

Proceedings

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on Mixed and Augmented Reality**

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2025 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct)

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Best Practices on Indirective Experience for Virtual Healing

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ABSTRACT

In this moment, diverse systems are being developed that allow users to have indirect experiences of cities and tourist attractions that are difficult to visit in person. If this system also includes a personalized guide to city, country, and travel destination recommendations, it will help increase interest in travel. To achieve this, we propose a virtual travel experience simulation that presents the potential for vitalizing domestic tourism by leveraging personalization technologies and immersive content. This combines a user-customized Korean city recommendation system with virtual reality (VR) technology, and utilizes personalization technology tailored to individual interests, creating immersive content. With this, we may have just experienced a virtual world, even though we are staying at home and not spending a lot of time or money, until we start doing this. That is, we can virtually visit anywhere and at any time we want to go. By providing users with a healing experience through VR travel, we can spread a positive image of the destination, raise expectations about travel, and give psychological satisfaction. Through this, we expect to encourage actual visits and contribute to the revitalization of local economies.

Index terms: Virtual reality (VR) experience, Domestic tourism promotion, Regional economic revitalization, City branding, personalized recommendation.

1 INTRODUCTION

Recently, the preference for domestic travel has been declining, especially among the younger generation [1]. This is mainly due to the uniformity of the domestic tourism industry and the ineffective communication of each region's unique attractions and characteristics. In particular, conventional methods of providing tourism information have failed to form an emotional connection with users, resulting in a lack of interest from potential tourists [2]. To address these issues, we propose a new type of tourism content that combines personalized travel recommendations with immersive virtual reality (VR) experiences. By analyzing users' interests and preferences, the system recommends personalized city travel experiences, enabling users to immerse themselves in the destination's culture and atmosphere vividly in a metaverse-based VR environment. Through this, users can enhance their anticipation for travel and experience of both emotional satisfaction and

immersion, which increases the likelihood of an actual visit. We mainly focus on providing a healing experience through an immersive metaverse. By offering an emotionally engaging space where users can momentarily escape the fatigue and stress of reality, the system enables users to consume content while simultaneously achieving psychological stability and emotional recovery. Therefore, this study aims to explore the potential for personalized technologies and metaverse-based interfaces to revitalize domestic tourism and make a tangible contribution to regional economies. This study is organized into the following chapters: Chapter 2 presents related work, Chapter 3 describes our VR Travel Simulation, Chapter 4 discusses its implementation, and Chapter 5 provides the conclusion and Future Research.

2 RELATED WORKS

2.1 Tourism experience using VR and AR

Recently, the tourism industry has actively explored the use of virtual reality (VR) and augmented reality (AR) technologies to complement the limitations of real-world travel and provide new experiential value. Empirical studies have shown that presence and enjoyment in VR-based tourism experiences have a positive impact on the intention to visit actual tourist destinations [3]. Studies have also emphasized that location-based VR tourism systems designed with a user-centered approach can effectively convey the appeal of urban heritage and lead to real-world visits [4]. In addition, immersive VR experiences at archaeological sites have been shown to recreate past cultures and offer tourists a time-travel-like experience [5]. But they never mention the concept of healing

2.2 The impact of VR tourism on the first visit intention

An analysis of virtual destination experiences showed that they influence the formation of destination images and, in turn, change actual travel intentions [5]. The differences between real-time narration and virtual tours affect users' memory and satisfaction, and storytelling elements within VR tours enhance the sense of immersion in the user experience [5]. In tourism experiences, the use of VR/AR technologies necessitates design strategies that enhance experiential immersion and strengthen the connection to real-world visits [6].

3 OUR VR TRAVEL SIMULATION

The VR travel simulation analyzes users' interests to recommend suitable city travel types and provides immersive VR content tailored to each city.

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Figure 1: VR travel simulation

Figure 1 is the first screen of the VR travel simulation. The content includes the following components:



Figure 2: VR travel simulation process

Figure 2 shows the process of VR travel simulation.

- Travel type test: Analyzes the user's travel tendencies to recommend suitable city travel types.
- Story-based sequence: Experience flow with intro story and healing structure, VR activities such as painting murals, taking pictures, meditation, and napping.
- Reward system: Provides incentives in real life after the experience to encourage actual visits.

4 CONSTRUCTION

The VR travel simulation is based on Unreal Engine 5 and is compatible with the Meta Quest 3 VR device. Figure 3 is the screen structure diagram of the VR travel simulation.

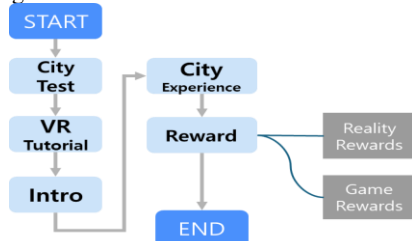


Figure 3: The whole flowchart

The main features are as follows:

- Mural Drawing Function: Real-time texture conversion through brush and wall overlap.
- Sound Effect: Provides spatial sound based on player position
- Wrist UI: Provides intuitive interface (setting, saving, exiting, etc.)
- Day/Night Transition: Simulates the flow of time through NPC interaction.

The differences from existing VR travel content are as follows:

- Providing personalized travel experiences: Going beyond standardized travel destination introductions to create content that matches the user's preferences.
- Connectivity with reality: Providing practical travel incentives based on the experience results.
- City mascots and stylized designs: Emotional immersion and city brand image formation.
- Mirror-world-based configuration: Possible to simulate future cities through digital replication of real spaces.

Figure 6 is real jingol village and a digital twin of the actual scene's appearance. This map digitally twins maps to create a realistic experience.



Figure 6: Real Jingol Village and Digital Twin of Jingol Village in Deajeon City

- Healing: feel mysterious and fairy-tale-like things when we see fireflies in the night sky.



Figure 7: The night healing course with a single firefly.

Figure 7 is a healing travel course where you can experience fireflies in the night sky of Jingol Village.

5 CONCLUSION

This study aims to provide users with a personalized city travel experience through metaverse-based VR content, thereby sparking interest in domestic travel and encouraging actual visits. By combining emotional immersion, an intuitive user interface, and reward mechanisms, we can offer a respite to busy individuals and present the potential to vitalize domestic tourism, making a tangible contribution to regional economies. In the future, the plan is to expand the content by incorporating data from more diverse regions and reflecting user feedback to enhance diversity and immersion levels.

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