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Editorial

In this issue you can see that we have decided to give space to some of our on-going projects. We are certainly also willing to promote relevant nationally funded projects or programmes.

Finally, I was saddened to see that Edsger Wybe Dijkstra died on August, 6 in the Netherlands. I will leave you with one of his famous remarks:

"In their capacity as a tool, computers will be but a ripple on the surface of our culture. In their capacity as an intellectual challenge, they are without precedent in the cultural history of mankind".

B. Smith, Head of Unit
Cultural Heritage Applications

Our team would like to wish a speedy recovery to Jose Esteban, who is the Spanish member of the National Representatives Group.
(see our webpages on the this Group)

What's on ?

Danish EU Presidency

The Danish Minister for Science, Technology and Innovation, Mr. Helge Sander, declared that the highest priority in the area of research is "strengthening the efforts to establish the (European) Research Area" (ERA).

His aim is

- to establish common objectives for the ERA.
- To emphasise the extension of the ERA to include other European organisations


And finally to maintain the on-going debate and consolidation of the Lisbon Process.

6th Framework Programme's Specific Programmes adopted.


An agreement has been reached among the Council, Parliament and Commission on the last outstanding issues on ethics concerning the Specific programmes. The Council and the Commission will aim to complete the legislative procedure as early as possible and at the latest in December 2003.

Following this agreement, the Competitiveness Council has adopted (on 30/09/02) the Specific Programmes for FP6. They have all been adopted unanimously, with the exception of the Specific Programme "**Integrating and Strengthening the European Research Area**", where Italy voted against.

For full background information, please read

 **Full speech of the Minister for Science, Technology and Innovation, Mr. Helge Sander, in the European Parliament in Brussels, on August 26, 2002**

For full background information, please read

 **2451st Council meeting's minutes, Brussels, 30 September 2002**
The 'Specific Programmes' where the first item debated

You can find this newsletter and more information on our activities on our web site at :
<http://www.cordis.lu/ist/ka3/digicult/en/newsletter.html>
Subscribe to this newsletter by sending a message with "subscribe" in the subject line to
digicult@cec.eu.int

FP6: Latest Developments




IST 2002 EVENT IN COPENHAGEN



- click on the event's icon above if you want to obtain the conference programme



- click on the Registration icon above if you want to find out how to register on-line

- our unit will be represented ! click on <  > if you wish to have a look at our unit's workshop programme



EXPRESSIONS OF INTEREST

As announced since the start of the invitations for Expressions of Interest, CORDIS offers you now a search possibility on the Expressions of Interest we received. It helps you find out about possible contact persons for your project in your thematic priority and gives you also access to the abstracts of the Eols.

http://eoi.cordis.lu/search_form.cfm



WORKPROGRAMME 2003-2004

The first presentation of the strategic directions which are developed in the new workprogramme as well as their rationale will be given on the IST 2002 EVENT in Copenhagen



SCIENCE AND TECHNOLOGY FORESIGHT

“Research and innovation policies are based on (implicit or explicit) visions of the future of science, technology and society. Therefore open co-ordination applies also to these visions. This is why co-operation in Foresight is called for in the European Research Area.”

To that end, the Cordis site offers you these webpages: >>> [foresight](#)



What you should know on FP6 and where to find it

- [European Commission general web page on the 6th FP in the European Research Sector](#)
- [Presentation of the new INSTRUMENTS of FP6](#)
If you come across words like “integrated projects”, networks of excellence” and “strps”, you should have a look on the Europa site to find out what exactly they mean
- [Rules for participation and dissemination](#)
The rules for participation and dissemination for the EC and Euratom Framework Programmes are likely to be adopted in late October. Please watch the relevant Commission “EUROPA” web-pages
- [Looking for partners for the new Framework Programme?](#)
Cordis Interactive Service is currently preparing a Partners service which will be launched in the coming months. You can already **start preparing for FP6** by creating/updating your partner profile to register your interest to participate. You can also start searching partners who have already entered their details for FP6.
[CORDIS PARTNERS SERVICE](#)
- [Are you ready for FP6 ?](#)
Cordis offers you a special site with information on the current status of FP6, on forthcoming national events, on the already registered partners, on contacts that can be made before the FP6 launch event on :
<http://www.cordis.lu/fp6/>
- see also the last issue of eCulture in which we already gave information of the same kind on [FP6: eCULTURE VOLUME 3 ISSUE 3](#)



