

Raking Light and Reflectance Transformation Imaging (RTI)

The observation of an artefact in raking light provides information concerning both its three-dimensional surface features and its state of conservation. The technique consists of illuminating the surface of the object by placing the light source at a very narrow angle of incidence with respect to the interested surface. This generates shadows, highlighting any surface irregularities, such as swelling and detachments, past interventions, retouching and deformations of the supports. This kind of analysis can be performed on each planar surface of the object; it is therefore particularly suitable for easel paintings, wall paintings, photographs and manuscripts, but can also be useful in the case of an artefact with a more complex three- dimensional structure. The method of examination called Reflectance Transformation Imaging consists in the acquisition of various raking light images obtained by positioning the light source at different incidence angles and directions. A dedicated software processes the image set, resulting in an interactive image on which the morphological features of the documented artefact are shown in detail.