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端島XR

産業遺産に触れてみて

www.thehashimaXRproject.org

Building 30 and the winding tower for Pit No. 2 were rendered in Unreal Engine 5.2 from architectural drawings and historical photographs.

The Hashima XR project brings together expertise in architecture, history, heritage studies, psychology, video game design, game learning analytics (GLA), and conversational AI (Rasa Open Source). It investigates the potential of historically accurate immersive video games as a tool for cultivating historical reconciliation. We are evaluating historical immersive virtual reality (IVR) technology as a cultural tool for strengthening civil society, nationally and internationally, by enabling individuals to experience contested historical events from multiple perspectives.

Hashima Island, circa 1970. Created with Unreal Engine 5.2 using original CAD and GIS data.

The project involves two integrated and simultaneous pathways:

"Scholarship-Driven Historical Video Game Design" is building an immersive video game simulating life on Hashima Island, a UNESCO World Heritage site near Nagasaki. This endeavor combines technology and historical research to showcase life on the island from the 1880s to the 1970s, including the controversial period of 1937-1945.

The heart of the controversy lies in the representation of colonial Korean laborers who worked in Hashima's coal mines. South Korea views their mobilization as "forced labor," while Japan maintains that they were recruited and paid as "wartime laborers." This debate forms a critical aspect of the game's narrative.

Players will explore Hashima through various interactive means: visual exploration, dialogue in different languages (Japanese, Korean, Chinese, and English), task completion, and decision-making that affects game progression. These elements are designed to deepen understanding of the complex historical relationship between Japan and its closest Asian neighbors, shedding light on the multifaceted power dynamics of the time.

Utilizing advanced tools like Unreal Engine, Maya, 3ds Max, and Marvelous Designer, coupled with historical research methods, the development team aims to build historically accurate representations of Hashima's people, objects, and landscapes. This approach ensures authenticity while inviting players to engage with a significant and complex part of East Asian history.

The project is an ambitious intersection of gaming, history, and cultural awareness, offering an engaging exploration of sensitive historical topics. Through innovative design and collaboration, it promises an enriching gaming experience and a platform for reflection and discussion on a shared but contested past.

"Data Collection and Game Learning Analytics" focuses on deploying a gamified simulation of Hashima to explore how scholarship-driven video games can enhance players' historical awareness and empathy and how these factors correlate with attitudes toward historical reconciliation processes.

The research design employs Game Learning Analytics (GLA) and Conversational AI, using qualitative and quantitative instruments to gauge the game's impact on historical awareness and empathy. Hashima's high public profile and controversial status in East Asia will be leveraged to attract a statistically significant data set. The game will be made widely available via a Pixel Streaming server and platforms like Steam, Meta, and GOG, complemented by a strategic social media campaign.

The pathway includes several key stages:

1. **Informed Consent**: Players must register and complete an informed consent interview, complying with UKRI guidance, facilitated by a custom-built conversational AI framework.
2. **Pre-Gameplay Assessment**: A validated instrument will measure participants' initial historical awareness and empathy levels.
3. **Gameplay Learning**: Players will engage with the game, exploring and interacting with historical environments. Distribution will be in multiple languages across East Asia to ensure a robust data set.
4. **Post-Gameplay Assessment**: The game's impact on key variables will be assessed by comparing pre-and post-test scores, including tracking participants over time.
5. **Game Learning Analytics (GLA)**: GLA tools will be integrated to monitor participants' in-game interactions and decision-making, allowing qualitative and quantitative analysis.