



International Course on Stone Conservation SC13

SESSION: Documentation

INSTRUCTOR: Rand Eppich & Ana Almagro

DATE/TIME: Monday, 29 April/All day & Tuesday, 30 April/All day

SESSION OUTLINE

ABSTRACT

Documentation is the first step in the conservation process. It provides a record of the condition and setting of an object at a specific point in time and serves as a diagnostic tool in the analysis of the conservation problem. As a baseline record, thorough documentation is critical for future monitoring and evaluation. The most useful documentation articulates change over time due to degradation, modifications and/or conservation interventions.

As there are many different conservation situations as well as a wide variety of tools it is necessary to understand overall Guiding Principles. These principles help the conservator select the appropriate level of recording balancing monument significance, tools, budget etc. A wide variety of documentation and recording tools will be presented from readily available low technology measuring tapes and digital cameras to high technology laser scanning. We will discuss the advantages and limitations of each tool; the criteria for selecting a particular tool and method based on the conservation needs; and the Guiding Principles of documentation: when to use the appropriate tool for the conservation needs balanced with budget, time and team expertise. There will be two lectures: Guiding Principles and Tools and Techniques.

After these morning lecture there will be a demonstration of the tools, discussion and introduction to the field exercise. The second day will be split into two exercises Field Exercise and Lab Exercises where participants will create base documentation records for their field work site, the Non-Catholic Cemetery in Rome. The exercise will be conducted using participants' own digital cameras and computers. Measuring tapes will be provided for scale control in photographs. Emphasis will be given on how to most effectively use your camera, computer and a simple measuring tape for the capture of maximum detail. During the Lab Exercise session participants will learn how to use readily available, low-cost image rectification software to produce scalable rectified images. These will be printed and used as the final base documents for subsequent condition mapping exercises.

OBJECTIVES

- To understand the Guiding Principles for the documentation of cultural heritage
- To determine the most appropriate documentation tool in response to the conservation questions and problems.
 - Understanding of which tools to use where and when to 'fit' to the conservation needs yet balanced with the significance of the stone object, scope and scale of the project, team expertise and budget
- To learn how to most effectively use simple tools such as the digital camera and a tape measure to create accurate documentation records.



CONTENT OUTLINE

These sessions will take place over two days in four main parts – 1) Lectures, 2) Demonstrations & Discussions, 3) Field Exercises, 4) Lab Exercises:

- LECTURE Guiding Principles for documentation of cultural heritage
 - What, when and why to document
 - Use of the principles for the selection of the 'right' tool
 - Three levels of recording will be outlined 'A' 'B' 'C' levels

- LECTURE Tools and Techniques
 - How and what tools to use
 - Introduction to the wide variety of tools available for documenting issues related to stone conservation
 - The publications *Recording, Documentation, and Information Management for the Conservation of Heritage Places: Guiding Principles* will be used.

- DEMONSTRATION – DISCUSSION
 - Demonstration of various tools and their functions: Disto, different types of cameras, tripods, tape measures and software and techniques
 - Discussion on the selection criteria scenario discussions – question session and small group discussions on selecting the appropriate documentation tool and method for a particular conservation scenario. The publication: *Illustrated Examples* will be used. Each participant will select and read one case study from this publication.
 - Use of digital cameras, image rectification and measurement techniques.
 - Introduction of the field exercise - GOALS and outcomes expected

- FIELD EXERCISE
 - Recording in the field using the tape measures, clip boards, distos and participants' cameras
 - Measuring the selected tombstones at the case study

- LAB EXERCISE
 - Processing the data collected – using software Photorectifier on the participants' computers
 - Printing out the final version of a rectified photograph for use during later sessions of condition reporting

Miscellaneous Tools

Image Rectification

PTLens – image rectification software. easy

<http://epaperpress.com/ptlens/>

Photoplan – image rectification software that works inside AutoCAD (all versions). Not cheap but very useful

www.photoplan.co.uk

Photoshop – rectification can be done along with removing lens distortion but isn't the best way
PhoToPlan

http://www.kubitusa.com/CAD/Products/PhoToPlan_Camera/CAD_photogrammetry.php

Photogrammetry

Pokescope – stereo image pair visualizer. Fun and Free. Aligns your stereo pair in one direction only.

