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**PROPOSAL OF COLORIMETRIC HIGH RESOLUTION MAPPING
OF THE SHROUD WITH SCANNER**

Abstract

Previous works proposed the execution of a colorimetric high-resolution mapping of the Turin Shroud by means of CCD sensors. There were evidenced metrological problems connected to the quality of the images and, to solve them, both a sophisticated setup with integration spheres and calibration masks, and a numerical method able to correct *a-posteriori* the acquired images was proposed.

The complexity of the operations foreseen for the mapping may be simplified by employing a normal scanner that can solve many problems connected to the uniform lightning of the subject and the electro-optical distortions of the image acquired by the camera.

For example an A4 format scanner may be employed in the acquisition of 4 x 22 high resolution images in files of 100 megabytes compacted (in Jpeg format) in about 4 MB.

The acquisition may be done leaning the Shroud on the scanner plane or accurately leaning the scanner on the Shroud, but, to have a scanning less intrusive as possible, the scanner structure may be modified and it may be placed on a moving support in order to eliminate any contact with the holy sheet. In this case the illumination system may be also substituted so as to also scan the Shroud in Ultra-Violet light.