

STORYTELLING THROUGH PHOTOGRAMMETRY AS A DIGITAL TOOL FOR PRESERVING CULTURAL HERITAGE: NEW GOURNA BETWEEN PAST, PRESENT, AND FUTURE

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Abstract

Heritage has many types of information that can be narrated, presented, and documented differently with the appearance of digital tools. With the important role of photography and storytelling in introducing us to know our history, millions of images are taken during the visit of heritage sites and historical buildings, yet they are rarely used for documentation. However, the new documentation tools started to increase the user interactivity with these sites, buildings, and monuments scale. The role of these tools does not stop at the documentation phase, but it spread to include the user as an active not just as a passive role, where the tools go deep to reach the visitors' minds and stay in their memory. For instance, photography, photogrammetry, 3D laser scan, and augmented reality, are tools that started to take a role in interactively preserving the cultural heritage.

After Notre Dame cathedral fire, we witnessed how digital media as video games and 3D laser scan can be the main source of rebuilding and reconstructing a building. Accordingly, with the high risk of Hassan Fathy's buildings at New Gournna in Luxor, the paper presents part of an ongoing project related to the documentation of these buildings to highlight the importance of using storytelling and photogrammetry techniques in documentation through narrating. These techniques allow the users to interact with the monument as if they were there beside it can give the augmented tour if the buildings are no longer there. The paper sets guidelines for users highlighting the important role of the mobile application for the documentation process where the users can generate their models very easily. Such a pilot model can be implemented later in gamification where the gamers can get more knowledge about the history of the places in an adventurous way.

Keywords:

Storytelling, Digital heritage, photogrammetry, photography, Augmented reality, Cultural heritage, mobile application.

Bio

Deena is assistant professor at the architectural engineering department at the British University in Egypt and associate director of Farouk El-Baz center of sustainability and future studies. In 2015, with her team, she founded an initiative called Cairo Heritage School besides sharing in funded project "Virtual Heritage Cairo". She get her MSc. and Ph.D from Cairo University. With a strong belief in the importance of bridging the gap between academia and industry, her research focuses on vernacular architecture, additive manufacturing techniques, augmented reality, and photogrammetry in construction. She won several awards in entrepreneurship and was shortlisted at Tamayouz Award for Women of Excellence in Architecture and Construction and Mohamed Makiya award in 2020.