

# Greece

Stefanos Kollias  
School of Electrical and Computer Engineering  
National Technical University of Athens

## A. Users and content

### What are the main materials/categories of objects being digitised?

In Greece there are some major digitisation activities taking place, funded partially by the State and by the Greek Information Society Programme. All types of materials are being digitised, including books, photographs and 2-D objects, paintings, videos, films, sound documents, music, 3-D (archaeological) objects and monuments.

### How is the digitised CH content being distributed?

Digitisation takes place both in organisations that are located all over the country, as well as in centralised locations, selected by the funding organisations/Ministry of Culture based on the significance of their content. In most cases there are corresponding websites that show the digitised material, generally, in low quality. In parallel, the Hellenic Ministry of Culture sets up the single portal to the Greek cultural environment, called <http://www.culture.gr>.

### Are there any eLearning or creative industry uses for the digitised CH material?

Some organisations use their digitised material for organising demonstrations of educational value – especially when dealing with 3-D environments of archaeological sites. Moreover, the Greek Ministry of Culture is investing a significant amount of funding for generating cultural content for schools, both in CD-ROM and DVD forms as well as for providing access to it through the Greek schoolnet.

### Are there any special issues that deal with the general accessibility of the digitised cultural content?

A pool of best practices, following the MINERVA and MINERVA Plus principles, have been conducted and been provided to the digitising organisations, to assist them in digitising and organising their collections and creating their websites and portals.

## B. Technologies for digitisation

### What common standards are most commonly used in digitisation?

The aforementioned studies that the digitising organisations have been provided with, through the aid of the Greek Information Society Programme, define common standards that digitisation and – metadata – annotation should follow. Dublin Core is the most commonly used standard, while other standards that are used include Uni-marc, Cidoc-CRM, MPEG-7. There are cases where specific thesauri are generated, especially when dealing with common thematic categories.

### What technologies and tools are most commonly used in digitisation?

Digitisation technologies include 2-D page scanning and OCR, sound, speech and music digitisation, low and high resolution video coding, high resolution film scanning, 3-D object coding. Generation of TIFF, JPEG and MPEG digitised content formats is the most commonly adopted procedure for digitising 2-D images, video, sound and films. Generating multi-resolution copies of the material is the basic way used for storage, access and web-based presentation of it. The adopted tools are based on software and hardware implementations of these technologies.

### **How is interoperability ensured?**

Since most of the content is generated by different organisations, there are various standards used in the annotation procedure. However, there are some cases that organisations have used their own – which have been using for long periods – annotation format. To achieve interoperability, the Hellenic Ministry of Culture has set up a project (1 MEuro) which will examine the specific standards used in the majority of digitised cultural materials and will define mappings between these and the well known standards. Moreover, interaction has been initiated between the Greek members of the MICHAEL Plus project (Hellenic Ministry of Culture, National Technical University of Athens) and main cultural organisations digitising content, so as to align the generated/used metadata structures with that of MICHAEL project, thus increasing accessibility to their content.

### **Have any research needs emerged?**

The latter work also includes a research part, which is related to semantic interoperability among the different standards and annotated cultural content. Technologies from the Semantic Web, generating semantic representations of knowledge are the main research topic in this framework. Some universities and research centres, such as National Technical University of Athens, ICS-FORTH, University of Thessaloniki, University of Athens, Technical University of Crete contribute to this research, both in the framework of Standardisation Organisations (W3C, ISO) and of R&D projects.

## **C. Sustainability of content**

### **What funding models and funding sources are most commonly used in digitisation?**

Most of the funding comes from the Hellenic Ministry of Culture and the Information Society Programme. Some matching funds come from private organisations when digitisation refers to cultural content possessed by them.

### **Have you any examples of cost-reduction?**

Some attempts to share means of digitisation have been made, however, at a rather small scale.

### **Have you any examples of national competence centres in digitisation of cultural content?**

The main competence has been achieved at R&D level, where universities and research centres, including National Technical University of Athens, ICS-FORTH, University of Patras, University of Thrace have produced a set of studies for digitisation and annotation of cultural content to be followed by digitising organisations. Moreover, the Hellenic Ministry of Culture considers the formation of a Digitisation Centre which will be able to assist digitising organisations in technological and implementation issues.

