Kolloquium im Rahmen der TOPOI Forschungsgruppe A-III WS 2011/2012

Räumliche und quantitative Analysemethoden in den Kulturwissenschaften

EXCELLENCE CLUSTER TOPOI

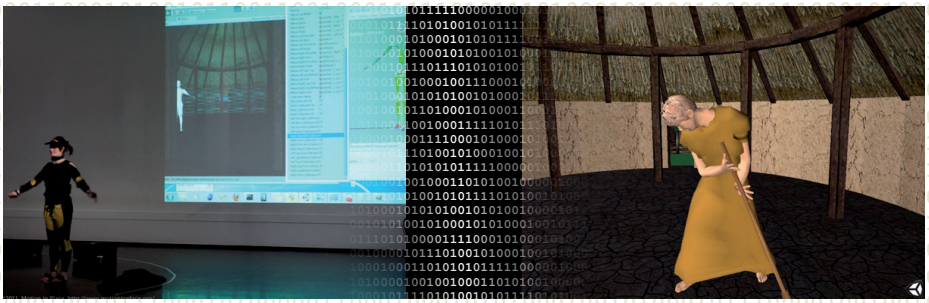
Mittwoch, 8. Februar 2012

STUART DUNN LONDON/UK

Moving through the Past: Motion Capture as a tool for archaeological visualization

Digital 3D visualization has long played an important role in the representation of archaeological features and artefacts, and in their reconstruction and presentation to the public. Many excavation projects are taking advantage of the relative cheapness and ease of use of available hardware and software for this. For example, it is possible to visualize Total Station measurements with packages such as AutoCAD, allowing the representation of extant and visible features in 3D. The process is also becoming faster and more efficient, with results often available during the fieldwork period. At the same time, the increasing maturity of 3D reconstruction and animation technologies in both academic research and popular culture is focusing attention on their use in cultural heritage. However, the emergence and maturing of these methods and techniques have, arguably, switched attention away from the human occupants of the buildings visualized. In 2010/2011, the UK's Arts and Humanities Research Council (AHRC) funded the Motion in Place Platform project, an interdisciplinary collaboration between Kings College London and the Universities of Sussex and Bedford. MiPP's primary aim was to investigate uses of motion capture technologies outside the studio, and the principle use it identified and investigated in depth was the augmentation of 3D archaeological reconstruction using motion capture in situ. This was explored in collaboration with the Butser Ancient Farm facility in Hampshire, England, using a set of architecturally accurate and to-scale physical reconstructions of Iron Age domestic round houses. Tasks indicated by finds, or inferred from contextual evidence, such as cooking, bread-making, flint-knapping and weaving were qualitatively reconstructed and observed using motion tracking technology, by people who were very familiar with the physical environment. The observations were superimposed in a virtual 3D version of the spaces.

The availability of the experimentally constructed buildings in the physical world provided us with a unique opportunity to test and evaluate both the motion data and our 3D reconstruction of the buildings. As with the reconstruction of physical architecture, we uncovered important interpretive and methodological questions which must be addressed before reconstructions employing motion data can be used in archaeological research. This talk will discuss these questions, and what motion data can and cannot tell us (or rather allow us to infer) about the past. It will conclude by sketching out an agenda for motion data combined with notions of declarative, configurational and procedural spatial literacy, which will allow motion data to be combined with more familiar 3D vsiualizations. This will inform and improve our interpretation of ancient domestic buildings.



ZEIT UND ORT Mittwoch von 16 - 18 Uhr c.t. im FU Topoi-Haus, Hittorfstr.18, 14195 Berlin

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