Till We Meet Again: A Cinévoqué Experience

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Figure 1: Poster of Till We Meet Again

ABSTRACT

Virtual Reality movies, with its possibility of being immersed in 360° spaces, have both inherent challenges and advantages associated with creating and experiencing them. While the grammar of story-telling in traditional media is well established, filmmakers cannot utilize them effectively in the context of VR due to its immersive nature, as the viewers could end up looking elsewhere and miss important parts of the story. Taking this into account, our framework Cinévoqué leverages the unique features of this immersive medium for creating seamless movie experiences, where the narrative alters itself with respect to the viewer's passive interactions, without making them aware of the changes. In our demo, we present *Till We Meet Again*, a VR film that utilizes our framework to provide different storylines that evolve seamlessly for each user.

CCS CONCEPTS

Human-centered computing → Virtual reality; Scenario-based design; User centered design; • Applied computing → Media arts;
Computing methodologies → Virtual reality.

KEYWORDS

Virtual Reality, VR Cinema, Storytelling, Responsive Narrative, Presence

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1 INTRODUCTION

Movies in Virtual Reality (VR) have not been explored to the extent traditional movies have been. The grammar of storytelling in VR is still being formed as there are many constraints in the medium that makes most of the cinematographic techniques of traditional films ineffective or impractical [Pillai et al. 2017]. Cinematic Virtual Reality (CVR) also differs from interactive high-end VR experiences, as it lacks the six degrees of freedom (6DOF) and the real time nature of those experiences. Researchers have studied how viewers experience movies in VR to provide guidelines on creating effective VR narratives [Gödde et al. 2018; Nielsen et al. 2016; Rothe et al. 2017]. However, the viewer still has the control over what they choose to look at. So the possibility of them missing an important event in the movie still persists.

We approach this problem by striking a middle ground between CVR and high-end interactive VR through our framework called Cinévoqué [Pillai et al. 2019], which acts as a backend for VR films and alters the experience of a viewer passively. The narrative shown to the viewer and the spawning of certain extra audio-visual elements are dependent on the passive interactions of the viewer with the film, such as their gaze over the course of a scene. This allows us to show different stories to different viewers, although to a viewer, the experience would have been similar to watching a VR film with a single story, as they wouldn't be aware if or when

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the narrative was altered. We use this approach in our demo where our movie *Till We Meet Again* evolves based on the way the viewer watches it.

2 CINÉVOQUÉ

The films that run on our framework are divided into smaller snippets called nodes, and the whole experience is split temporally into levels, which is a group of one or more nodes. Nodes in the same temporal location are placed under a single level, which makes alternate storyline traversal possible. The viewer's passive interactions within the experience is measured through spatio-temporal entities called hotspots that are associated with the Points of Interests (POIs) intended by the storyteller. This information is used in real-time to decide which node is to be chosen from the succeeding level to be shown to the viewer. Our framework also uses this data to add some real-time components to CVR that would increase the responsiveness of the whole experience, for example, some audio cues in the film could be played based on where the viewer looks. Similar approaches are used to implement more complex features in the Cinévoqué experiences described in the following sections.

3 THE EXPERIENCE

In order to test our framework, the prototype *Schrödinger's Vada-Pav* was created with a simple narrative structure. Our recent film, *Till We Meet Again*, has a relatively complex narrative structure and is an example of an appropriate VR movie that utilizes the potential of a Cinévoqué experience.

3.1 Schrödinger's Vada-Pav

This film immerses the user into the first-person perspective of a person watching a video in their office. A waiter enters, takes an order for Vada-Pav and leaves. When the waiter returns after some time with the order, there are two possible outcomes to the narrative. If the user continues to focus on the video, the waiter will leave, assuming that the character is busy. In case the user turns around to look at the waiter entering, the framework would seamlessly transition to a narrative showing him delivering the order.

Schrödinger's Vada-Pav implements a virtual body sitting on a rotating chair for the character, which orients itself to the user's physical body to improve embodiment in live-action CVR. Additionally, the movie would dynamically show a notification with the viewers' name (if provided before the experience begins) on the monitor, while the video plays in the background. This movie only has a binary outcome and depicts a simple situation rather than an intricate story. In order to further test the framework on a story intensive live-action VR movie, *Till We Meet Again* was created.

3.2 Till We Meet Again

This film presents an emotional journey of a small family, as seen from the perspective of the father. The user would be immersed in a space that is dear to the character, who is waiting for something or someone. Based on the users' point of view and attention to certain details within that space, the story unfolds. In addition to the 360° narrative, this film presents the user with a stereo 3D and spatial



Figure 2: Narrative Structure of Till We Meet Again

audio experience. This film also has a virtual body for the character on a rotating chair that orients itself to the user's physical body.

In this film, the user experiences one of eight storylines that conclude in one of six possible endings. The narrative structure consists of 4 levels, 15 nodes, and 11 hotspots (Figure 2) [Pillai et al. 2019]. Each narrative takes on a different storyline and ends with a unique revelation with six possible outcomes (Figure 3).



Figure 3: Possible narrative outcomes of Till We Meet Again

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