Latest Publications

Scix Newsletter

PULMANweb:

Digital guidelines for public libraries and their local cultural partner organisations on social policy, management and technical aspects

Pulman's first digital guideline manual is available online for download. It is the first and provisional edition of the PULMAN guidelines; you are invited to send your comments before the end of November 2002; by that date a second edition will be produced.

For now, the guidelines only exist in English to enable as many people as possible to see them. The translation into the national languages of the PULMAN project partners countries has already started.

[Pulman guidelines manual](#)
[Contact the project coordinator](#)

Today's technology offers new solutions to scientific publishing and information exchange, in areas such as the provision of scientific e-print services and support for new forms of interactivity and communication in the chain from author to end-user but these often remain under-exploited because of a lack of sound business models and pilots. The SciX project examines, through business process engineering techniques, the current business models, demonstrate that alternative models are technically and economically viable and study the obstacles to change.

SciX is a 24 month project with an EU funding of €1.000.000. Co-ordinated by the University of Ljubljana (Slovenia), the partners include Swedish Business School of Finland, Icelandic Building Research Institute, an Indra (Spain), Technical University of Vienna (Austria), FGG Institute (Slovenia) and the University of Salford (UK). SciX is pronounced like sigh-ex.

[Index of the already published newsletters](#)
[Scix project homepage](#)

El.pub electronic publishing
R&D news and
resources

The European Library (TEL) conference report

The European Library (TEL), a 30-month co-operative project of our unit (Digital Heritage Applications) will provide the groundwork on which to build a pan-European service.

The project and a number of preliminary results of the project have been presented at the international conference 'The European Library – Milestone Conference' on April 29-30, 2002 at the Deutsche Bibliothek Frankfurt am Main.

The conference report is now available on the project website.

[Conference report](#)

VIRTUAL REALITY TOPIC NEWS

Ever had a look at "El.pub" 's homepage?

The El.pub web site provides a focal point for news and resources about research and developments (R&D) in interactive electronic publishing. The information published is of importance to all who are engaged in the information business

The free electronic periodicals offered include

- ☛ **el.pub Weekly** – a free email newsletter on interactive electronic publishing
- ☛ **VR topic** weekly news on VR
- ☛ **El.pub analytic:** in-depth analyses of the market and technical aspects of electronic publishing.

PROJECT INFORMATION

For this edition, four of our projects made a very detailed description of their activities, their objectives and their expected outcomes.

- **MINERVA:** a network of excellence working at ministry level for coordination of digitisation policies.

- **TRIS:** an accompanying measure for take-up trials

Two IST projects working in the domaine of Access to scientific and cultural heritage,

- **ASH** in the field of Scientific Space Heritage

- **ARTISTE** in the field of Integrated Art Analysis and Navigation Environment

One of the most relevant objectives of Information Society Directorate General of the European Commission is to co-ordinate the digitisation policies of the cultural heritage, within a wider application project of new technologies in this specific field. The point of reference is the **eEurope Action Plan** formally approved during the European council held in Feira in June 2000 and renewed until 2005.

On 4th April 2001 the Swedish presidency of EU arranged in Lund, in co-operation with the European Commission (Information Society Directorate General– Cultural Heritage Applications Unit), a meeting of the experts of all the member states in order to analyse the main thematic issues of this initiative, suggest recommendations co-ordinating the future works and contribute to create an added value to the ongoing European digitisation programmes. The ground principle states that *the European cultural and scientific knowledge is an exclusive heritage of public worth, reflecting the collective memory of the different European societies and is at the same time a solid platform for the development of the European digital content industry.*

The results of the meeting were resumed in the **Lund action plan**. One of its most important objectives is to promote the creation of European contents and set them on global networks, fully exploiting the potential of digital technologies.

