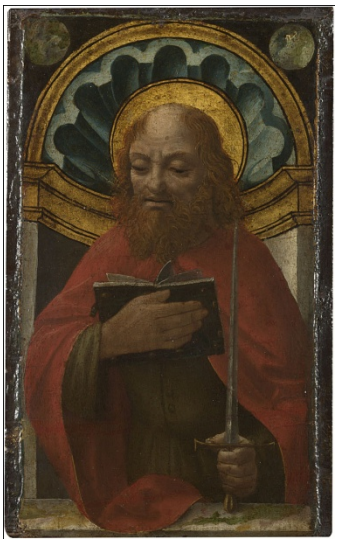
PRESS RELEASE

THE NATIONAL GALLERY

CAT SCAN REVEALS SECRETS OF SAINT PAUL

Advanced medical imaging technology has been used to unlock the hidden stories of a fifteenth century painting, in a unique collaboration between the National Gallery and GE (General Electric).



For the first time ever a painting in the National Gallery's collection has undergone a computerised axial tomography (CAT) scan, in order to answer an intriguing question about what lies beneath the surface of the paint and between its panels.

Saint Paul, attributed to the Master of the Pala Sforzesca, was painted in around 1495. It is a small wood panel (23.8 x 13.3 cms) that once formed part of an altarpiece - Saint Paul is depicted before a niche, with his usual attributes, a book and the sword by which he was martyred. It has been on display at the National Gallery since 1924.

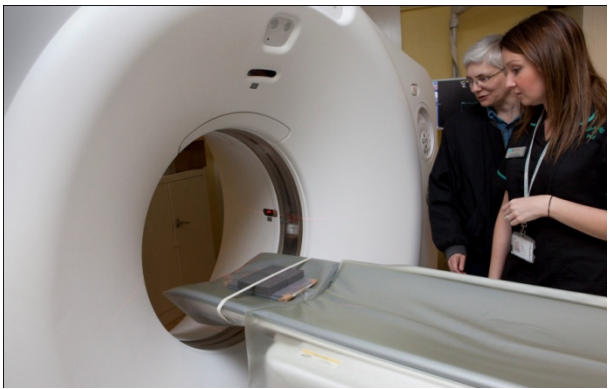
Conservators examining the work were curious to know more about the panel, which is currently on display in the Gallery's exhibition Devotion by Design: Italian Altarpieces before 1500 (6 July – 2 October 2011). As part of the examination the painting was X-rayed. The X-radiograph revealed something the eye cannot normally see – three nails embedded in the support structure of the painting, which cannot be viewed from either the front or back of the work.

Senior Scientific Officer Joe Padfield explains, 'Although the X-ray showed us that nails were present in the panel, we needed more information to be able to establish their exact 3-D location. As part of our ongoing research into the technical examination of paintings, we have previously investigated simple tomography and decided to approach Gallery supporter GE, a world-leading manufacturer of CAT scanners, to see if this medical technology could help us to find where in the structure the nails were positioned.'

A CAT scan is a procedure that combines many X-ray images with the aid of a computer to generate cross-sectional views and, if needed, three dimensional images of the internal organs of the body and structures of the body. They are used to define abnormalities or assist in procedures by helping to guide the placement of instruments or treatments accurately. A large doughnut shaped X-ray machine takes images at many different angles around the body. These images are processed by a computer to produce cross sectional pictures of the body.

Mark Elborne, GE UK's CEO, commented 'With the invaluable help of the Princess Grace Hospital, GE was only too pleased to provide our technology to help the National Gallery in this intriguing investigation. The scanning of the painting was able to reveal hidden detail of an important part of their wonderful collection, and we will continue this partnership with the National Gallery in working to reduce their energy needs in the future.'

After rigorous checks by the Gallery's Conservation Department to ensure the complete safety of the painting while undergoing this procedure, GE arranged for *Saint Paul* to be taken to The Princess Grace Hospital in central London, where it underwent a CAT scan on their GE Discovery HD 750 – with fascinating results.



Research Associate Rachel Billinge explains "The CAT scan clearly shows that St Paul is now backed by two panels, and that the nails are in the original panel. Their purpose appears to be to mend a split in this panel – behind which the second panel was then placed. We can also tell the nails were added

later – as the scan shows they are far too small to be contemporary with the original panel. If they had been 15th century then they would have been made by a blacksmith and so would have been much larger. It is wonderful how using this technology has allowed us to add to our knowledge and understanding of a work of art."

For further press information please contact Lizzie Phillips in the National Gallery Press Office on 020 7747 2596 or lizzie.phillips@ng-london.org.uk