

Participatory digital heritage portal within a game engine: a workflow for creation and sharing of information and narratives

Contextualized Digital Heritage Workshop - Suzhou

Workshop organizers:

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General description

One of the main points that characterizes built heritage compared to contemporary constructions is the strong connection with a specific physical and cultural context. For this reason, the main idea that underlies this workshop is linked with a contextualized practical exercise ([Di Mascio et al 2016](#)). Built heritage represents a precious material and cultural resource to be studied and preserved for present and future generations.

However, despite its recognized importance, it is increasingly at risk from: conflicts, pollution, lack of maintenance and consequent abandonment. Raising peoples' interest and comprehension of built heritage represents one way of enjoying and preserving it. Advances in digital technologies open up alternative and new possibilities in the documentation, study, communication and dissemination of tangible and intangible features of built heritage: this field of study is identified as Digital Heritage. Digital technologies can improve people's engagement in digital heritage activities, supporting the creation and sharing of information, personal experiences and interpretations (such as notes, sketches, pictures, audio files, videos), from both professionals and laypeople.

This event proposes a brief scenario documentation, interpretation, and sharing and dissemination of heritage information and personal experiences, such as narratives. The proposed workflow will allow participants to create a portal of people's information and experiences in the form of a 3d navigable environment within a game engine and populate it with a variety of information. Within this virtual environment, users will be able to experience the 3d virtual heritage, interact with and enjoy the user-generated content spread around it in a playful and more engaging way.

This workshop continues and merges the paths started by two successful workshops held during the previous eCAADe (Oulu, Finland) and CAADRIA conferences (Melbourne, Australia). This proposed event will represent a place to share constructive and polyvalent discussions on how to create and share information and personal experiences along a digital heritage workflow. The event will be split in two days.

Number of participants: Maximum 15 people.

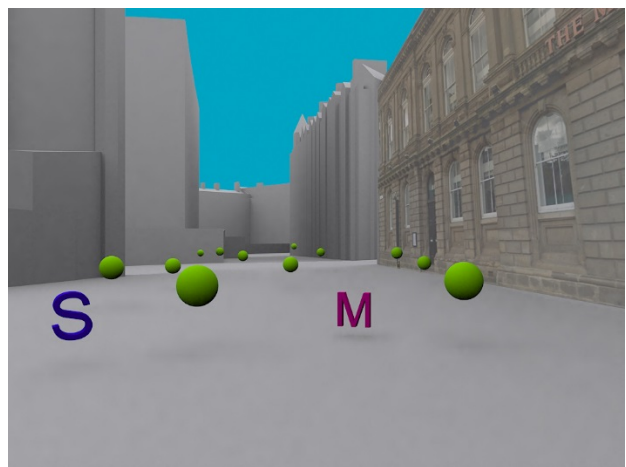
- **Previous knowledge of the participants:** Everyone (students included) whose research or study area is focused on Digital Heritage and related topics is welcome to participate.

- **Required Infrastructure of the participants:** a laptop to support the practical exercise is mandatory. Information about the required software packages will be sent via email to the participants.
- **Envisioned Outcome:** a PowerPoint presentation will be prepared to show the whole workflow and the final result achieved by the participants.

Detailed timetable:

<i>Timetable – Day One</i>	<i>Timetable – Day Two</i>
09:30-09:50	09:30-10:30
Welcome by organizer(s) & introductions; description of the workshop’s organization	Welcome by organizer(s) & lecture
09:50-10:40	10:30-10:50
Introductory lecture; overview of the case study and brief tutorial about photogrammetry	Coffee break
10:40-11:00	10:50-12:30
Coffee break	Creation of a basic 3d navigable environment with interactive elements in UNITY (the portal)
11:00-12:30	12:30-14:00
Site visit to collect information (such as notes, sketches, pictures, videos)	Lunch
12:30-14:00	14:00-15:30
Lunch	Creation of a basic 3d navigable environment with interactive elements in UNITY (the portal)
14:00-15:30	15:30-15:50
Photogrammetric Modelling	Coffee break
15:30-15:50	15:50-16:45
Coffee break	Round table discussions about the presentations
15:50-16:40	16:45-17:30
Post-processing of 3D mesh models	Final summary; final discussions, future plans and closing remarks
16:40-17:15	19:00
Final lecture and closing remarks of the first day	Dinner/ drinks
19:00	
Dinner/ drinks	

Reference Images



Brief CV of the workshop presenters



Marc Aurel Schnabel is the founder of DARA. He is the Dean of the Faculty of Architecture and Design, Victoria University of Wellington, New Zealand and Professor in Architectural Technology at its School of Architecture, as well as Visiting Professor at School of Architecture, Sheffield University. As Programme Director Architecture he is leading research and education a. o. in Architectural Design, Building Information Modelling (BIM), Virtual Reality, Digital Heritage, and Digital Manga within the field of digital media in architectural and urban design.



Dr Danilo Di Mascio, Architect and PhD, is currently working as Postdoctoral Research Fellow in the Department of Architecture and Built Environment, Faculty of Engineering & Environment, Northumbria University, and is part of the Virtual Reality and Visualization Group (VRV). He has undertaken research projects on digital technologies (laser scanner, CAAD, 3d modelers, BIM, game engines and semantic web technologies), applied in the comprehension, analysis and documentation of tangible and intangible characteristics of cultural heritage, in five different countries: Belgium, England, Italy, Scotland and United States. The researches include a wide variety of buildings from vernacular architecture to masterpieces of architecture such as the Glasgow School of Art designed by C.R. Mackintosh and the Chicago Stock Exchange designed by Louis Sullivan. He participated, as author and speaker at various international conferences in Europe (EAEA and eCAADe), Middle and Far East. During the CAADRIA Conference hold at the Chinese University of Hong Kong (2010), he received the Young CAADRIA Award for his research.