Therefore, this heritage must be made accessible to the citizen and come into sustainability dynamics.

However, several **key problems** could prevent the full exploitation of the potential of these resources, whether culturally, socially or economically. The main barriers identified are:

- ▶ **Fragmentation of approach.** Though widespread, the existing digitisation activities are highly fragmented, depending on the policy instruments and mechanisms in the different Member States.

- ▶ **Obsolescence.** Inappropriate standards and technologies could make the already existing digital resources outdated or useless.

- ▶ **Lack of simple, common forms of access for the citizen.** Access by the citizen to the different resources, at national and at EU level, is compromised by the lack of common approaches and technical standards as well as by lack of support and systems for multilingual access.

- ▶ **Intellectual property rights (IPR).** The needs of the stakeholder involved in digitisation projects must be recognised and balanced. Solutions for handling and managing rights need to be understood and applied by the cultural sector if the economic value of the content is to be realised in a sustainable way.

- ▶ **Lack of synergies between cultural and new technologies programmes.** There is an increasing need for improved linkages between cultural and new technologies programmes in order to create a European added value.

- **Institutional investment and commitment.** Digitisation requires a commitment from individual organisations, frequently the memory organisations such as archives, libraries and museums, to long-term, expensive and technically demanding actions.

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In order to address these issues, the European Commission established a **permanent steering group** of national representatives of all the member states (NRG) to coordinate activities related to the Lund principles and promote a European action plan.

The General Directorate for Libraries and Cultural Institutes of the Italian Ministry for Cultural Heritage and Activities, presented the MINERVA project to support these issues. It started on 1st March 2002 under the 5th Framework Programme.

The objective of the MINERVA project is to create a network of Member States' Cultural Ministries, to **discuss, correlate and harmonise activities carried out in digitisation of cultural and scientific contents.**

The original partners of the project are the ministries of Italy (co-ordinator), Belgium, Finland, France, Spain, Sweden United Kingdom, joined by that ones of Holland and Greece, and the bodies Amitié s.r.l. (IT) and Relais Culture (FR). The first goal is to enlarge the network to all the member states.

The aim of MINERVA project is to create a **common European platform**, recommendations and guidelines about digitisation, meta-data, long-term accessibility and preservation. Due to the involvement of EU governments, it aims at coordinating national programmes and establish contacts with other European countries, international organisations, associations, networks, international and national projects involved in this sector, with a special focus on actions carried out in the DigiCult action of IST.

MINERVA acts both on political and technical level and represents the main European network in the field of digitisation and long term accessibility of the cultural heritage.

The activity of MINERVA is organised in **work-packages:**

- ▶ **Benchmarking and good practices**

This work-package, coordinated by Finland and Sweden, aims to assure exchange of compatible information on programmes and policies between Member States and give visibility to national activities in order to swap similar experiences and skills.

► Inventories, discovery of digitised content, multilingualism issues

This work-package, co-ordinated by French experts, has the objectives to identify the ongoing, planned or realized projects in the field of digitization of cultural and scientific contents, in order to propose a common inventory based on a minimum set of metadata addressing multilingual issues.

► Preservation

This working group aims to realise a work plan related to the Resolution on long term preservation of the digital memory approved during the Council of Ministers held in Brussels on 23 May 2002 on the proposal of the Spanish Presidency of UE. This document stresses the importance of a real agreement of initiatives and tools at European level as well as of an involvement of the technologies stakeholders.

► Web sites quality

Belgium and Spain direct this group in order to recommend guide-lines and quality criteria for what concerns cultural web sites and portals, and suggest principles of evaluation.

► Interoperability and service provision

The objectives of this work-package, led by English experts, consist of analysing, identifying and evaluating activities on metadata, registries and schemes.

As a result of this work, progress can be made towards identifying a common framework for an information environment that could be adopted across the Member States.

