

## INTERNATIONAL CO-OPERATION FOR DOCUMENTATION AND MONITORING OF THE CULTURAL HERITAGE

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### ABSTRACT

CIPA's mission is documentation of the Cultural Heritage, the necessary technology for data collection and monitoring, data control and quality management, data administration, data archiving, data maintenance; data retrieval, data use, data comparison and analysis of data changes. In this area a great number of gaps are located which have to be bridged. The method of bridging is international and inter-professional co-operation. CIPA, the ICOMOS & ISPRS Committee on the Documentation of the Cultural Heritage, is presented with its 10 Working Groups. The international activities of ISPRS and ICOMOS are well received and bridge gaps for a better future of the coming generations.

### KURZFASSUNG

CIPA's Aufgabe ist die Dokumentation des Kulturellen Erbes, die notwendige Technologie für die Datenerfassung und für deren regelmäßige Wiederholung, Datenkontrolle und Qualitätsmanagement, Datenverwaltung, Archivierung, für die Daten-nachführung, Datenbereitstellung, Datenverwendung, Datenvergleich und Analyse von Veränderungen. Im Bereich dieser Arbeitsaufgaben werden eine Anzahl von Lücken geortet, die überbrückt werden sollten. Die Methode dafür ist internationale und interprofessionelle Zusammenarbeit. CIPA, das ICOMOS-ISPRS Komitee für die Dokumentation des kulturellen Erbes, wird mit seinen zehn Arbeitsgruppen vorgestellt. Die internationalen Aktivitäten von ICOMOS und ISPRS werden gut angenommen. Sie helfen, die Lücken zu überbrücken. Es sind Aktivitäten für eine bessere Zukunft kommender Generationen.

#### 1. CULTURAL HERITAGE

Cultural Heritage is considered everything worth to be handed over from generation to generation, worth to be mentioned in a testament. Cultural Heritage can be immobile or mobile. Cultural Heritage can be of importance for some subjective or objective reason, can be of value for just one family, for a group of people, for a nation or for mankind as a whole. The importance can be based on the fact, that it is somehow unique, special, interesting, beautiful, or just valuable. For many practical reasons it is advisable to register and document everything: in order to manage systematically its maintenance and development, or just to prove ownership or the state in case of loss, crime, accident or catastrophe, for the insurance company or for the subdivision among heirs, etc. If we need documents for some reason and do not have them, we consider it a gap.

#### 2. DOCUMENTATION

Documentation of an object means a collection of descriptions, drawings, and images in such a form that the purpose of documentation is fulfilled: At any time now or later we can retrieve the most important information about the object from text-, drawing- or image- or also sound documents. The object itself is therefore not any more necessary. In case of loss, damage or destruction the documentation could serve as a basis for repair or

reconstruction: Documentation as a part of cultural (and financial) civil protection. Documents are expected to be true. Photographic images are such documents. But the image alone is not enough. Photographic documentation should be accompanied by some written information, e.g. date of photography, the inner orientation parameters, some pass-information etc. Completeness is the next requirement. For 3D we need stereo-partners. For block-adjustment and restitution of a complete and complex object we need overlapping images. For colour documentation we need a colour proof and proper illumination. As an intermediate summary we find that proper documentation photography, whether analogue or digital, whether static or film or video, needs some more know how, which must be available for conservationists. Otherwise we have a gap.

#### 3. MONITORING

Monitoring means regularly repeated documentation. The reason for monitoring is status-control, change detection and change analysis in time, before it is too late or too expensive. Any documentation has to be up to date so that it can be used for proper decisions. The memory of man is very poor as much as details are concerned, specially when we see the object very often. Slow decay we recognise too late, slow or piecewise changes we cannot remember properly. We need the assistance of image documents which we can compare. Easily



comparable images should be taken from the same place and at the same time of the year and of the day and at comparable weather and light conditions. Again, we need some good rules for monitoring by photography. Without such simple rules for monitoring we may have another gap.

