Haaga-Helia
ammattikorkeakoulu

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Lights on: Haaga-Helia UAS students light up the Suomenlinna Fortress

Our interactions with the world are multisensory in nature - the senses move us through spaces, mix with our memories and are constantly connected by our brains (Jost et al., 2023). In the realm of architecture and interior design, lighting plays a crucial role in setting the tone and evoking emotions, enabling spaces to fulfil their intended purpose. This is especially true for the external lighting of heritage buildings, where the aim is to create a memorable impact on viewers, both during the day and at night. Strategic lighting engineering and architectural design are essential in highlighting the architectural nuances of these structures through a captivating interplay of light and shadow.

Illumination of Heritage Buildings: A Nighttime Spectacle

Outdoor lighting for heritage buildings focuses on creating a theatrical appeal rather than on practical illumination, necessitating a lower intensity of light compared to indoor settings. Before embarking on such a design, it's important to consider aesthetics, mood lighting, and various technical, economic, and conservation aspects, keeping in line with UNESCO's guidelines and recommendations (Balocco & Carbone, 2022).

UNESCO advises against bottom-up illumination for monuments, except in the case of historic buildings, emphasizing the need to contain light within the façade to prevent it from straying. Additionally, the use of luminous flux reducers with automated or self-timing mechanisms is recommended to minimize light during daylight hours. These guidelines aim to protect biodiversity and the night landscape, especially in natural and rural areas, promoting the use of smart lighting solutions like intelligent and adaptive lighting systems, as well as solar-powered LED lighting.

Storytelling through audiovisual stimuli

Our engagement with the world is profoundly linked to our senses, directing us through environments, mingling with our recollections, and effortlessly combined by our minds. Within digital amusement, the rise of interactive storytelling has become notable, thanks to progress in innovative computing techniques (Rico Garcia et al., 2022). One significant challenge in this field is the limited control content creators, such as film directors or game designers, have over the user's experience, whether they are viewers or players once the narrative begins.

Traditionally, sound design has played a critical role in the audiovisual storytelling of linear media. However, the advent of non-linear and immersive media, propelled by technological advancements, is transforming the landscape. With an increase in sensory information and users gaining more control over the narrative through choices and navigation, immersive environments present new hurdles for storytelling in interactive narratives. This shift necessitates innovative strategies and techniques for audiovisual narrative progression.

The question arises whether technology can create an immersive environment that gives users a sense of agency and choice, where their actions are subtly influenced in such a way that they adhere to the narrative without overt controls (Salselas et al., 2021). Furthermore, the potential of sound as a subtle tool to direct the user's attentional focus within these narratives is explored, highlighting its importance in enhancing the interactive storytelling experience.

Celebrating Heritage with Light: The Case of Suomenlinna Kekri

An innovative example of lighting enhancing heritage spaces is the project by Haaga-Helia UAS students at the Suomenlinna Sea Fortress for All Saints' Day. These event management students created a narrative storyline and expanded it into an immersive multisensory experience, highlighting the significance of this

UNESCO World Heritage Site and the history of the All Saints' festival. The collaboration with the world heritage site and the use of advanced AV technologies allowed for a respectful yet engaging presentation, demonstrating the potential of lighting to attract visitors and celebrate cultural heritage.

Fig 1. 3D videomapped generative computer graphics at Kekri 2024 in Suomenlinna World Heritage Site (Authors' own, 2023)

Haaga-Helia University of Applied Sciences' XR Experience and Multichannel Retail Solutions (XREXP) project is at the forefront of event industry innovation, integrating multisensory aspects and technology into event planning. This project uses XR technologies like 3D holographic screens, video mapping, digital twins, and other creative audiovisual concepts to improve event space design and customer experience, enhancing regional appeal and offering more immersive experiences for participants.

Collaboration with students shows how technology and creativity can create new, experiential, and diverse event experiences. These efforts enrich participants' experiences, contribute to learning, regional growth, and cultural enrichment. In this project, multisensory approaches are a key part of event planning and implementation, setting new standards for the future events.

Thoughtful application of lighting in heritage spaces highlights architectural beauty, ensures sustainability, respects conservation guidelines, and enhances visitor experiences. By embracing innovative technologies and mindful design, lighting can illuminate the past and enlighten the future.

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