Information on finalised or planned actions and outputs is available at www.minervaeurope.org

► **Project title : The Minerva project**

► **Cordis fact sheet**

► **Additional information can be obtained from the project coordinator Rossella Caffo**



Project website: <http://trisweb.org>

Multimedia for education:
innovative take-up trial projects and their
accompanying measure
TRIS

In 2000, **25 trial projects were selected** as a result of a call launched by the *Cultural Heritage Applications* Unit of DG Information Society, within the Action Line for *Trials on new access modes to cultural and scientific content*.

- Trials are **experimenting with existing technologies** to find new ways of creating, manipulating, managing and presenting new classes of **digital cultural objects**, held by archives, libraries and museums.
- They aim at enhancing user experience, by providing innovative means of **exploration, learning and entertainment**.
- They are **user-centred**, focusing, in particular, on user interaction and models for interactivity with high-quality virtual representations of valuable cultural objects, and the creation and navigation of virtual cultural and scientific landscapes.
- **Driven by small cultural institutions run by local authorities or by SMEs with local interests**, trials are demonstrating how smaller institutions can play a very important role in the use of innovative technologies for the production of cultural content.
- The trial projects **address a wide range of user communities** including tourists, teachers, SME's, historians, scholars, scientists as well as the single citizen. A particular attention is given to the inclusion and involvement of young people.

TRIS, a European Commission accompanying measure, is co-ordinating these 25 trials in order to increase their impact and exploit their results. The co-ordination and dissemination activities of TRIS are supporting the trials to reach critical mass and substantial cultural, scientific and commercial impact.

The trials have appeared at a time when the debate on the potential and perspectives of the Information Society in Europe is most fertile and intense. One of the greatest challenges lying ahead in the Information Society is a deep revision of educational processes throughout; the role of memory institutions in this regard is increasingly seen as going beyond the mere transmission of artistic and scientific knowledge, to cover, in forms that are still in large part to be shaped, part of the role traditionally attributed to the educational institutions.

After more than one year following their launch, most of the trials are nearing completion and have produced quite interesting results. This article will overview a number of them, with a particular focus on their potential for education and learning. 'Multimedia for life-long learning' was one of the main themes of this year's IFLA Conference, held in Glasgow from 16-24 August 2002. The background analysis carried out by TRIS, aimed at producing the paper for the conference, has emphasised the great educational value of the content and technologies adopted by many of these projects.

▶ When talking about education and learning, young people are usually one of the privileged targetted audiences. Thus, for instance, the trial **CHOSA** aims to increase access to young visitors (as well as to adults) to the Cultural Heritage of St Albans, in the UK. The project is developing an interactive web game and a WAP tour, both fun and educational, for access to and awareness of the Verulamium archaeological site for those who cannot get into the real museum.

▶ Another trial paying a special attention to the needs of the youth is **TPHS**, which is trialling an innovative web based system, making available, in an engaging and playful way, information on buildings and related objects, considered of particular interest to children. Co-ordinated by the English Heritage's Education Department, the UK leader in heritage education, TPHS aims to build active online heritage communities, which engender trust, motivation, ownership, and user participation, through the creation of democratic, grass-roots extensions to existing cultural collections.

▶ **TREBIS** is also addressing the needs of young people. In this project a natural history museum (Vorarlberger Naturschau, Austria) presents digital information on the distribution of animals and plants in the Vorarlberg Austrian region, within a multimedia context. Via a multimedia user front end, visitors are encouraged to query about bio-diversity, endangered species and ecological facts. The project integrates well-established technologies, such as database management system and geographic information system (GIS) with a leading edge multimedia front end, to create an attractive environment for user interaction.



▶ **UNI-NMS** and **KIST** are working to enhance access to the collections of the National Museums of Scotland (NMS), considered as a valuable instrument of informal learning and an educational resource right across the curriculum.

In particular, **UHI-NMS** aims to add value to the Museums' digital content for the National Grid for Learning. The project is designing content to have application in formal and informal learning environments, addressing a wide range of end-user groups as well as intermediary users (teaching/advisory staff). **UHI-NMS** is interactively trialling the introduction of, and end-users' reaction to leading-edge pedagogical approaches and appropriate technical solutions for the remote use of digital content.

