

Innovative tool reveals the paintings hidden within

The development of optics that 'fly' over paintings could revolutionise art conservation.

CHRIS TITMUS



SatScan in operation

An innovative tool to image artwork has resulted from a partnership between art conservators at the Hamilton Kerr Institute (HKI), a research department of The Fitzwilliam Museum, and SmartDrive Ltd, a Cambridge-based company that specialises in precise motor control systems.

SmartDrive usually work with electromechanical companies needing precise motion control for robotic assembly lines and scientific

instrumentation. But for this venture, they turned to the HKI, a centre of excellence for conservation services and world renowned for its research on oil and tempera easel paintings.

The aim of the joint venture was to use tools that SmartDrive had developed for science and technology applications to create a scanning system to guide art conservation. The result, SatScan, is capable of revealing hidden layers of paint, as Chris Titmus, imaging consultant

at the HKI, explained: 'The information that SatScan provides guides the restoration process and enriches the history of the work. It can also help with authentication by revealing details that may show consistency with a certain artist.'

Detailed topographical surface data from the artwork are captured using a moving camera that, under computer control, 'flies' in front of the painting. High-resolution digital images in visible light, infrared and ultraviolet parts of the spectrum are used to visualise under-drawings or to examine previous re-touching. The system speeds up a previously manual, cumbersome process and extends the size and range of work that can now be scanned.

Dennis Murphy, Managing Director of SmartDrive, said: 'Without HKI's expert knowledge of the area, and capacity to put SatScan through its paces in a working environment, we could never have developed a tool that we feel is a significant breakthrough for art restoration.'

For more information, please contact Chris Titmus (cjt50@cam.ac.uk) or visit www-hki.fitzmuseum.cam.ac.uk/ or www.smartdrive.co.uk/