"Collecting, Compiling, Cataloging and Sharing Heritage stereoviews”
TG status report
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RecorDIM Partners Meeting
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4. Discussion period and recommendations
5. Need for outside assistance / participation
RecorDIM Taskgroup on "Collecting, Compiling, Cataloging and Sharing Heritage stereoviews"

1. Status of the TG work:
According to the RecorDIM initiative progress can be stated for information providers as well as for information users:
Currently there are 2 main activities in the field of information providers:
1.1 to deal with existing heritage stereoviews and
1.2 to achieve new heritage stereoviews
1.1) **Existing heritage stereoviews open a realistic gate to the past**, concerning this RecorDIM taskgroup are to be mentioned:
The progress of the CMP/UCR Keystone-Mast Collection in the digitization of approximately 50,000 Heritage stereoviews (of a total amount of 350,000 stereoviews), as represented by Steve Thomas, cannot be judged high enough and is an ongoing activity.

Steve Thomas, Head of the UCR/CMP Keystone-Mast collection (left picture) by Francois LeBlanc (GCI) and viewing through stereoscopes at the CMP (right picture)
2 Masterpieces of the Keystone-Mast Collection representing approx. 50,000 historic heritage stereoviews of a total of 350,000 stereoviews “waiting for digitization and application”

Buddha of Kamakura “Dalbutsu”

Interior Throne Room Peking
However, due to the typical relative small base-to-distance ratio (=b/y) the standard deviation sy for spatial measurements from these kind of heritage stereoviews shows already approximately sy =± 0.2m(!) (as calculated from sy = ±((y/c)*sp’)*(y/b) with a baseline b=6.5 cm, a focal length c=7.5 cm, an object distance y=10m and an accuray for the parallaxe measurement sp` =±-10 µm).

This limited accuracy in spatial coordinate determination of approx. ± .2 m is an important reason, why this RecorDIM taskgroup prefers promoting the documentary value instead of the geometric aspect of existing heritage stereoviews!
1.2 Gaining new heritage stereoviews
ISPRS Comm. VIII President Ammatzia Peled as the representative information provider generated colour stereoviews of Heritage in Israel in outstanding quality, see http://www.rjb-3d.com/
The authors add current heritage stereoviews, for which they hold the Copyright, processed with the 3D Easy Space software:

• Please, wear color anaglyph glasses now:
Jerusalem: antique street/
medical bath color anaglyphs
by President Ammatzia Peled
Heritage stereoview Masterpiece: column base: Antoninus Pius (138-161) (Martian field, Rome: Vatican Museum) by W. Schuhr
Heritage stereoview (color anaglyphs): in the antique theatre of Tloss(Turkey) by W. Schuhr
Advantages of Heritage stereoviews:
Gaining a complete additional Dimension:
Monastry Bursfelde: part of the Wall in 2D & in 3D by W. Schuhr
1.3 Regarding information users it is the main concern of this task group, to provide state of the art documentation technology for the archaeologic field work. For this purpose it is the intention, at least partly to replace subjective interpreted manual sketches by objective high resolution photographs and, of course preferable, by heritage stereoviews:

Prefering the rectified low altitude photography by the Archaeologist Prof. Fahri Isik (University of Antalya) in Patara (Turkey) (left) and heritage stereoviews (State of Saxony Anhalt/Germany) (right)
Regarding information users also 1st steps for a “convincing cooperation” with Archaeologists in the ancient City of Patara (Turkey) as well as down in Magdeburg (Germany) are very promising, the Archaeologists in particular show great interest in heritage stereoviews taken from balloon:
2. Remaining steps for information user & provider of the RecorDIM TG on “Heritage stereoviews” to deliver:

2.1 to improve heritage stereoview recording & documentation (including improvements in digitization of existing stereoviews):

To achieve new heritage stereoviews an extremely light fibre glass rod single lens camera has been used. In addition a 3D-ROD-CAMERA LITE to obtain heritage stereopairs from approx 10m height, the Univ. of Appl. Sc. Magdeburg officially proposed to the German Ministry of Research, (planned 3D camera & simulated sample heritage stereoview, see left), aiming heritage stereoviews to add or even to replace manual sketches (compare manual sketch of a historic border mark (Saxony Anhalt, Germany) and the corresponding color anaglyphs of the stereoview on the right side).
2.2 to improve the website “3dsite.icomos.org” of this RecorDIM TG with respect to samples, visualization and applications of heritage stereoviews for heritage documentation, protection and reconstruction purposes:

RecorDIM Task Group on

"Collecting, Compiling and Sharing Heritage Stereoviews" to benefit conservation practices worldwide.

Addressing the RecorDIM initiative Roundtable-1 list of gaps and needs, in particular "to improve perception and communication in Heritage recording, documentation and information management", listed at http://www.getty.edu/conservation/publications/pdf_publications/recordim.pdf.
2.3 to recommend low-cost software like e.g., Easy Space 3D, Anaglyph Maker (see sample), z-Anaglyph etc. to prepare state of the art heritage stereoview presentations, e.g. as color Anaglyphs & to extract metric information from the stereo images.
3. Questions to be addressed in Rome

3.1 Are (at least) other RecorDIM taskgroups convinced to obtain stereoviews instead or in addition to manual sketches and in addition to 2D photographs for heritage documentation purposes?

e.g., heritage stereoviews in Rock Arts:
Alignements of CARNAC (France)
(W.Schuhr)

Samples for heritage stereoviews are welcome at schuhr3d@hotmail.com
4. Discussion period and recommendations

4.1 The queue “sketch, photography, stereoview” for many applications supposed to be a degree of comparison:

- A main characteristic of heritage stereoviews is, that for many purposes they are well suited for different(!), future interpretations, even for the next generation! This activity should not be taken over by a RecorDIM TG, which is concentrating on subjective (!) interpreted vector data.
- However, there are no standard receipts to obtain stereoviews!
- Depending on the “School“ and the expected 3D perception (from natural to extended) there is a huge range for an “optimum base to distance ratio“. Therefore it is highly recommended, not just to take 2 stereo photographs at an instant, but to take a queue of say 5 photographs with different baselength!

*(Make your own experiences in heritage stereoviews from learning by doing!)*

4.2 It is liked to point to the fact, the idea of this RecorDIM TG to use rather flexible light rods of approx. 10m length with a high resolution digital camera recently has been adapted by HEINZ RUETHER, to be used for Heritage stereoview documentation on the whole African continent!

4.3 Every TG should prepare a website, to which the ware house page should link.
5. Need for outside assistance / participation
5.1 Maintaining the TG website 3dsite.icomos.org
5.2 Technical verification and financing the 3D-ROD-CAMERA LITE
5.3 Convincing more Archaeologists about the obvious advantages of existing and new (!) heritage stereoviews and to define different applications for heritage stereoviews, e.g.
- Excavation documentation
- Monument Copy, protection and Reconstruction:
  - Trevi Fountain: Copy in Seoul (South Korea) (left) and the original
  - Virtual Museum: The Large Leshan Stone Buddha from Sichuan (China) in EON's 3D ICUBE virtual museum:
- Education in Archaeology etc.
- purchasing the Digital Keystone-Mast heritage stereoview collection