Technical Examination for Paper Conservation
Manuscripts, Prints, Drawings, Stamps
CHSOS has developed Archimedes, the multipurpose scanner for Art Diagnostics. It is a modular low-cost, mobile and lightweight scanner that can accommodate a number of diagnostic imaging methods such as Technical photography, Infrared Reflectography, Multispectral Imaging, and X-Radiography.

Archimedes! One Scanner for all imaging methods

Archimedes for Paper Conservation
This scanner is particularly useful for library assets such as manuscripts, prints and drawings that need to be kept flat. The imaging cameras can be scanned over the paper object which can safely rest on the table. Archimedes can fits even a large infrared reflectography camera and it helps to acquire high-resolution imaging of the items.
Technical Photography (TP) - a collection of spectral images realized with a modified digital camera and different lighting sources and filters - enhances reading of faded prints, inks, and paints.
We designed a Technical Photography kit specifically for art professionals and educational institutions.

It’s the best compromise among Quality, Adaptability and Costs and it allows to realize a complete set of 7 technical photo documentation methods: VIS (visible photography), UVF (Ultraviolet Fluorescence), UVR (Reflected Ultraviolet), IR (Infrared), IRF (Infrared Fluorescence), IRFC (Infrared False Color), IRT (Infrared Transmitted)

This is a kit for art professionals: conservators, art appraisers, archaeologists, art historians.

Use it for fast and informative examination of easel paintings, wall paintings, manuscripts and historical documents.
Ultraviolet Fluorescence (UVF)
Often paintings and documents have been modified over their history: a conservation intervention or a change made on purpose. Distinguish inpaints and alterations using Technical Photography (TP).
Artists can change from the original sketch making *pentimenti which are* revealed by an infrared reflectography examination.
Tiny incisions can be documented and they can provide information on the artistic tools and methods used. RTI (Reflectance Transformation Imaging) is a computational photography method used to study incisions in drawings, prints, and paintings.
**Reflectance Transformation Imaging (RTI)**

*Nuremberg Chronicle, dated 1493.*
Woodcut Macro RTI
1. fibrous appearance of the rags paper.
2. lines show no regularity of width or direction.

*Book of Hours, dated 1498.*
Woodcut Macro RTI
1. edge rims.
2. lack of textile fibers in the parchment.

*Pantheon in Rome, 1786.*
Etching
1. raised ink
2. varying intensity of the lines.

*Portrait of C. G. Liljevalch, 1909.*
Engraving, Macro RTI.
1. raised ink,
2. tapering and swelling lines.

Macro photography and RTI (Reflectance Transformation Imaging) allow to document the printing method.
Ultraviolet 254 nm

Phosphors coating is best viewed in shortwave ultraviolet light (254 nm).
Watermarks

Ultraviolet Fluorescence photography (UVF), RTI and infrared photography (IR) are non-invasive methods that can enhance reading of watermarks.
Excite phosphors in paper

Some Countries, such as Republic of San Marino, use a paper supplemented with phosphors.
Examination of stamps with technical photography provides a number of hints for their authentication.
Pigments identification with onsite, non-invasive and non-destructive Reflectance Spectroscopy (RS).
Gorgias – Reflectance Spectrometer for Art
Any questions?

Contact CHSOS:
Dr. Antonino Cosentino
Email: antoninocose@gmail.com
Phone: +39 3283211186
Web: chsopensource.org
Address: via matrice 4. Viagrande, Italy