Our Philosophy

Efficient and high-precision production monitoring, quality control, inspection and reliable reverse engineering are absolutely essential to be competitive in a global market.

In the field of industrial metrology and beyond, optical and portable non-contact 3D measuring systems become more and more important. We offer optimized solutions around your inspection and digitization tasks to keep the quality of your products always at the maximum level.

Precise 3D scan data with high-resolution color texture

The CMHI chose this scanner model [smartSCAN] for its speed, resolution, accuracy, and portability. The light weight of the scanner (4 kg) and its relatively faithful recording of color were also important.

3D Imaging Report CMHI of the Peabody Museum, Harvard University

3D SCANNING SOLUTIONS FOR Arts & Culture

M E A S U R E T H E A D V A N T A G E

M E A S U R E T H E A D V A N T A G E
In the course of its evolution mankind has created magnificent works of art whose heritage must be preserved for both present and future generations. The digital acquisition and documentation of these masterpieces with state-of-the-art 3D scanning technology is therefore increasingly gaining in importance — be it in architecture, fine arts, archaeology or paleontology. The contact-free scanning process can be carried out in the museum as well as at the archaeological site, allowing for delicate objects to be handled with the utmost care and provides detailed 3D data with high-resolution color textures for thorough studies without using the original. The digital acquisition and documentation allows for delicate objects to be handled with the utmost care and provides detailed 3D data with high-resolution color textures for thorough studies without using the original.

**Virtual search for evolutionary traces**

Be it for the documentation of the current condition, the analysis of hand-drawn paintings, the creation of a comprehensive digital archive or the fast and contact-free scanning of the finds for evolutionary traces. These digital images serve, for example, as the basis for the recreation of wall paintings, or for the creation of functional reconstructions. These virtual images serve, for example, as the basis for the recreation of wall paintings, or for the creation of functional reconstructions.

Detailed structures with high-resolution color textures.

The generated 3D models often reveal fine details or irregular shapes or smallest height profiles. By applying the OPTOCAT software module ‘Texture Mapping’ photographs can be transferred onto the 3D data at sub-pixel accuracy, regardless of whether these images have been generated by the scanner or taken with any external camera. The advantage of this approach is that it allows the most comprehensive digital archive: The fast and contact-free scanning process can be carried out in the museum as well as at the archaeological site, allowing for delicate objects to be handled with the utmost care and provides detailed 3D data with high-resolution color textures for thorough studies without using the original. The digital acquisition and documentation allows for delicate objects to be handled with the utmost care and provides detailed 3D data with high-resolution color textures for thorough studies without using the original.

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**Digital “fingerprints” of works of art**

Precise scan data for paleontological and anthropological studies.

The virtual image is scalable to any size and serves as the basis for model and mold making or rapid prototyping in any desired dimension. Based on the digital templates, true-to-original copies are created with the aid of cast molds or 3D printers. These replicas can then be used in a variety of applications, e.g., for exhibition purposes or in educational material.

**Digitizing teeth and bone finds reduces the need for repeated physical handling of the sensitive object.** Even tiny objects are captured in minute detail, including its original color. Be it for the documentation of the current condition, the analysis of hand-drawn paintings, the creation of a comprehensive digital archive or the fast and contact-free scanning of the finds for evolutionary traces. These digital images serve, for example, as the basis for the recreation of wall paintings, or for the creation of functional reconstructions. These virtual images serve, for example, as the basis for the recreation of wall paintings, or for the creation of functional reconstructions.

**Digital data acquisition on-site or in the museum**

Digital 3D models for archaeology even under extreme conditions.

Easily changeable measuring fields

Black-and-white or color cameras

Using scan data widens the scope of scientific work in all aspects of the original. The third dimension of a work of art not only constitutes a detailed foundation for its studies, it also facilitates its professional restoration or reconstruction.

**True-to-original replicas in 3D**

3D digitization for replicas and mold making.

Extendable with turn/tilt unit, photogrammetry and tracking

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Digital 3D models for archaeology even under extreme conditions.

The optimum synergy of high-resolution 3D data with high-resolution color textures.

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**RANGE OF USE**

- Data for virtual reconstructions
- True-to-original replicas in 3D
- Precise scan data for paleontological and anthropological studies
- High-resolution, detailed 3D data
- Texture Mapping module for 3D data with high-resolution color texture
- Black-and-white or color cameras
- Easy changeable measuring fields
- Three triangulation angles (10°, 20°, 30°)
- 3D digitization for replicas and mold making
- Flexible, location-independent 3D scanning
- Optimum protection of the object thanks to contact-free data capture
- Digital images for precise analyses
- Data for virtual reconstructions
- Time-saving documentation and easy archiving
- 3D data for the creation of true-to-original replicas

**ADVANTAGES**

Be it for the documentation of the current condition, the analysis of hand-drawn paintings, the creation of a comprehensive digital archive or the fast and contact-free scanning of the finds for evolutionary traces. These digital images serve, for example, as the basis for the recreation of wall paintings, or for the creation of functional reconstructions. These virtual images serve, for example, as the basis for the recreation of wall paintings, or for the creation of functional reconstructions.

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**VIRTUAL RESEARCH & DOCUMENTATION**

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Arts & Culture

In the course of its evolution mankind has created magnificent works of art whose heritage must be preserved for both present and future generations. The digital acquisition and documentation of these masterpieces with state-of-the-art 3D scanning technology is therefore increasingly gaining in importance — be it in architecture, fine arts, archaeology or paleontology. The contact-free scanning process can be carried out in the museum as well as at the archaeological site, allowing for delicate objects to be handled with the utmost care and provides detailed 3D data with high-resolution color textures for thorough studies without using the original.

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