## **D. Digital preservation**

### **Are there national policies for digital preservation?**

Not yet.

### **Can you give examples of tools or technologies used for digital preservation of CH content?**

Digital preservation is an issue that has started being considered by many Greek digitising organisations; however, no specific tools or technologies have been largely adopted yet.

## E. Monitoring progress

### Input/output indicators

Input	MEUR	Comment
Funding allocated to support digitisation - government	100 Meuro in total for the period 2003-2007. 100 Meuro in total expected for period 2008-2013.	
Funding allocated from within existing institutional budgets*	Small portion compared to the above.	
Size of work-force (full-time equivalent posts)	250 projects in 2003-2007. Much smaller number of (focused) projects foreseen in 2008-2013.	

\*Combined total, including personnel costs.

Output	Number of collections / items	Comment
Number of digitised collections	250	
- museums	90	
- libraries	20	
- archives	140	
Number of digitised collections recorded in a national inventory		there is no national inventory of digitised collections
- museums	80	
- libraries	20	
- archives	130	

A questionnaire, on related digitisation issues, was addressed to about 140 organisations currently implementing digitisation programs and being funded through the national "Information Society" Programme. About 60% of the organisations have provided their responses, which refer to the following amount of content being digitised until the beginning of 2008:

The digitised content - in appropriate forms - is becoming publicly available in respective websites of the organisations. The Hellenic Ministry of Culture sets up a main portal to Hellenic cultural content, <http://www.culture.gr>. Similar actions are foreseen by the National Audiovisual Archive for the Hellenic audiovisual content.

Content type	Quantity
Books: number of pages	2.000.000
Written documents: number of pages	1.750.000
2-D objects : number	30.000
Photographs: number	300.000
Paintings: number	3.000
Art designs: number of items	20.000
Video: hours	3.000
Film: hours	3.000
Sound: hours	12.000
3-D objects: number	10.000

**Use indicators**

Use	Amount	Comment
Use of web-sites distributing digitised heritage content	200	by 2008
- user sessions		
- average duration of user sessions		
- average page impressions per user session		
Purchase or distribution of CDs / DVD s	200	
Audiences for streaming, video-casting or broadcasting		

**Assess any user-need surveys made on digital heritage content services**

The main issue considered in this framework is copyrights management. The Hellenic Copyright Office has been also funded to produce digitised related material and information. They have also contributed, through the Hellenic participation, to the MICHAEL Plus project, a report entitled *National Legal Requirements for publication of cultural heritage material on an online service*. The conclusions of this contribution are summarised below:

The following general rules should be considered regarding copyright issues and national requirements for publication of cultural heritage material on an online service:

- 1) if the object to be illustrated is protected by copyright law, the licence of the right holder has to be granted
- 2) contacting the competent collecting society for a category of right holders may help in identifying and contacting right holders
- 3) even if protected by copyright law, a work may be used without the authors consent in the cases described as limitations or exceptions to copyright law 2121/1993
- 4) if the object to be illustrated is covered by copyright law but its term of protection has expired (see above mentioned regarding duration), it can be reproduced freely with the reservation of the respect to the relevant moral rights as represented by the Ministry of Culture
- 5) if metadata are imported by other metadata collections, it should be judged according

to the criteria of the *sui generis* right of the maker of a data base whether or not it constitutes an illegal extraction and/or re-utilisation of the whole or of a substantial part, evaluated qualitatively and/or quantitatively, of the contents of that database

6) if a general agreement is signed with all involved cultural institutions regarding both the offered illustrations and the metadata exported, most of these issues will be covered properly

It is worth also mentioning that Creative Common Licences have just been introduced in Greek reality. One could think of using this type of licenses, although there is no relevant Greek decision regarding their validity yet.

The Hellenic Copyright Office will be used - as an intermediate and consultant - to all cultural institutions involved in digitisation, as far as copyright issues are concerned.