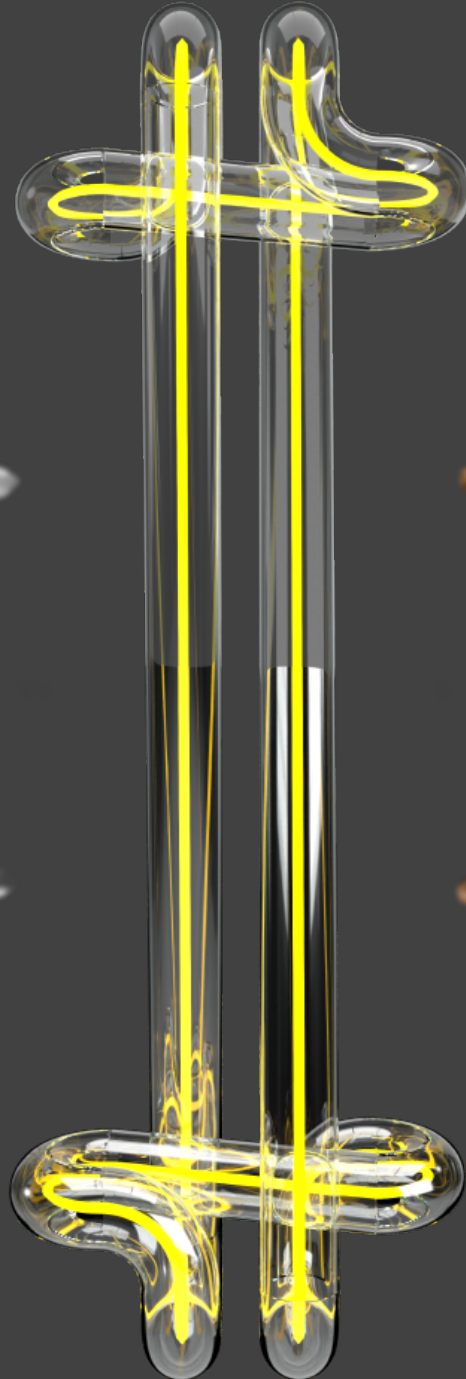


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by Council of Arts and Design Deans of Thailand (CADDT) and The Association of Siamese Architects under the Royal Patronage (ASA) together with the Faculty of Digital Arts, College of Design and the Faculty of Architecture Rangsit University.



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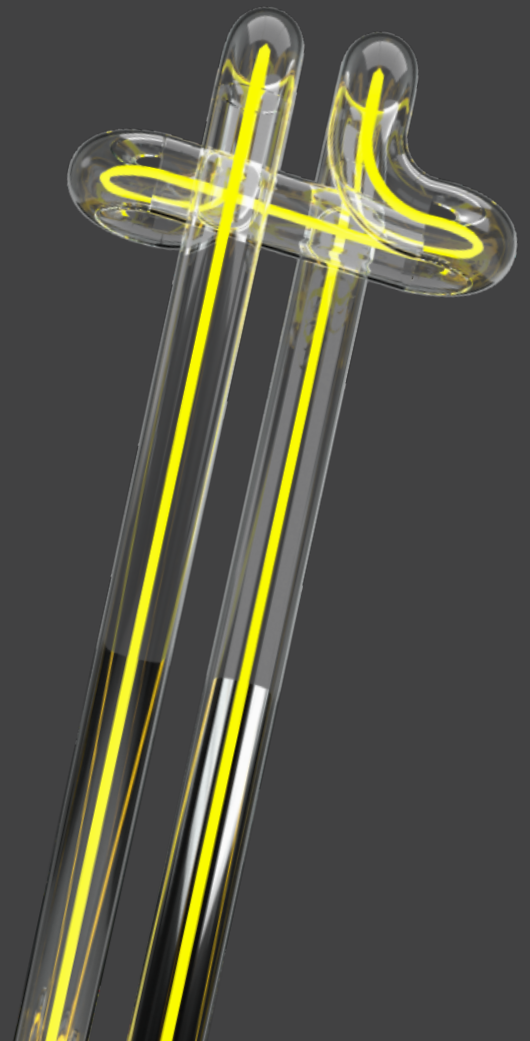
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# Photogrammetry Preservation

Mr. Piyanon Somboon

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## Introduction :

The preservation of cultural heritage sites is crucial for maintaining a connection to our past and our cultural identity. Sites like Wat Sorasak in Sukhothai Province, Thailand, serve as valuable historical and cultural resources that require meticulous documentation, preservation, and protection. Photogrammetry techniques have gained popularity in recent years due to their ability to create highly accurate and detailed 3D models of archaeological structures, providing researchers with a new means of analyzing and understanding cultural heritage sites.

The photogrammetric survey conducted at Wat Sorasak highlights the effectiveness of photogrammetry techniques in documenting and preserving cultural heritage sites. The 3D models produced through the use of photogrammetry software enable detailed analyses of the site's architecture and features, facilitating the identification of areas that require conservation or restoration work. This, in turn, ensures the long-term preservation of the site.

The use of photogrammetry technology also offers an innovative way for visitors to experience and appreciate cultural heritage sites. Virtual and augmented reality technologies can create a new and immersive means of exploring these sites. This can be particularly beneficial for individuals who face geographical or other restrictions that may make physically visiting these sites difficult.

In conclusion, the utilization of photogrammetry techniques in documenting and preserving cultural heritage sites holds significant promise. By creating 3D models, researchers can expand their understanding of these sites. Additionally, virtual and augmented reality technologies can provide visitors with a unique and engaging way of experiencing cultural heritage sites. As such, it is imperative that we continue to develop and employ these technologies to ensure the protection and conservation of our cultural heritage for generations to come.

## Objectives:

To emphasize the importance of preserving cultural heritage sites for maintaining a connection to our past and cultural identity.

To explain the popularity of photogrammetry techniques and their ability to create accurate and detailed 3D models of archaeological structures.

## Process or Concept / Methodology:

- Define Research Framework
- Capture photographs of the site from various angles using high- resolution cameras.
- Process the photographs using reality capture software to generate a 3D model of the site.
- Develop the design with real-time rendering using Lumion. Edit the video and audio using AfterEffects.

## Techniques and Materials:

3D Animation Size : 1920\*1080 pixel

## Conclusion:

Photogrammetry techniques have shown effectiveness in documenting and preserving cultural heritage sites like Wat Sorasak in Sukhothai Province, Thailand. The 3D models created enable detailed analyses of the site's architecture and features, identifying areas requiring conservation or restoration work and ensuring long- term preservation. These technologies offer innovative and engaging ways for visitors to experience and appreciate cultural heritage sites, particularly for those facing geographical or other restrictions. The use of photogrammetry techniques in documenting and preserving cultural heritage sites holds significant promise, expanding researchers' understanding of these sites and ensuring the conservation of our cultural heritage for future generations.

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