3D acquisition, processing and presentation of prehistoric European rock-art

From 2013-03-01 to 2016-02-29

Objective

There is ancient rock-art in most European countries and it is more common than cave art, with pictures and geometric shapes cut into rather than painted onto rock. This art exists in open-air surfaces exposed to the weather rather than inside caves. This wealth of Europe’s cultural heritage is inaccessible, difficult to study but provides profound stories from our ancient past. Valcamonica, in the Lombardy region of northern Italy, has some of the best rock art in the world. These «Pitoti» (meaning little puppet in the local dialect) are on the UNESCO list of world heritage. Tens of thousands of Pitoti images span a period from about 4000 BC into medieval times. They show hunting, duelling and dancing scenes, as well as Europe’s first map. However, the evolution of the wonderful Pitoti graphics is omitted from our standard history story. 3D-PITOTI provides the opportunity to set the record straight and give all Europeans a chance to enjoy this, hitherto underestimated, part of their common European heritage. Pitoti are 3-dimensional as they have depth because they are carved into the rock. But this third dimension has never been recorded or studied in detail. 3D-PITOTI will provide the step change needed by researching and developing:

• An affordable and portable multi-scale 3D scanning toolkit for the high resolution acquisition of Pitoti figures and their natural context;

• Intelligent data processing technologies to enrich the scanned 3D data by classification, clustering and retrieval techniques; and

• Interactive 3D visualization and presentation techniques to provide access to the enriched high resolution digital rock-art for scientists, museum visitors, school children and web users.

The 3D-PITOTI project will significantly advance the state of the art in rock-art research methodology and will not only ‘take the rock-art to people’ for the first time but will convey Pitoti knowledge to a much wider audience in interactive and engaging ways.

Related information

• Definition of stakeholders and future scenarios

Documents and Publications
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Subjects

Information and communication technology applications - Social Aspects

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