www.pokescope.com

Photomodeler – photogrammetric software – not cheap but useful

<http://www.photomodeler.com/index.htm>

GPS Software

EasyGPS – gps download software – includes input for almost all GPS units

<http://www.easygps.com/>

GPS software - free

www.topografix.com

GPS Utility – a free translator

www.gpsu.co.uk

GoogleEarth – of course (if you don't already have it) You can now download all your gps coordinates directly into this!

www.earth.google.com

CAD and 3D

ProgeCAD – AutoCAD type software – works really well

<http://www.progesoft.com/>

MeshLab – free and very good for dealing with pointclouds

<http://meshlab.sourceforge.net/>

DISTO – the most useful tool.

www.leica-geosystems.com/cpd/

Image Editing Photography

PTGui – panoramic image editing software

<http://www.ptgui.com/>

SESSION OUTLINE CONT'D.

PICASA – Image editor – free and works well

www.picasa.google.com

expo disc – for getting the right white balance on your images

www.expoimaging.net/

Video

Adobe Premiere – good software works on PC or Mac

www.adobe.com/products/premiere

FinalCut – the best software in my opinion for video editing – Mac only NOT cheap but worth it

<http://www.apple.com/final-cut-pro/>

SoundForge – for editing audio

www.sonycreativesoftware.com/products/soundforgefamily.asp

Geographic Information Systems

ArcView or ArcGIS – NOT cheap at all but they do offer student discounts and trial versions. The on-line tutorials are very good!

www.esri.com

Quantum GIS – Open source GIS software – what Fulvio uses

www.qgis.org

MapInfo – lower cost GIS software

www.rockware.com

Other Useful Things

Don't forget about Ebay for good deals on equipment!

Card Recovery software – good for recovering the images from corrupted camera cards

www.cardrecovery.com/

OCR – Optical Character Recognition – once you scan a document you can turn it from an image into a word document

www.simpleocr.com/

PTM – polynomial texture mapping

<http://www.hpl.hp.com/research/ptm/>

Openoffice – all the stuff you need

www.openoffice.org/

Mindmapping summary – a lot of freeware is listed here



<http://www.mind-mapping.co.uk/mindmapsoftware/mind-mapping-software-summary.htm>



READINGS


 = Essential reading material


 = Available online

 Clark, Kate. 2007. Informing Conservation – Introduction. In *Recording, Documentation and Information Management for the Conservation of Heritage Places : Illustrated Examples*. edited by Rand Eppich and Amel Chabbi. 3. Los Angeles: Getty Conservation Institute. http://www.getty.edu/conservation/publications/pdf_publications/recordim.html



Clark, Kate. 2001. Introduction. In *Informed Conservation: Understanding Historic Buildings and Their Landscapes for Conservation*. London: English Heritage. Copies will be made available during the course.

 Dallas, Ross. 2007. TOOLS OVERVIEW. In *Recording, Documentation and Information Management for the Conservation of Heritage Places : Illustrated Examples*. edited by Rand Eppich and Amel Chabbi. 5-9. Los Angeles: Getty Conservation Institute. http://www.getty.edu/conservation/publications/pdf_publications/recordim.html

 Eppich, Rand, and Amel Chabbi. 2007. Preface. In *Recording, Documentation and Information Management for the Conservation of Heritage Places : Illustrated Examples*. Los Angeles: Getty Conservation Institute. http://www.getty.edu/conservation/publications/pdf_publications/recordim.html

 International Scientific Committee for Documentation of Cultural Heritage – <http://cipa.icomos.org/>

Leach, Peter. 1988. *Surveying of Archaeological Sites*. London: Institute of Archaeology Publications. Copies will be made available during the course.

 Letellier, Robin, Werner Schmid, and François LeBlanc. 2007. *Recording, Documentation, and Information Management for the Conservation of Heritage Places : Guiding Principles*. Los Angeles: Getty Conservation Institute. Pages vii – viii, xiii – xiv and xvii – xviii http://www.getty.edu/conservation/publications/pdf_publications/recordim.html

 Letellier, Robin, Werner Schmid, and François LeBlanc. 2007. Chapter 1. *Recording, Documentation, and Information Management for the Conservation of Heritage Places : Guiding Principles*. Los Angeles: Getty Conservation Institute. http://www.getty.edu/conservation/publications/pdf_publications/recordim.html