#### 4. INTERNATIONAL CO-OPERATION FOR DOCUMENTATION AND MONITORING OF CULTURAL HERITAGE

International Co-operation for Documentation and Monitoring of Cultural Heritage is something very advisable for many reasons:

- ◆ Cultural Heritage of the same type and from the same time is distributed across the borders of today, because the Roman Empire, the Byzantine Empire or the Austrian-Hungarian Monarchy had different areas of influence. Classical Archaeology, Byzantinistic research, or studies on Austrian Youth Style are thus automatically international. Many institutions and scientific societies work internationally and their results should be available for all relevant national institutions. This is not yet well organised in all cases. A gap has been found.
- ◆ Egyptian artefacts can be found today in London, Paris, Berlin, Vienna and in many other towns outside Egypt. The same can be said about the Greek and many other monuments. Scientific research, e.g. comparisons or completions, need co-operation, bridging borders, access to data of other nations. This is not yet easily possible everywhere. We have located another gap.
- ◆ World Heritage monuments, the top monuments of mankind under protection of UNESCO, are observed internationally. Documentation and Monitoring of World Heritage sites must follow some realistic standards otherwise its management would fail. The standards for their documentation are not yet completely defined. We have another gap.
- ◆ Some countries are rich enough to do documentation and monitoring of the Cultural Heritage by themselves. Others have severe problems and need help. Help must come in time before it is too late, before damage, decay or demolition threatening by normal decay or by stupidity, after revolution or by war or by other catastrophes: inundation's, storms, earthquakes. If the richer countries don't help, we recognise a severe gap, and mankind could be the loser.
- ◆ Some countries have the know-how and are grown up and ripe to do proper documentation, others are in hands of politicians who need all the money of future generations for momentary projects, only. Here we see a mental gap which has to be bridged. Mental gaps need education and communication. Internet and international co-operation are good means for mutual information, technical know-how-transfer and education.

#### 5. CIPA'S EXPERT AND WORKING GROUPS

CIPA has *Expert Groups* – organised according to an ICOMOS – ISPRS matrix of working areas for CIPA Board

Members, National and Committee Delegates and for all co-operating experts of the world for a free dialog on problems related to the documentation of the Cultural Heritage. It is an open forum, a market place for the discussion of problems and proposals and for mutual expert assistance, for information and education. Each working area has two observers ("Chairpersons of Expert Groups") who are connected to the CIPA Working Groups which learn this way about problems and proposals perhaps not yet considered. One can make contacts and invite interesting and interested personalities and top experts to take part in the activities of the Working Groups. The *Working Groups* have a well defined programme, selected, evaluated and approved by the *Expert Advisory Board* of CIPA. This Expert Advisory Board consists of all chairpersons and co-ordinators of Expert and Working Groups of CIPA. There is another Advisory Board in CIPA, the *Delegates Advisory Board*. It is growing fast and has now already members from about 30 countries. Its tasks are communication between CIPA and the member countries of ICOMOS and ISPRS as well as realisation of proposals in the home countries.

The permanent *Working Groups* and the not permanent *Task Groups* have the following aims and tasks:

##### Working Group 1:

##### Documentation & Documentation Management.

The Working Group is discussing the future of Heritage Documentation and working on recommendations. Further it plans for international workshops with the aim to encourage more experts to get in contact with CIPA and to really understand, develop and forward its mission. Chairman is the Vice-President of CIPA, Robin Letellier, Canada.

##### Working Group 2:

##### Heritage Information Systems (HIS)

has no strategic plan developed yet for the organisation of the HIS-Chaos in the world. But now it seems that Internet-Networking provides an acceptable solution. Chairman is Bosse Lagerqvist, Goeteborg, Sweden.

##### Working Group 3:

##### Simple Photogrammetric Systems

is under new chairmanship of Spain and France. Antonio Almagro, Spain, developed and combined a field photogrammetric system, which is rather simple and cheap. P. Grussenmeyer together with Pierre Drap, France, contributed with an internet based restitution program. Andre Streilein, the Netherlands, prepared a simple rectification program for the internet. The Working Group shall test, compare and adjust besides the professional systems with priority ready-to-use, low-cost and simple systems.