▶ **KIST** is using 3D, audio, animation and video to provide an innovative digital exploration of the collections of the National Museums of Scotland, adding a new dimension to the visitor experience. In particular, the project is trialing and further developing the 'Treasures Programme', currently available in the Exhibit Room of the museum and allowing exploration of selected objects, mainly through text and colour images. Besides testing it, KIST is enhancing the programme, by introducing added-value facilities such as sound, rotation, zoom and film. The programme is being designed for access over the web and aimed at being used as an on-line educational resource.

▶ Similarly to KIST, **CTIC** is using photo-realistic 3D and virtual reality to provide interactive access to the costumes and textile collections held by a group of UK museums and art galleries. In particular, the project is trialing a novel, purpose designed interface to enable users to access digital cultural content, enabling to explore, interpret and encourage dynamic user participation in the interpretation of user selected objects. The project addresses users who find it difficult to visit the museum because of geographical remoteness, disability or social exclusion as well as teachers, by raising the design and communication standards in educational websites for museums.

▶ Virtual reality is also the main technology employed by **VIRTUAL**. The project, near its completion, is developing a web-based prototype in innovative services for the Well's Cathedral's historic collections, held in both its archive and library. In particular, Virtual is creating a 3D virtual environment reproducing the context, content and sense of place of the cathedral collection and its setting.

▶ **VALHALLA** brings an interesting outlook on historical gardens. The project is developing a resource displaying real-time video and explanation of historic gardens and landscape parks. Through a Web interface, Valhalla will offer the possibility to explore, by directly controlling a number of installed camera(s), historic gardens and parks from viewpoints not usually achievable at ground level. One of the immediate educational aspects of the trial is the innovative use of the web, which thanks to the real time videos, provides comparative views of the two historical gardens, which are being tested (Hatfield House, UK and Chateau de Villandry, France), enabling skills and understanding to be shared between young visitors and experts at remote garden locations.



▶ Finally, standing in the middle, between a museum and a theme park, **VIRMUS** is an open-air Latvian museum built on the web by using lightweight 3D technology. Besides exploiting the web as a promotion channel, by creating 3D web pages on cultural heritage buildings, the project also leaves ground for physical visits, aimed at enhancing the active role of memory institutions

and fostering tourism and socio-economic development.

Additional information on TRIS and on the individual trials can be obtained from the [TRIS](#) website or from Barbara Morganti who wrote this article

Besides being a cultural phenomenon and a success case, involving the participation of over 80 cultural institutions, the trials' initiative is helping to trace meaningful routes to the role of cultural innovation in Europe. The continued monitoring of these practical experiments can be seen as providing a privileged point of observation for those seeking fresh ideas on expanding the educational possibilities of cultural institutions.



An integrated art analysis and navigation environment
ARTISTE

Project website: <http://www.artisteweb.org>

ARTISTE has developed a sophisticated image retrieval system that analyses and cross links art works in four of Europe's greatest museums: London's National Gallery, London's Victoria and Albert Museum, Paris's Louvre, and Florence's Uffizi Gallery.

In this groundbreaking work, metadata and visual content are analysed across four databases containing nearly 170,000 separate, high-resolution 2D images. Local metadata schemas are seamlessly translated to common standards so that the individual collections are searched as though they were all a single entity. The innovative search capability offers new ways to study art and identify similarities between works in disparate collections.

This short article briefly summarises what has been achieved in ARTISTE. For a detailed description, fully illustrated, see July's issue of Cultivate Interactive:
<http://www.cultivate-int.org/issue7/artiste/>.

► **Objectives and Application Areas**

The user partners had a variety of objectives. The Victoria & Albert Museum wanted a system that would provide quick access and retrieval of images and related information for documentation or inclusion in the products of publishing and editing organisations.

