Narrative Design for Rediscovering Daereungwon: A Location Based Augmented Reality Game

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ABSTRACT

Rediscovering Daereungwon is a location-based Augmented Reality (AR) mobile game application that aims to enrich the experience of navigating Daereungwon, a Korean cultural heritage site consisting of royal tombs from the Silla dynasty. In this paper, a framework binding 3 PoIs with distinctive features into a successive, cohesive, and immersive narrative is introduced. It applies and improves upon the Memorable Experience Design (MED) Framework and the Interest Curve proposed by Bulencaea and Egger (2015) to guide tourists through Daereungwon, while game challenges and rewards in the form of augmented objects and interactions provide them with information on the PoIs and Daereungwon as a whole.

Author Keywords
Augmented Reality; AR; outdoor AR; location based game; gamification; interactive narrative; storytelling

INTRODUCTION

Located in Gyeongju, the old capital of the Silla dynasty from B.C. 57 to A.D. 935, Daereungwon is a unique site that holds a total of 23 tombs found inside large, identical-looking mounds in one area. The three most famous tombs in this area are Michuwangreung, Hwangnamdaechong, and Cheonmachong, serving as main attraction points.

However, the conventional way in which Daereungwon has been experienced by most of its visitors fails to bring out and deliver the diverse information and stories it contains as a cultural heritage site, mainly for two reasons. First, owing to the fact that all the tombs look identical at a glance, and that the scenery remains much the same from entrance to exit, the vastly different features and historical backgrounds of each tomb in the site (especially the three most famous ones) are largely invisible from the visitors, ‘buried’ underneath the sloping exterior of the tombs.

Second, although the inside structure of Cheonmachong is open to the public, the visit itself leaves much room for the imagination, as all important relics containing the historical context of the place have been removed permanently from the site. Consequently, Daereungwon is on the whole perceived more as a site that provides an aesthetically pleasing experience that is uneventful and ahistorical, rather than as a cultural heritage site abound with historical meaning.

NARRATIVE DESIGN

Concept

The ultimate goal of this application is to engage the visitors in a different dimension of fun and enjoyment from what had been previously possible on site. This is done by increasing the visitors’ sense of connection and immersion to Daereungwon with a gamified, interactive narrative. It focuses on heightening the understanding and awareness of the historical context within the gaming experience, as opposed to a straightforward, one-directional, and dictative approach to the delivery of information that similar applications have employed before.

The design of this first-person RPG is centered around the three main attractions, or Points of Interest (PoI) in Daereungwon: Michuwangreung, Hwangnamdaechong, and Cheonmachong, along with their distinctive characteristics as unique burial monuments. Every element of the game will be wrapped inside a consistent, continuous narrative from the moment the visitor initiates the game upon entering the site until its termination at the exit of the site.

Character and Synopsis

Rediscovering Daereungwon transforms each player into a scavenger trespassing the originally forbidden burial grounds of the Silla royalty, trying to reach Cheonmachong at the innermost location of Daereungwon and steal its two most valuable treasures—the Gold Crown and Cheonmado. The order in which the three PoIs are navigated from entrance to exit aligns with the overarching progression of the game narrative. They serve as sequentially laid-out stages where the scavenger/player must fight off all obstacles that stand in the way as she sets on her path to reach the desired goal in the end. The challenges escalate in terms of their levels of difficulty and intensity.

The scavenger encounters more objects and people as she moves along the routes in between the challenges, which instills in her a renewed sense of where she is and what it means for her to be pursuing her initial goal. In other words, the scavenger becomes aware of the co-existence of life and death, past and present in the site as a living intruder among the ancient dead.

In addition, the different context and features of each of the three PoIs are major components in setting the details for the challenges in each level of the game.
Figure 1. Bird’s-eye View of Daereungwong: The navigational route and stages of Rediscovering Daereungwon

Narrative Framework

The Memorable Experience Design (MED) Framework, proposed by Bulencea and Egger [1], demonstrates a method of creating tourism experience concepts by linking experience staging with game design thinking. Each pillar of the framework has several elements that help trigger a desired outcome. In particular, the Positive Emotions Pillar consists of elements that trigger visitors to be in a state where they are intrinsically motivated to build and develop their own experiences.

Schell’s Interest Curve

The Interest Curve by Schell (2008) is applied in the MED framework as a method to structuralize the progression pattern of the experience so that the interest and immersion of user is effectively maintained. Besides knowing when to insert different elements within an experience, this tool can also be used as an evaluation metric of an experience that is already implemented, placing the elements of the experience on a curve to know when to best include each element during the experience.

Applying elements of the MED framework and mapping it on the Interest Curve

It is possible to lay out the progression of the gamified, interactive narrative of Rediscovering Daereungwon in its entirety by applying the elements of the MED framework along the Interest curve. This curve is also aligned with the spatial progression of the navigational route the player has to take. The difficulty of the game challenges increases at each level, designed to be played at the three major PoIs. Other elements that contribute to a more positive gaming experience are allocated throughout the curve.

Each of the 3 PoIs within the game narrative consists of: (a) a certain fictional situation that is presented to the player before she engages with the augmented content, (b) a game challenge that embeds information and artifacts related to the PoI, and (c) a rewards that transforms into a game tool at the next level/PoI, leading the player to stay on path and complete the experience.

Figure 4. Rediscovering Daereungwon: The game narrative mapped on the Interest Curve by Schell (2008)

CONCLUSION

Applying and improving upon elements of the Memorable Experience Design (MED) Framework and the Interest Curve proposed by Bulencea and Egger (2015) for a first-person Role-Playing Game(RPG), Rediscovering Daereungwon is an attempt to create an on-site experience that calls to attention the invisible, historical context of Daereungwon and immerse the visitors in its rediscovery. This paper represents the first step in this endeavor, providing a coherent framework on which the narrative arc can be mapped onto a pre-existing framework and linked to the spatial landscape of the cultural heritage site. The actual implementation of this AR-driven mobile system, accompanied by visual markers detected with an outdoor GPS system, is left for future work, along with a more detailed plan of the interactive elements in the narrative design. Proving the validity of this approach with a sound user evaluation method will also be important in the realization of this proposed application.

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REFERENCE