

*Dossier: La documentazione digitale da Michelangelo a Cimabue*

### *Dossier: Digital documentation from Michelangelo to Cimabue*

Whose task is it to put together documentation? What sort of working relationship exists between document specialists and computer application programs? What are the needs and requests of restorers and preservation experts in terms of what computer programs and document specialists can provide? More to the point, is it really necessary to make use of computer documentation? And if so, what are the advantages compared to the tried and tested traditional methods? Carrying out a state-of-the-art project would be a daunting task if it were not possible to make appropriate use of filtering mechanisms to highlight the events and experiences of major significance and of widespread application, sometimes at the expense of excluding those of more obvious success. The dossier puts forward a view that is first methodological, then historical, before turning to some very recent case-studies, and finally pointing out guidelines for experimentation. Broadly speaking, the Dossier seeks to explore how and in what way advanced technologies for digital documentation can influence and bring about changes in the approach to documentation as a discipline. In particular, attention is focused on the relationship between the users – those who work in the field of cultural heritage preservation – as well as the providers, suppliers and computer documentation specialists who are fully aware of the potential of this new technology. Their cooperation is essential in order to make it possible to set up a virtual circuit that is able to define why and how, and therefore what tools should be used for putting together documentation. Framework and content should be designed hand-in-hand, says author Settis. The goal has to be that of training a documentation specialist who is able to make full use of commercially available software tools to record graphic and non-graphic data, and who is able, ideally, to conceive and put forward guidelines for their implementation and day-to-day management. Author Moscati gives an overview of the historical development of the computer-assisted approach to preservation, by presenting an evaluation of the relationship between traditional methods of archaeological research and the theoretical aspects of computer applications. The paper by author Petriagnani provides a step-by-step reconstruction of the prospects for development contained in embryo within the prototype experience on the Sistine Chapel in the 1980s. Author Warrack recounts the organization of a documentation system directly controlled by the restorer, or at any rate set up directly on site with computer equipment. The project involved surveying the state of preservation of the Angkor Wat temples in Cambodia. Author Eiteljorg explains how CAD software is not only a graphic aid but also a tool for handling numerical data, up to the point of three-dimensional modelling. Techniques such as automated mapping and geographical information systems (GIS) represent the main and most promising path of development in the field of digital documentation relating to preservation. Author Di Giacomo discusses ways of integrating databases with information of a vector or raster type. His paper expands on the one by author Cerica who deals with the subject of metadata and the problem of documenting documentation. Authors Petrescu and Murariu focus on the user/producer relationship, with their description of a special GIS application for wall paintings. The final section of the dossier deals with applications specially designed to aid the task of documentation and restoration, through very advanced research on computer languages, and on the nature of the user/producer relationship. The paper by author Forte illustrates some of the systems and applications for virtual reality as used in the field of documentation and spatial modelling of cultural heritage items. Author Accardo describes the technical features of the main systems for surveying and processing data, with an eye on the possibility of applying digital technology systematically in order to set up numerical 3D archives for sculpture. The dossier comes to an end with the description of the work carried out in Assisi, supervised by Giuseppe Basile, for the re-composition of the frescoes destroyed by the earthquake.

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## ABSTRACT

I monocromi di Mario Schifano

*Monochromes by Mario Schifano*

This article is taken from a study of several monochromes by Mario Schifano, most of which were produced in the first half of the 1960s. The works are in the form of enamel painting on paper with canvas backing (smalti su carta intelata). The purpose of the article is to gain a fuller understanding of Schifano's work, the way he chose to express himself and the materials he used, as well as the process of deterioration affecting the works, the preservation history of each one, and to what extent they had been restored previously. We examined 28 works painted by Schifano between 1960 and 1964. With eight of these works, it was possible to carry out a detailed, circumstantial examination. For the remaining twenty, we were only able to make a visual inspection. The information gleaned from examining the works was backed up by interviewing collectors as well as his assistants and those who had supplied him with his materials. Thanks to their collaboration, we were able to establish the dates of the works, which otherwise would have been lost. It was possible, for instance, to discover the proprietary names of the products used by Schifano as well as the techniques and procedures he adopted. In this way, we were able to construct models which were very similar to the original monochromes. By comparing the models with the data acquired through direct examination, we deduced some useful information regarding how the works were produced. This helped towards understanding the causes of deterioration and enabled us to investigate ways of carrying out future restoration. It was also possible to determine the best conditions for preserving the works.

Consolidamento strutturale di legni archeologici essiccati

*Strengthening treatments of air-dried archaeological waterlogged wood*

The paper deals with the experimental results of the strengthening tests carried out on some shrunken air dried oak specimens from a ship found in a sand quarry near Ravenna. The impregnation treatment has been performed by means of two different epoxy resins (Isepox Bond 46 and Bond Mare Sub) commonly used in shipyards, and of Kauramin Basf (a melamin resin employed in the Mainz Roman Shipwrecks Museum for the waterlogged wood treatments). The efficacy of the impregnation was assessed by laboratory tests specific for stone materials, such as the calculation of the water capillary absorption coefficient. The experimental results show that Isepox Bond 46 can be used as the strengthening agent, while the Bond Mare Sub resin is more useful as a high resistance filler.

Il degrado biologico di alcuni prodotti derivati del legno da utilizzare in aree archeologiche

*Biological deterioration of some wood products to be employed in archaeological areas*

Within the framework of a research project in order to select some wood products suitable for shelters in archaeological areas, the susceptibility to biological deterioration of fir and larch glued-laminated timber and Parallam® has been evaluated. The efficacy of two preservative products for brush application on wood has been also estimated. The behaviour of wood products has been evaluated on specimens in laboratory tests, simulating field conditions. The microbiological growth has been estimated both as surface colonization and as weight loss. Moreover chromatic differences induced on wood by the two preservative chemicals have been tested. The results provide interesting information on the different susceptibility of the tested materials to fungal decay and on the ability of preservatives to inhibit fungi growth.