Rekrei Bibliography

Rekrei Participants

March 24, 2016

Contents

1 Introduction

The following is a bibliography of Rekrei (formerlly Project Mosul) related publications, both popular and scientific. This is limited to publications authored by official participants of the project.

2 Popular

2.1 Project Mosul: A Digital Future for Lost Heritage

Authors: Chance Coughenour, Matthew L. Vincent
Abstract: Popular article featured in a series by Current World Archaeology about lost and destroyed heritage.

3 Conference Presentations

3.1 Crowd-sourcing the 3D digital reconstructions of lost cultural heritage

Authors: Matthew L. Vincent, Chance Coughenour, Fabio Remondino, Mariano Flores Gutierrez, Victor Manuel Lopez-Menchero Bendicho, Dieter Fritsch
Conference: Digital Heritage 2015, Granada, Spain, 28 September - 2 October, 2015
Abstract: Crowd-sourced photogrammetric reconstructions offer a unique opportunity for the digital visualisation of lost heritage. Project Mosul is a project that seeks to digitally reconstruct lost heritage, whether through war, conflict, natural disaster or other means, and preserve the memory of that heritage through digital preservation schemes. The project is not without its challenges, however. For example, geometric fidelity is impossible to determine, maintaining community interest, while returning some value to the research community. That being said, textured 3D models can still be a valuable source for visualization, memory and documentation.

3.2 Project Mosul - Preserving the Memory of Lost Heritage

Authors: Chance Coughenour, Matthew L. Vincent
Conference: Conference on Cultural Heritage and New Technologies, Vienna, Austria, 2-4 November, 2015
Abstract: The principal objective of Project Mosul is to foster a volunteer initiative which recreates virtual models of recently destroyed cultural heritage from crowd-sourced data. Although originally launched following the release of the shocking video of devastation at the Mosul Museum in Iraq, the project has expanded its attention to the nearby sites of Nimrud and Hatra. Unfortunately, cultural heritage in danger is not only limited to man-made destruction, as demonstrated by the recent earthquake in Nepal. So too, the project seeks to widen its aim in utilizing photogrammetry to help preserve the memory of this valuable heritage for future generations and empower anyone interested to participate. Furthermore, the websites tools have been developed with an emphasis on open source, thereby allowing users to take part in their development. The results thus far are compelling where some artifacts have been reconstructed from less than ten images. Of course, as the number of acquired photos increases, so will the amount and quality of 3D models of these lost artifacts and archaeological structures. Thanks to the integrated 3D gallery on the website, volunteers work can instantly be visualized. Although from a

scientifically-grounded perspective, it may never be possible to verify the precision of each virtual reconstruction since the original is now gone. At least its virtual substitute helps to preserve the memory of what was lost. By expanding on previous investigations and technology, Project Mosul is a concept that was bound to materialize, even outside of official heritage organizations. Its innovative concept has attracted the attention of people and organizations from the public and private sectors alike. Our hope is to not only to point out the growing need to protect cultural heritage in danger but we also hope to present one example of how this may be achieved.

4   Journal Articles

4.1   Crowd-sourcing the 3D digital reconstructions of lost cultural heritage

Authors: Matthew L. Vincent, Chance Coughenour, Fabio Remondino, Mariano Flores Gutierrez, Victor Manuel Lopez-Menchero Bendicho, Dieter Fritsch
Conference: Digital Heritage 2015, Granada, Spain, 28 September - 2 October, 2015
Abstract: Crowd-sourced photogrammetric reconstructions offer a unique opportunity for the digital visualisation of lost heritage. Project Mosul is a project that seeks to digitally reconstruct lost heritage, whether through war, conflict, natural disaster or other means, and preserve the memory of that heritage through digital preservation schemes. The project is not without its challenges, however. For example, geometric fidelity is impossible to determine, maintaining community interest, while returning some value to the research community. That being said, textured 3D models can still be a valuable source for visualization, memory and documentation.

5   Book Chapters

6   Posters

6.1   Project Mosul: Preserving the Past Through Crowd-Sourced Imagery

Authors: Matthew L. Vincent, Chance Coughenour, Fabio Remondino
Abstract: Project Mosul is a project that grew out of a reaction to the mass destruction of cultural heritage, particularly that of The Cultural Museum of Mosul. Using crowd-sourced imagery from tourists and professionals alike, lost heritage has been virtually reconstructed using semi-automatic photogrammetric processes. While these virtual reconstructions serve to preserve the memory of the lost heritage, they cannot replace that which has been lost. The project embraces crowd-sourced principles, and strives to involve the volunteer community in every aspect of the project. The models resulting from the photogrammetric process are open and free to the public to access; however, these models have limited scientific application due to the inability to quantify the geometric fidelity. That being said, the ability to visually preserve and present the heritage

through virtual museums and exhibits. Future work will involve mixed media exhibitions incorporating both physical reproductions and virtual visualisation tools helping to connect the public with the heritage and raise awareness of the value of our global heritage. Beyond the representations and exhibitions, we are working towards the integration of documentation of the heritage in order to retell the complete story of that which has been lost..

References

Coughenour, C., & Vincent, M. L. (2015a, August). Project mosul: A digital future for lost heritage. *Current World Archaeology*, *6*(12), 10-11.

Coughenour, C., & Vincent, M. L. (2015b, November). *Project mosul - preserving the memory of lost heritage.* Conference on Cultural Heritage and New Technologies.

Vincent, M. L., Coughenour, C., & Remondino, F. (2015, November). *Project mosul: Preserving the past through crowd-sourced imagery.* Poster.

Vincent, M. L., Coughenour, C., Remondino, F., Flores Gutiérrez, M., López-Menchero Bendicho, V. M., & Frtisch, D. (2015, Sept). Crowd-sourcing the 3d digital reconstructions of lost cultural heritage. In *2015 digital heritage* (Vol. 1, p. 171-172). doi: 10.1109/DigitalHeritage.2015.7413863

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