The HKUST Ancient Map of China Collection—the next step: from digital images to GIS and datamining

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Outline

- The HKUST Antique Maps of China Special Collection
- Digitization as preservation
- Digitization as enrichment
- Collaboration with the Pelagios Project
- Annotating Western and Chinese maps
- Further steps (geo-resolution, iconological analysis)
The UST library and its map collection

- UST map collection: 100+ ancient European printed maps of China and East Asia
- From Italy, the Low Countries, France, Germany, England
- An exhibition is currently on at the library:
  - [http://library.ust.hk/special/tartary/tartary.html](http://library.ust.hk/special/tartary/tartary.html)
World Map from the Nuremberg Chronicle of the World (Schedel, 1493)
A new map of China (Ortelius, 1592)
The kingdom of China (Speed, 1627)
China subdivided into its provinces (Coronelli, 1695)
Digitization as preservation

Workflow

Scanning → Storage (Tiff, jpg, pdf) → RSe server (Collection, thumbnail) → MARC record: bibliographic data → CMS metadata & images
Digitization process
Digital images

100 Mb JPG file
1,230 fragments
Rare & Special e-Zone

http://lbezone.ust.hk/rse/
Digitization as enrichment

Digitized maps increase accessibility, but are static surrogates of the originals.

The next steps:
- Transcribe old place names
- Identify their modern counterparts
- Link them to modern maps (geo-resolution)
- Analyze them as visual objects (image indexing)
Pelagios project: text based, modern maps

Place names from Homer’s Ilyad shown on a georeferenced map

http://commons.pelagios.org/
Recogito project: image based, ancient maps

Speed’s map of China (left) and the same map with image annotations (right)

http://lbezone.ust.hk/bib/b536691
## Transcribing and identifying locations

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Details of place name annotation on Speed’s map

Place names in Speed’s map of China
Challenges

The amount of annotation work is large. Crowdsourcing is an option. But old western place names in the maps are:
- difficult to identify
- non standardized
- difficult to read
Matteo Ricci’s Chinese World Map (1602)
Transcriptions of Chinese map names

Detail of Ricci’s annotated map of the world

Details of place name annotation on Ricci’s map
Advantages

- The map has been extensively researched.
- It is complementary to contemporary western maps.
- It can be used in the classroom: Chinese place names in the map are often non standard, but are easier for local students.
- It can be used by other institutions.
Next steps:
1. Geo-resolution

Geo-resolution of Roman place names from Recogito
Next steps:
2. Iconological analysis of cartouches

Fig. 10  Top left corner of Speed’s map of China

Fig 12  Source of Speed’s image
Linschoten, *Itinerario*, 1596.

Fig. 13  Source of Speed’s image
Conclusion

- Ancient maps are both textual and visual objects.
- They acquire meaning by being compared with other texts, other images, other maps.
- Digitization can increase both accessibility and knowledge.
- It can address both scholars and the general public, as users and as creators.