Vom Schrank ins Netz. 3D-Digitalisierung wissenschaftlicher Sammlungen – gewusst wie?

Introduction

From October 2017 to December 2020, the

BMBF funding project "Gyrolog - Development of a digital gyro collection for

historical and didactic research ". Its aim was to

the top collection of the University of Stuttgart, which is unique in Germany

Subsidiary collections at the Technical University of Munich and the Johannes Kepler University

To digitize Linz and selected accompanying objects and thus make them accessible to interdisciplinary scientific use in OpenAccess.

The reason for the project was the great importance of technical gyroscopes for numerous modern everyday and key technologies. Without professional processing, however, these objects remain silent because they are mechanically complex and

are heavily encapsulated. The aim of Gyrolog was therefore to free technical gyroscopes from their "black box" using digital methods and thus for research and

To develop teaching in the history of technology, technology didactics, museum education, etc.

The most modern techniques of computer vision, photogrammetry, endoscopy, computed tomography and data fusion were used as tools for digitization

for use. This new methodical combination made it possible to gain groundbreaking knowledge beyond the actual goal of Gyrolog

and experience for the 3D digitization of university and museum collections in general.

The intention of the conference at the end of the term of Gyrolog is on the one hand to present the methods used and the results achieved by Gyrolog. On the other hand, the meeting should also form a forum to present thematically related current research projects as well as fundamentally discussing methodologies, user requirements and application horizons of the 3D digitization of scientific collections. A plenary discussion with

The lecture program is rounded off by short impulse contributions from 3D practice.

Due to the corona pandemic, the conference will be virtualized. Details are given in the Registration section below.

We cordially invite you to participate in the final conference of the Gyrolog project.

Program

January 4, 2021

11.00-11.15 Welcome and introduction

Technical session 1: Methodology of 3D digitization I

11: 15-11: 45 Pedro Santos, Darmstadt:

Automatic 3D digitization of museum objects

11: 45-12: 05 Sven Simon, Stuttgart:

Gyrolog Methods Part I: Computed Tomography

12: 05-12: 25 Dieter Fritsch, Stuttgart:

Gyrolog Methods Part II: Integration of Computer Vision and

Computed tomography data

12: 25-12: 30 Moderated explained transition to wonderme

12: 30-13: 30 lunch break (wonderme is available all the time)

Technical session 2: Methodology of 3D digitization II

13: 30-14: 00 Michael Klein, Vienna:

3D modeling, visualization and animation in science

and technology - selected examples

14: 00-14: 20 Erika Érsek, Victor Häfner and Anne-Christine Benedix, Karlsruhe:

Out of service! Physical simulations to reconstruct

kinetic functional processes in virtual 3D models

14: 20-14: 40 Matthias Göggerle and Johannes Sauter, Munich:

Showcases - A digital playground for the Deutsches Museum

14: 40-15: 00 coffee break (with wonderme)

15: 00-15: 20 Fabian Schwenn, Hamburg:

Hamburg goes 3D. The digitization project "Hamburg Open

Science 3D / AV "

15: 20-15: 40 Fabian Hesse et al., Hamburg:

How to 3D? A user-centered, multi-media approach to digitizing Hamburg's collection objects

15: 40-16: 00 coffee break (with wonderme)

4th

Technical session 3: Digitize collections and use them in teaching

16: 00-16: 20 Stefan Przigoda and Maren Vossenkuhl, Bochum:

Mining models as objects of knowledge. Research-based deep exploration and 3D digitization in the German Mining Museum

Bochum

16: 20-16: 40 Florian Müller, Innsbruck:

3D documentation and visualization of ancient objects from the Archaeological University Museum Innsbruck

16: 40-17: 00 Hiram Kümper, Mannheim:

Research-based learning in the historical auxiliary sciences on 3D objects. Coins, seals ... and the rest of the world

17: 00-18: 00 end of the day with wonderme

January 5, 2021

Technical session 4: Potential for research and teaching: 3D models

and / versus 3D digitized material

11: 00-11: 20 Robert Päßler, Dresden:

Added value through 3D? 3D digital copies and 3D models in digital

Archive of mathematical models

11: 20-11: 40 Albert Kümmel-Schnur, Constance:

Exhibiting the invisible. Can 3D visualizations be real

Replace objects?

11: 40-12: 00 Marius Maile, Stuttgart:

Modeling, visualization, digitization in 3D

12: 00-13: 00 break with wonderme

diploma

13: 00-13: 30 Martin Stricker, Berlin:

3D and the future of scientific collections

13: 30-15: 00 Perspectives from 3D ?!

Plenary discussion with impulse contributions

Helmuth Trischler, Munich

Franziska Limbach, Bonn

Christiane Rambach, Stuttgart

Maria Niklaus, Stuttgart

Discussion leader: Beate Ceranski, Stuttgart

3:00 p.m. Farewell and end of the conference

Please note that the times given above may change at short notice.

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Sign up

Due to the corona pandemic, the conference will be virtualized via the Cisco Webex platform used at the University of Stuttgart and with the additional platform “wonder.me”.

When you sign up for the meeting, you'll get the Cisco Webex links for

the sessions and can participate directly from your browser (or alternatively download and use the desktop app - both are possible). You do not need your own software licenses.

We have the platform for meeting each other during the breaks

"Wonder.me" provided. You will also receive the corresponding link for this when you register. How this platform works will be discussed at the conference

explain before the first break and master the transition together.

We ask for your registration by email by 12/30/2020 if possible

office@pas.uni-stuttgart.de

Please do not hesitate to contact us at any time if you have any questions!

Contacts:

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Link: https://wissenschaftliche-sammlungen.de/de/termine/vom-schrank-ins-netz-3d-digitalisierung-wissenschaftlicher-sammlungen-gewusst-wie