The Uffizi and the Centre for Research & Restoration for the Museums of France (C2RMF), which includes the Louvre, wanted a system to help them in paintings restoration – for example, to detect surface cracks and their correlation with patterns of wooden planks on the backs of canvases.

► **Image Content Analysis**

Image content analysis algorithms are key to many of the search features. They enable searches in which the user submits an image to the system and

requests images to be returned that are similar to the query in some way such as colour or texture. A sub-image can be presented with a request to search for the parent image.

► **Metadata**

The system allows a metadata search to be carried out simultaneously with an image content search. This narrows down the process so that images are only returned that also match the metadata request – perhaps the name of a painter and/or the term 'watercolour'.

ARTISTE supports metadata in English, French and Italian.

► **Wizard-based interface**

ARTISTE has a simple, wizard driven user interface that makes it easy to create, execute and browse the results of complex metadata and content-based queries. This interface supports four languages (English, French, Italian and Danish) reflecting the language needs of the members of the consortium.

► **Impact on Standards**

ARTISTE has used existing standards and technologies where possible for metadata structuring and translation. This underpins an open standards approach to providing an open interface for metadata harvesting and image search and retrieval.

Extensive use of RDF in ARTISTE provides a way to establish common semantics for both content-based analysis and textual metadata searching in heterogeneous collections. This goes a long way towards interoperability between multiple digital libraries. However, common semantics are not enough to provide interoperability with third-party systems. To achieve this requires adoption of

standards for the process of search and retrieval itself, i.e. use of standard protocols.

ARTISTE supports and advances two standards in this area. The first is the Open Archive Initiative (OAI) protocol for metadata harvesting. The second is a Search and Retrieval Web (SRW) service standard proposed by ZING, which builds upon the well-established z39.50 digital library protocol. Information about this can be viewed at <http://www.it-innovation.soton.ac.uk/artiste>.

► **Public trial system**

The trial site is at <http://artiste.it-innovation.soton.ac.uk/>. Users register with their e-mail address and a password of their choice. Searches are personalised, so that users can view their own search history.

► **Technical partners**

Four technical partners developed the ARTISTE system. NCR provided the underlying object relational database technology; Giunti helped develop the user interface; IAM at the University of Southampton researched the image analysis algorithms; and IT Innovation integrated the system and helped advance digital library standards for multimedia search and retrieval.

► **Follow-on project: Sculpteur**

As ARTISTE draws to a close, its follow-up project, Sculpteur, has already begun. [See <http://www.sculpteurweb.org>].

Sculpteur will further develop and improve the ARTISTE system, while developing the technology and expertise to help create, manage and present cultural archives of 3D models and associated multimedia objects.

As part of the work, Sculpteur will exploit an exciting new development in web technology, the semantic web, and it will develop e-Learning systems able to use the semantic knowledge created during the project.

Sculpteur will investigate the possibility to store and retrieve images using algorithms that can detect features characteristic of 3D objects. Different ways of using the system have been discussed, such as classifying coins, analysing engravings with regard to surface degradation and matching copies of sculptures with their originals in other collections.

► **Project title :**

An integrated art analyses and navigation environment

► **Cordis fact sheet**

Additional Information can be obtained from the Project Manager Gert Presutti or from the Sculpteur Project manager Fabrizio Giorgini

access_to_scientific_space_heritage



► **The ASH Virtual Control Room**

In early February nine students from 'Rungsted Gymnasium' in Denmark were given the opportunity to control the last part of a space mission to the comet Wirtanen. They were put in charge of first bringing a spacecraft into orbit around the comet, then analysing the composition of the comet, and finally selecting a good landing spot.

This took place in the Virtual Control Room developed by the IST project ASH (Access to Scientific Space Heritage, IST-1999-10859). The event was the first full scale usability test session carried out in the project.

'It was very exciting' said student Marianne after the test.

Access to scientific space heritage
ASH

Project website:

<http://www.ashproject.org>

► **Learning environment**

The Virtual Control Room is a vision of a new learning environment. It is a unique set-up that fascinates and motivates students, thereby increasing the learning effect. The Virtual Control Room has a look and feel like a real space mission control centre with a big screen in front of a number of work places. The students are seated at these work places.

