Measurements and Documentation of Buddhist Stone Inscriptions in China, Shandong

1. Introduction

2. Measurements and Data organization
   2.1. Different types of inscription location
   2.2. Measuring methods

3. Data processing and -modeling
   3.1. Levels of detail
   3.2. Maps and Plans
   3.3. 3D models
   3.4. Orthoimages and “Orthorubbings”

4. Database and GIS

5. Prospects and Conclusion

1. Introduction

2. Measurements and Data organization
   2.1. Different types of inscription sites
   2.2. Different types of measurement methods

Summary
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2.1. Different types of inscription location

Top or slope of mountain

Silishan

Top of Taishan

2.1. Different types of inscription location

A valley

Hondingshan valley

Southern slope of Hondingshan valley

Inscription of southern slope

2.1. Different types of inscription location

An inscription on a plane surface or on a stele

Diamond Sutra at Taishan

Inscription on Stele character size 2 cm

2.2. Measuring methods

• traditional GPS and Total station measurements for topography

GPS at Hondingshan

Total Station at northern slope of Hondingshan

2.2. Measuring methods

• near range photogrammetry in some extreme situation

Analog photogrammetry at Hondingshan

Digital photogrammetry at Tanchishan

2.3. Measuring methods

• Structure of processing and modeling of data is important for the further analysis

• We divide data processing into a horizontal and vertical hierarchy

• vertical -> different levels of detail

• horizontal -> different methods of 2D or 3D processing

• Structure of processing and modeling of data is important for the further analysis

• We divide data processing into a horizontal and vertical hierarchy

• vertical -> different levels of detail

• horizontal -> different methods of 2D or 3D processing
The horizontal documentation level:

- the whole province of Shandong (level 1)
- the regions or political districts of the province, like Dongping or Zoucheng (level 2)
- the inscription site, like a valley or a mountain (level 3)
- the inscription itself that could be a Buddha name, a sutra text or a commentary (level 4)
- each character of the inscription (level 5)
3.4. Orthofotos and "Orthorubbings"

- Level 4: Rubbing and "Orthorubbings"

- Level 5: Single character with exact location

- Production of an "Orthorubbing"

- 297 Characters Ming documented within this project

4. Database and GIS

- Database is an xml-based open source database
- Graphical part of the database is based on google map viewer

http://www.stonesutras.org
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4. Database and GIS

- Transcription
- Translation
- Rubbings
- Stones
- secondary literature etc
- location

http://www.stonesutras.org

5. Prospects and Conclusion

- Until now we have used photogrammetry because preciseness is more than sufficient
- In future we would like to try Laser scanning or other optical scanners, for example for the survey of stelae
- precise global coordinates of each inscription contained in the database allows for location based queries

Thank you very much for your attention

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