

## HySpex for Hyperspectral Art Scanning at Louvre (C2RMF<sup>1</sup>)

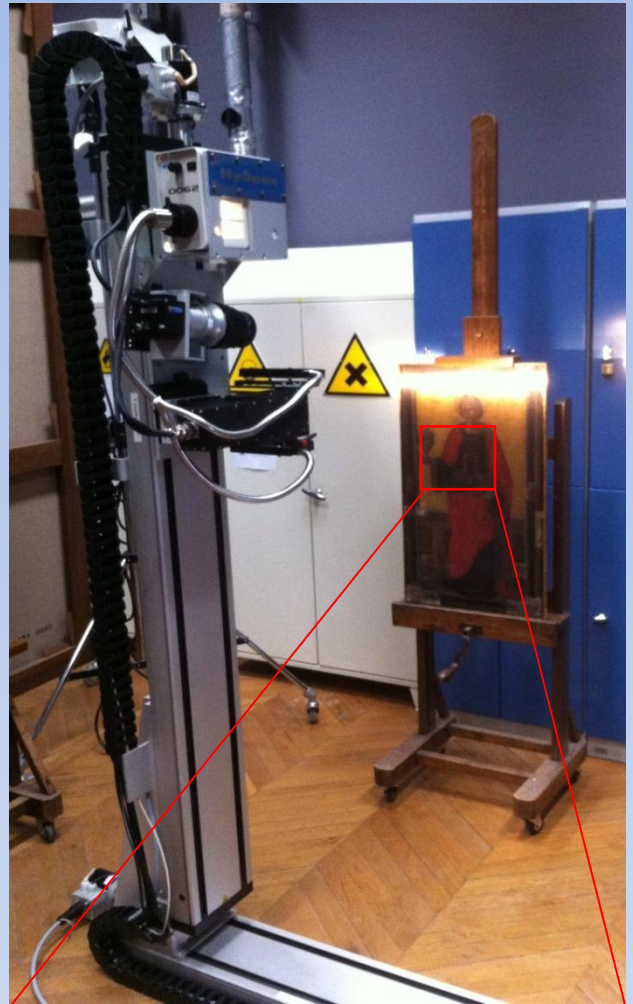
NEO was contracted by C2RMF (Le Centre de recherche et de restauration des musées de France) at the **Louvre Museum** in Paris to develop a novel instrument system for **hyperspectral imaging of large paintings** and other pieces of art. The system was installed at C2RMF's location early 2011.

As a part of NEO's on-site installation and training session, the system proved to be a very useful tool providing stunning images and **revealing previously unknown features** of old paintings (see picture).

The system used by C2RMF is based on NEO's **well proven HySpex VNIR-1600** combined with a large (100cm\*150cm) horizontal and vertical scanning stage, a fiber optic light source and a high resolution line scan camera yielding a **scene pixel size of approximately 12 $\mu$ m** at 30cm object distance. The setup is compatible with all HySpex cameras and can be delivered in both multi- and single-camera configurations to cover the desired spectral range.

The setup can easily be employed for **other applications** involving scanning of large vertically oriented objects such as buildings, plants, rocks, and even humans. By using the custom made HySpex close-up lenses, the instrument can be adjusted to the desired object distance. We deliver both **standard and customized hyperspectral** imaging solutions.

Please contact NEO ([hyspex@neo.no](mailto:hyspex@neo.no)) to discuss your application requirements.



Top: HySpex system installed at the Louvre Museum. Bottom: First test revealed previously invisible features on the lady's clothing.

<sup>1</sup>C2RMF is responsible for documentation, conservation and restoration of the items held in the collections of more than 1,200 museums across France. The C2RMF is involved in the development of technologies and scientific procedures employed in the preservation of art works, both on its own and in partnership with other museums and research institutions across the globe. Hyperspectral imaging is a project of the Archives and New Technologies department in association with the Restoration department. For more information on the center see <http://www.c2rmf.fr>. For more information on the hyperspectral imaging project, see <http://merovingio.c2rmf.cnrs.fr/technologies/>.