TA VR: Technoetic Arts Metaverse

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Abstract

This paper delves into the metaverse museums, as an initiative showcasing the 2004 Spring Term final projects of 3rd-year undergraduating students from the Roy Ascott Studio Advanced Program in Technoetic Arts in Shanghai. Leveraging virtual reality (VR) technology, the public is invited to explore a digital exhibition, offering a unique and immersive experience. Drawing inspiration from Dowling's (2019) concept of the immersive method, commonly employed in physical museum exhibitions, our virtual showcase aims to engage visitors in a narrative and storytelling process that transcends traditional boundaries. The goal is to inspire a state of flow, where the audience becomes deeply absorbed in the artistic journey presented by the students. In the virtual world, the state of flow is cultivated through a variety of tools, with particular emphasis on augmented reality (AR) technology. This paper explores the technical implementations of AR, as demonstrated by Yuan (2019), to provide digital narratives within the metaverse museum. By seamlessly integrating AR elements, we aim to enhance the overall immersive experience, allowing visitors to interact with and navigate the virtual space in ways that transcend the limitations of physical exhibitions. Through a conceptual exploration of these ideas, our paper contributes to the evolving discourse on the intersection of art, technology, and education. The Technoetic Arts Metaverse Museum not only serves as a platform for the display of cutting-edge technoetic art but also as a testament to the transformative potential of immersive technologies in redefining the way we engage with and experience art in the digital age.

Keywords

Metaverse, Extended Reality, Technoetic Arts, Virtual Exhibition, Immersive Method, Augmented Reality (AR), Digital Narratives, Technoetic Arts graduation projects, Roy Ascott Studio Undergraduate Students 2023-2024.

Introduction

In the ever-evolving landscape of art and technology, the metaverse has emerged as a transformative space that transcends conventional boundaries, offering new possibilities for creative expression and immersive experiences. This paper explores the intersection of art, technology, and education through the lens of the metaverse museum—an innovative platform designed to showcase the final projects of 3rd-year undergraduating students from the Roy Ascott Studio Advanced Program in Technoetic Arts in Shanghai.

The conceptual foundation of this exploration draws inspiration from Dowling's [1] profound insights into the immersive method, a specialized means of communication that has found its place not only in physical museum exhibitions but also within the digital realm. Dowling's work emphasizes the immersive method as a potent tool for engaging audiences in a narrative or storytelling process, fostering a state of flow that captivates and inspires.

The intention is to use immersive methods [1] are a means of specific communication also used in physical museum exhibitions to engage in a narrative or storytelling process, thus provoking a condition of flow. This status can also be evoked in the virtual world by employing various tools, offering, for example, digital storytelling using augmented reality methods (for technical implementation [2].

Furthermore, our investigation is guided by the technical advancements elucidated by Yuan [2], whose exploration of augmented reality (AR) technology provides a roadmap for the integration of digital narratives within the metaverse museum. Yuan's work serves as a crucial reference point for understanding the intricacies of employing AR to enhance the immersive experience, offering a glimpse into the potential of technology to reshape the boundaries of artistic expression and audience engagement.

As we embark on this exploration, we aim to not only present a virtual exhibition of technoetic art but also to unravel the conceptual underpinnings that drive the metaverse museum. By synthesizing the ideas of Dowling [1] and Yuan [2], we seek to elucidate the immersive potential of the metaverse as a canvas for storytelling, inspiring a state of flow that transcends the limitations of traditional exhibition spaces. Through this journey, we navigate the evolving landscape of art education, pushing the boundaries of how we conceive, create, and experience art in the digital age.

Technoetic Metaverse on Mozzila Hubs

Technoetic Arts Metaverse Museum, housing the final projects of 3rd-year students of Roy Ascott Studio's Advanced Program in Technoetic Arts, is implemented using Mozilla Hubs [3] —an open-source platform that enables the creation of shared virtual spaces. Leveraging Mozilla Hubs ensures accessibility and ease of use for a diverse audience interested in exploring the convergence of art and technology.

Technoetic Arts Metaverse Museum was considered to be built on the Mozilla Hubs framework, offering a foundation for creating customizable virtual environments. This framework provides the necessary tools to design immersive spaces that accommodate the diverse range of projects from the graduating students. Nevertheless, as we write the camera-ready version of this paper, it has been announced that Mozilla Hubs will shut down on May 31, 2024, and we will search for alternatives.
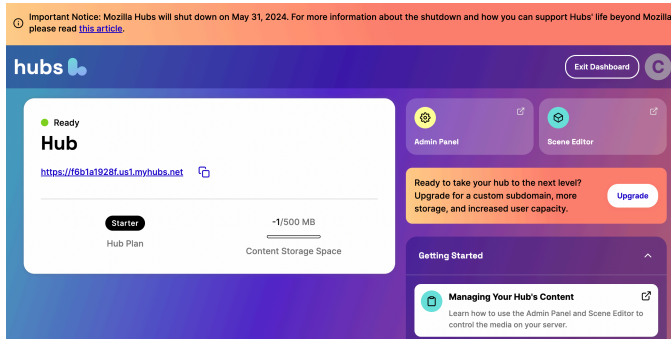

Figure 1. Mozilla Hubs announced it will shut down on May 31, 2024. Screenshot by the author.

