

109 D. (10) Karnataka Digital Museum

Preamble:

KSCST has completed the KDH Programme: Digital documentation of Heritage Monuments using 3D laser scanning and Geo-spatial technology Technologies of state archaeological protected heritage monuments to capture the Surface Geometric details of the Monuments to generate 3D Point cloud data, 3D Mesh Models and CAD Engineering drawings to promote Virtual Tourism for reconstruction/restoration of the protected Heritage monuments comes under Dept of Archaeology, Museums and Heritage (DAMH), Govt of Karnataka. After the successful implementation of the program, KSCST has submitted the proposal for “Digital Documentation of Antiquities Displayed in Government Museums of Karnataka State using 3D Laser Scanning and Geo-Spatial Technologies” to DAMH during February 2023.

The **MoA** has been signed between DAMH and KSCST on 4th July 2024 and KSCST has received the work order ಕ್ರಮಾಂಕ:ಪ್ರಸಂಪ/ಸಿಬ್ಬಂದಿ-2/3ಡಿ ಲೇಸರ್ ಸ್ಕ್ಯಾನಿಂಗ್/2024-2025.

Objectives:

- Generation of 3D point cloud data, 3D mesh models, and CAD engineering drawings of antiquities.
- Geo-tagging of photographs of museums and creation of the database on various parameters of different types of antiquities in the GIS environment.
- Creation of Virtual Immersive Walkthroughs of Museums having Antiquities Using VR and AR Technologies

Progress: April – November 2024

- Project Advisory Committee (PAC) has been constituted to procure hardware/software and to provide technical guidance in successful execution of the project by involving Prof. B. Gurumoorthy, Chief Executive, Society for Innovation and Development (SID) and Professor, Centre for Product Design and Manufacturing, IISc, Bengaluru – Chairman, Dr. Narayan Panigrahi, Scientist at Center for AI & Robotics, DRDO, Bengaluru, Dr. Ravi Raju, Chief Research Scientist, Department of Materials Engineering, Indian Institute of Science, Bengaluru as Members and The Executive Secretary, of KSCST as Member Secretary.
- Organized 1st Project Advisory Committee meeting on 6th September 2024 and Approved minutes of the meeting of 1st Project Advisory Committee meeting
- Organized the demonstration of 3D scanners from various vendors at KSCST and CAIR lab at DRDO, Bengaluru on 23rd September 2024 for the committee members
- Organized Demo of CREAFORM Go!SCAN 3D, Shining 3D EinScan laser Scanner, ARTEC 3D Scanners And FARO FREESTYLE at KSCST and Found ARTEC 3D Scanners are best suitable for the Project based on the previous project experience and onsite/field conditions.

- Organized 2nd Project Advisory Committee meeting on 16th October 2024
- KSCST project team visited a Government Museum at Bengaluru on 22nd October 2024 to and collected the data on the size of antiquities, inscriptions and engravings in the coins, medals and jewelry etc.
- The committee agreed and approved the technical specifications to procure 1 qty handheld 3D Laser scanner for medium sized antiquities and a 1 qty desktop 3D Laser scanner for small sized coins/jewels/medals. e- tendering for procurement of 3D scanners is under progress.
- KSCST project team is planning to initiate the 3D Laser scanning of antiquities in any one of the Museums indicated by DAMH as part of inauguration of the project in the 4th week of December 2024 by inviting Shri. H.K. Patil, Hon'ble Minister for Law & Parliamentary Affairs and Legislation and Tourism Department and Shri. N. S. Boseraju, Minister for Science and Technology and Minor Irrigation



Glimpses of KDM Project

Executive Committee: For Information