For pedagogical reasons work places are grouped into islands. An island includes three work places. Two students can share one work place. Therefore an island can accommodate between 3 and 6 students. Furthermore, each island has a bigger screen (the island screen) used to share common information. The islands are grouped around the big screen.

A standard Virtual Control Room configuration includes four islands in order to accommodate a school class with up to 24 students. However, the number of islands can vary according to specific needs and physical constraints. This makes the concept very flexible.

► **Space mission**

Students learn about space and astronomy by planning and carrying out a space mission. The inspiration for the mission implemented in the project comes from the European Space Agency mission Rosetta. The Rosetta mission will be launched on 13 January 2003. The spacecraft will make a ten year journey through the solar system before it reaches its target. It will make a swing around Mars in August 2005, pass Earth again in 2005 and 2007, and finally reach the comet Wirtanen in 2011.

When the spacecraft approaches the comet scientists will use the onboard scientific instruments to get detailed information about the comet, including a map for selecting a suitable landing spot. Eventually the spacecraft will be inserted into orbit around the comet. The climax of the mission will be in 2012 when a lander is released and put down on the comet's surface.

The Rosetta mission is very interesting from a teaching perspective. It is an exciting mission searching for traces of life, it includes many facets of space exploration and astronomy. In addition, it illustrates many topics from mathematics, physics, chemistry, biology, etc.

► **Collaborative learning**

The underlying pedagogical concept emphasises collaboration between students. Actually many tasks can only be completed if the students work together. The students will get the experience of both the necessity and strength of collaboration when exploring complex physical phenomena. The Virtual Control Room provides an intuitive user interface. This includes touch sensitive screens and a special Personal Interaction Panel (PIP) based on 3D virtual reality. The PIP allows students to manipulate 3D objects in a very intuitive and user-friendly way. The user interface and collaborative pedagogical approach provide a learning environment with qualities representing state of the art.

► **ASH project**

The ASH project started in January 2000 and ended in July 2002. The project consortium comprised six partners. Three partners, EuroPlanetarium and Royal Observatory, both in Belgium, and Tycho Brahe Planetarium in Denmark were responsible for planning and developing the mission.

Three other partners, DELTA Danish Electronics, Light & Acoustics (project coordinator), Space Applications Services (Belgium), and Technical University Vienna designed and implemented the distributed system architecture, simulation models and advanced 3D user interface.

► **Project title :**
Access to scientific space heritage
► **Cordis fact sheet**
► **Additional information can be obtained from the project coordinator, Jørgen Bøegh**



DigiCULT Report

(Part 4 of our five part series on the DigiCULT Report)

► *National Policies & Initiatives: Maximising a Nation's Investment in the Cultural Heritage Sector*

With some delay in comparison to the cultural industries, European national governments have acknowledged the importance of the culture heritage sector as being a vital component in building a democratic Information Society. As "guardians" of our rich cultural heritage and therefore, as potential providers of digital contents, cultural heritage institutions are considered an important factor in the knowledge society: they hold the key to a treasure chest of cultural resources which only waits to be opened and used.

In the last few years, national governments in all of Europe have started to unlock that treasure chest. Building on the opportunities of digital technologies to bring digital cultural heritage resources to the attention

of a wider audience, they have launched large-scale digitisation programmes to make digital cultural resources more easily and widely accessible. Substantial resources have been spent on the creation of digital material, yet in many cases, without paying sufficient attention to future use and maintenance of those digitised objects.

Last but not least because of growing budget constraints, national governments are now forced to rethink their approach to digitising cultural heritage resources. They have realised the need to develop a systematic and co-ordinated method to implement cultural heritage policies in which digitisation of resources is only one part of a list of objectives. Such a comprehensive cultural heritage policy should aim to:

- build a critical mass of digital cultural heritage resources (digitisation policy),
- transfer know-how to less enabled institutions and actively promote regions (technology transfer and development policy),
- make cultural heritage resource more widely available (access policy),
- stimulate usage through different target groups (usage policy),
- create and develop new markets for cultural heritage resources (market development policy), and to
- secure availability and accessibility of cultural heritage resources also in the future (preservation policy).

