

## Final endeavor of "Monument Man"

John Asmus<sup>1\*</sup>, Vadim Parfenov<sup>2</sup>

<sup>1</sup>*Center for Advanced Nanotechnology, Department of Physics, University of California, San Diego (UCSD), La Jolla, CA, USA 8239 Sugarman Dr. La Jolla, CA 92037-2222 USA*

<sup>2</sup>*Department of Quantum Electronics and Opto-Electronic Devices, St. Petersburg State Electrotechnical University, Popova str. 5, 197101 St. Petersburg, Russian Federation*

\*[jfasmus@ucsd.edu](mailto:jfasmus@ucsd.edu)

In September 1973 two advisors to the World War II staff of General Eisenhower met for the first time in a hospital room in San Diego, California. George Stout, retired Director of the Gardner Museum of Boston, had led the "Monuments Men" (played by motion picture actor George Clooney) in recovering World War II looted artworks. Professor Walter Munk, (recovering from a skiing accident) was an Associate Director of the Scripps Institution of Oceanography (SIO) and had led the team that forecast the sea conditions for the Normandy invasion sites and selected an optimum date for the Allied landings. At their hospital meeting the pair set in motion events that led to the establishment of the Balboa Art Conservation Center as well as the UCSD Center for Art/Science Studies. That year (after the 1972 SIO discovery of self-limiting laser divestment of stone and metal exterior statuary during a 3D holographic study in Venice) research at the University of California (UCSD) continued to explore laser technology as a promising approach to objects conservation (with the support of Mr. Kenneth Hempel of the Victoria and Albert Museum, London.) On the other hand, Stout was primarily interested in the conservation of paintings and he proposed laser varnish ablation for improved removal of residues from previous cleaning attempts. He utilized an available first commercial solid-state laser (Hughes Company ruby laser model 202, 9/18/62) to demonstrate laser divestment of embrittled oxidized varnish from a painting. The test painting was a Serbian Icon, "Our Lady of Tikvin," (Timkin collection.) Forty years later, this technique of painting cleaning is widely employed, but with lasers that are vastly more suitable in wavelength and pulse duration than Stout's free-running ruby device. Shortly before his passing in 1978, he (independently with Lord Kenneth Clark, Professor Carlo Pedretti of UCLA, and radio carbon dating discoverer, Professor James Arnold) suggested the virtual (digital) restoration of the Louvre "Mona Lisa" and he arranged for the spectral analysis of its varnish. This final endeavor of George Stout led to the discovery of necklace pentimenti as well as a revelation that Leonardo painted two versions of the "Mona Lisa", just as is the case of his other celebrated paintings. George Stout concluded his UCSD collaboration by making arrangements with UNESCO for the performance of TEA laser divestment tests on stone specimens from the World Heritage Isis Temple Site at Lake Nasser on the island of Philae.

---