

E-HERITAGE: THE FUTURE FOR INTEGRATED APPLICATIONS IN CULTURAL HERITAGE

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Abstract

A number of factors are combining to change the structure and contents of documentation of cultural heritage: 1) the exponential growth in data generated by imaging techniques makes it possible for a site or an artifact to be recorded at a resolution of 16 megapixels and at a density of several hundred million cloud points-provided that a few hundred gigabytes of space are available and the database used can handle large data sets comfortably; 2) high-resolution imaging is becoming more affordable and/or available; 3) the economics and legal constraints of conservation practice are gradually pushing towards more stringent documentation standards; 4) improved communications infrastructure and mobile computing facilities are changing the way that data is recorded, processed, stored and – inevitably - used; 5) increasingly available computerized expert systems (intelligent knowledge-based systems) will be integrated into the very systems that conservators and documentation specialists will carry around with them or access on a daily basis; 6) the advent of web-based systems will afford super-computer processing power and large-system database handling to the documentation specialist and the conservator in the field and permit greater flexibility for teleworking; 7) Computerised Project-based Management techniques will gradually spread from the realm of large institutions to SME's and individual practitioners in a way which will make digital image processing in architecture and archaeology more akin to the exchange of engineering drawings in automobile design industry. 8) The availability of cheap local or distributed processing power means that most of the above advantages will be present in both developed and developing countries thus enabling the post-processing that currently constitutes 80% of work in digital photogrammetry and laser scanning. Laser scanners will gradually follow high-resolution digital cameras and become affordable for nearly everybody while hybrid systems will become more powerful and more portable. This paper explores *e-heritage* as an integrated project which aims at providing a seamless yet structurally and inherently upgradeable technological platform for all activities within cultural heritage conservation and management

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