##### Working Group 4:

##### Digital Imagery and Virtual Reality

is under the chairmanship of Klaus Hanke, Innsbruck, Austria, and Andre Streilein, Delft, The Netherlands, and is booming with many papers concerning the know-how transfer from ISPRS into the users world of ICOMOS. Digital imaging, measurement and visualisation techniques have changed the documentation approach and offer new possibilities which should be tested, compared and developed for prosperous and more



economic use. The Working Group offers a test data set free for everybody who wishes to learn the handling and contribute to the use of such tools and materials. (<http://cipa.uibk.ac.at/dataset.html>)

**Working Group 5:  
Archaeology and Photogrammetry**

developed a very informative and didactically excellent home-page, which is a real show-window of CIPA. (<http://www.univie.ac.at/luftbildarchiv>) The chairpersons are Michael Doneus, Vienna, Austria, and Cliff Ogleby, Melbourne, Australia.

**Working Group 6:  
Surveying Methods for Documentation**

Contacts to FIG are still missing. The Working Group offers field proven surveying and documentation technology, such as for example CART from Canada: (<http://nickerson.icomos.org/cart/>) and checks them for possible amendments by combination with photogrammetric and other methods. Chair: Steve Nickerson, Canada. Deputy chair is W. Boehler, Mainz, Germany.

**Working Group 7:  
Photography**

is newly formed. Its aims are: better imaging with consideration of the special need of conservationists and photogrammetrists, better archival quality, better suitability for change-detection in time. Special methods are tested for applicability as for example the panoramic photography, fisheye and shift lenses versus metric cameras, video documentation etc. A bridge will be built by this Working Group to the imaging industry and to photographic societies. Chairman is Günter Pomaska, Germany.

**Working Group 8:  
Cultural Landscapes**

has been started just recently. Chairman is Erwin Heine, Austria. As his Deputy has been invited H. Olenderek, Warsaw, Poland. UNESCO and ICOMOS have included Cultural Landscapes into their scope. CIPA has to follow and will offer its technological know how in Aerial Survey, Geographic Information Systems, Digital Terrain Modelling and Orthophotography for the survey of Cultural Landscapes, National Parks and Historical Gardens and Sites. Monitoring from air, change detection in time and planning of measures are within the scope of this working group. A new bridge between the ICOMOS and ISPRS world.

**Task Group 1:  
Non Professional Heritage Recording**

offers an internet-based heritage information system called APIS which is ready for use in German and English language for international input and data exchange. Many countries are already teaching amateur photogrammetry in the meantime. It is hoped that Task Group 1 furthers expedition- and tourist-photogrammetry, which is considered a valuable contribution for the safeguard of monuments in developing and poorest countries. Another initiative concerns the co-operation with the UNESCO-schools in all countries: Scholars watch the development of the built heritage. About APIS see <http://apis.org>. Chairpersons are Jozef Jachimski, Krakow, Poland, and Ulrike Herbig, Vienna, Austria.

**Task Group 2:  
Single Images in Conservation**

The group is readily formed and has an excellent web-page ([http://cipa.uibk.ac.at/tg2\\_1.html](http://cipa.uibk.ac.at/tg2_1.html)) on the use of single images. This is only the beginning, because Task Group 2 has planned a textbook on "Single Images in Conservation", but this has to be written at first.

For more details see <http://cipa.uibk.ac.at>. For starting contacts to CIPA, please fill in the questionnaire there and contact by email the chairperson of the most interesting Working Group. Communication among all of the CIPA experts via CIPA mailing list is open for registered and approved experts, only.

## 6. CIPA'S GENERAL MISSION

- CIPA has a mission: to bridge the above mentioned gaps.
- CIPA has ideas how to do it.
- CIPA is something for all experts, for the experienced as well as for the young generation.
- In CIPA, the ICOMOS and ISPRS Working Teams do practical research and development, and take care for mutual know-how transfer.
- CIPA furthers professionals and professionalism.
- CIPA forwards the most economic methods and the optimum synergies for documentation and monitoring of the Cultural Heritage.
- CIPA is organised.
- CIPA has a Working Programme and also the experts for mutual dialog, consultation and project work.

CIPA can also be considered simply as a team of internationally co-operating friends who wish to bridge the gaps existing in its wide working area, to contribute to the conservation/preservation of the cultural heritage, and to help developing the cultural environment. The mission is directed to the far future. Not this generation will profit the most from CIPA's activity, but the next ones, the generations of heirs of a more and more beautiful cultural and natural environment.



