation is suggested by visual and, mainly, acoustic stimuli. Taking advantage of the limited range of view in a 360º video, soundscape is manipulated for dramatic purposes so the user is motivated to make instantaneous and instinctive decisions regarding the navigation of the immersive space.

4 Spatial Storytelling

Henry Jenkins applied the notion of environmental storytelling for video games, in which narrative is organized through a spatial navigation instead of through a timeline (2005). In a similar notion, Chris Crawford distinguishes micronarratives as parcelled portions of an overall story which can be accessed interdependently (2005), usually through the navigation of a space.

As observed in Figure 1, the immersive environment in "The Hunter & the Wolff" is divided in three interdependent spaces, rooms of a house: Bedroom, Hall and Kitchen. Each of these spaces can be accessed independently through the rotating POV, since they have different sound mixes. The key principle is to isolate each room's soundscape, so if user is looking at what's happening in one of the rooms, they can listen only to that particular mix.

"The Hunter & the Wolff" is a linear adaptation of the traditional folktale "The Little Red Riding Hood", divided into two simultaneous subplots: Ginny's plot and the Grandmother's plot. Both plots take place interdependently, as the characters move from one room to the other. The principle of simultaneity is what allows the user to make decisions and choosing which character to follow, in the awareness that there are other actions – scenes, or micronarratives – taking place in other spaces in the environment. This way, despite being a linear, pre-rendered, cinematic story, the ability to navigate between micronarratives facilitates a non-linear interactivity, resulting in a different timeline every time.

5 Sound-driven Guidance

One of the challenges in VR narrative is how to provide guidance to the spectator. In interactive VR, this guidance should rather suggest possibilities to the user. As mentioned, this prototype explores the use of non-naturalistic soundscape in an immersive environment for dramatic purposes. It is non-naturalistic because the mixes are manipulated with the purpose of guidance. There are two key concepts of this design: **cue sounds** and **on and off mixes**.

Figure 2: Snapshot from "The Hunter & the Wolff", illustrating cue sounds and on and off mixes. The clinking glasses in the space in the middle (Hall) can be heard in the space on the right (Kitchen), calling the attention of both the character and the user. At the same time, an off-mix is switched on in the empty space on the left (Bedroom) so the user can hear part of the action in the Hall.

Cue sounds are specific sounds that aim signal an event taking place in a micronarrative different from the one observed at a certain moment. For instance, a recurrent cue sound in this prototype would be the doorbell, which can be heard everywhere in the house, independently of where the user is staring. There are other cue sounds like certain pieces of dialogue or clinking glasses, that can be heard at specific moments of the linear story, with the purpose of suggesting both characters and the user of other simultaneous micronarratives.

On and off mixes consist in the alternation of the soundscape of each room depending on the presence or absence of characters, with the specific purpose of avoiding acoustic voids and loss in the navigation. For instance, when there's a character or more in a room, the soundscape corresponds to the actions and dialogues of that micronarrative; this would be an **on mix**. On the contrary, when a room is empty, the mix switches so the user can hear noises – mainly dialogues – from the next room, suggesting navigation towards it; this would be an **off mix**. This way, even when a room is empty, users would still be provided some diegetic guidance.

These notions of sound-driven guidance are complemented with visual guidance notions based in adapted film language techniques (Passmore et al, 2017; Gödde et al, 2018; Speicher et al, 2019) and proxemics and theatre blocking techniques (Pope et al, 2017), in the understanding that this prototype is, overall, a study of adapting cinematic techniques into interactive narrative.

6 Conclusions

Hands-off interactivity could serve as a way to develop a type of interactivity that relies on instinctive decision-making, driven by the use of diegetic stimuli to suggest guidance through the storyworld. This type of interactivity could be more suitable for more cinematic storytelling that requires constant and consistent narrative immersion, whether if it is in VR or other video formats.

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