Mozilla Hubs was optimized for virtual reality (VR) experiences, allowing visitors to explore the metaverse museum using VR headsets. This ensured a heightened level of immersion, aligning with the paper's objective of creating a deeply engaging and transformative experience.

To enhance the immersive quality of the virtual exhibition, spatial audio was considered to be integrated into the Mozilla Hubs environment. This feature allows for realistic soundscapes, ensuring that visitors can experience aural elements corresponding to their location within the digital space.

Mozilla Hubs leverages WebVR technology, enabling interactive elements within the virtual museum. Visitors could engage with the exhibits, navigate the space, and even collaborate with others in real-time, fostering a sense of community and shared experience.

Building on Yuan's [2] insights into augmented reality, the Metaverse museum incorporates AR overlays within Mozilla Hubs. This technical implementation allows for the seamless integration of digital narratives, enriching the overall storytelling experience for visitors.

Mozilla Hubs ensured cross-platform accessibility, enabling visitors to explore the metaverse museum from various devices, including desktop computers, laptops, VR headsets, and even smartphones. This flexibility ensures a broad audience reach, promoting inclusivity in the virtual exhibition.

The choice for adopting Mozilla Hubs as the technical foundation for the Metaverse museum, before the announcement it will shut down, was aligned with the paper's conceptual framework while harnessing the capabilities of an open and versatile platform for creating shared virtual spaces.

Final Considerations

The exploration into the metaverse museum is inspired by the discussion on Virtual Museum by Bernadette Biedermann [4] as the convergence of art, technology, and education, several key considerations emerge. The adoption of Mozilla Hubs as the platform for hosting this virtual exhibition has proven instrumental in realizing the conceptual objectives outlined in the paper. Leveraging the immersive method, inspired by Dowling's (2019) insights, and incorporating the technical implementations of augmented reality (AR) as articulated by Yuan (2019), the metaverse museum stands as a testament to the transformative potential of virtual spaces.

Technoetic Arts Metaverse Museum serves as a canvas for Technoetic Arts, showcasing the culmination of students' creative endeavors within a digital realm. This platform not only embraces technological innovation but also encapsulates the ethos of Technoetic Arts—a discipline that explores the fusion of technology and consciousness.

By adopting Dowling's [1] immersive method, the metaverse museum successfully engages visitors in a narrative and storytelling process. The seamless integration of spatial audio, interactive elements, and AR overlays within Mozilla Hubs contributes to the creation of a state of flow, where audiences are absorbed in the artistic journey presented by the graduating students.

The choice of Mozilla Hubs was considered to ensure cross-platform accessibility, allowing a diverse audience to explore the virtual exhibition from various devices. This commitment to accessibility aligns with the inclusive nature of art education, breaking down barriers and democratizing access to cutting-edge Technoetic Arts.

Technoetic Arts Metaverse Museum extends beyond individual exploration, fostering a sense of community through real-time collaboration. Visitors can interact with exhibits, engage in discussions, and share their experiences, enriching the overall impact of the virtual exhibition.

As technology continues to advance, the metaverse museum provides a glimpse into the future of art exhibitions. The paper encourages ongoing exploration and experimentation with emerging technologies, pushing the boundaries of what is possible in the realm of virtual art spaces.

In essence, the Technoetic Arts Metaverse Museum not only showcases the innovative projects of graduating students but also serves as a catalyst for broader conversations about the intersection of art, technology, and education. By embracing the metaverse, we redefine the traditional notions of exhibition spaces and open new frontiers for artistic expression in the digital age. As we navigate this ever-evolving landscape, the metaverse museum stands as a beacon, inspiring future endeavors that bridge the gap between imagination and technological innovation.

References

[1] Dowling, D. O., "Immersive Longform Storytelling. Media, Technology, Audience," New York: Routledge 2019.

[2] Yuan, J., "Museum4punkt0 / Impulse: how to_augment reality." In *museums4punkt0*. How to_augment reality: Nachklapp zum Workshop, online, accessed January 27, 2024, https://www.museum4punkt0.de/how-to_augment-reality-nachklapp-zum-workshop/

[3] Mozilla Hubs. (n.d.). accessed January 27, 2024, https://hubs.mozilla.com/

[4] Bernadette Biedermann, "Virtual museums as an extended museum experience: Challenges and impacts for museology, digital humanities, museums, and visitors – in times of (Coronavirus) crisis," Digital Humanities, Volume 15 Number 3, 2021, accessed January 27, 2024, https://www.digitalhumanities.org/dhq/vol/15/3/000568/000568.html#yuan2019

Acknowledgments

Author Biography

Born in 2002 in Qingdao, a beautiful coastal city in China's Shandong Province. Sun Yuqian is currently in the third year of undergraduate studies at Roy Ascott Studio Advanced Program in Technoetic Arts in Shanghai. Sun Yuqian is blending artistic expression with a deep concern for contemporary Chinese social issues while using the latest technology to express ideas. With a keen interest in the complexities of contemporary Chinese society, Sun Yuqian's focus extends to topics such as people's lives, and cultural and family bonds. Sun Yuqian aims to bring attention to these critical issues and provoke thoughtful dialogue. As a student of Technoetic Arts, Sun Yuqian utilizes a multidisciplinary approach to convey messages and explore the interconnectedness of technology, art, society, and the mind.