In addition, it is also national governments who are responsible to create a favourable legal framework and make available the necessary funds to successfully implement such a comprehensive policy.

▶ **Developing methodologies for digitisation**

At present, European member states take different approaches towards digitisation, based on their governmental structure and different funding mechanisms. While some member state like Spain and France, set clear priorities at the national level, others have not yet defined any digitisation policy. In those cases, decisions on what to digitise are left to the archives, libraries and museums themselves, and therefore, selection criteria for digitisation are not always transparent. This is one reason why digitisation so far has often happened more or less ad hoc and accidental, without any prior planning or a clear notion of future use. Such an approach bears the risk of wasting resources as work might be duplicated, or materials digitised without complying to any compatible standard.

The experts participating in the DigiCULT study see the task of providing models, guidelines and examples of best practice for digitisation as a primary responsibility of national governments. Developing methodologies and guidelines is necessary to ensure a resource-efficient, comprehensive approach to digitisation that allows cultural heritage institutions to make informed decisions.

Such methodologies should set priorities based on:

- user-focused selection of material,
- future conservation requirements and preservation needs,
- public access and future use,
- appropriateness of content for digitisation and privileged domains (some collections are not suitable to be digitised), and finally,
- the requirement for scalability, to also be an appropriate model for small institutions.

National governments as the primary funding bodies are in a strong position to necessitate cultural institutions to follow particular guidelines and models.

▶ **Know-how transfer and collaboration: strengthening regions and involving small institutions**

Today, an estimated 95% of all cultural heritage institutions in Europe are not in the position to participate in any kind of digital cultural heritage venture. They not only lack the financial resources to participate, but also have a shortage in staff, essential skills, and the necessary technology. Facing this situation, a comprehensive cultural heritage policy would need to address the issue of how to strengthen small cultural institutions and regions who play an important role on the local level as holders of material that is valuable to the community.

On the one side, there is a challenge for policy makers to invest in the technological infrastructure of small archives, libraries and museums, yet, on the other side, and regarded even more important by the experts participating in the DigiCULT study, it demands to invest in people and their skills. As Mark Jones, Director of the Victoria and Albert Museum, UK, stresses: "Funding should focus on building capacity. The biggest impediment in this area is the lack of capacity in the sector." (DigiCULT Interview, August 9-10, 2001) In other words: to improve the lack of capacity, national governments should invest in people and not in projects.

There is urgent need for modern training programmes that respond to the lacking ICT skills among the staff of cultural heritage institutions. To this purpose, the DigiCULT experts suggested to set up regional information centres or centres of excellence that would help small organisations develop the basic skills needed to participate in the digital age.

In addition, the experts participating in the DigiCULT study recommended to stimulate co-operation between cultural heritage institutions, and encourage projects where small institutions could "piggy-back" with experienced cultural organisations in common projects to foster knowledge transfer. National governments should actively promote these kinds of (cross-sector) collaboration by making co-operation a funding requirement for projects. As such, project success could be measured in terms of successful knowledge transfer between participating institutions.

▶ **Cultural heritage for all: low-barrier access to cultural heritage**

An open and integrative approach to cultural heritage not only demands that a multitude of cultures should be represented in a nation's cultural memory, but equally important, it highlights the need to provide easy and affordable access to the cultural heritage resources. An effective cultural heritage policy needs to address the various aspects that determine ease of access to cultural heritage resources, including *cost* of access, the *technical barriers* but also the *intellectual and physical impediments* that may prevent citizens to

retrieve digital cultural heritage resources. These aspects partly interlock with challenges of a larger Information Society policy.

In most European member states, the notion prevails, that citizens should have free access to public cultural heritage resources. Recently, however, in the emerging digital cultural economy, national governments seem to put increasing pressure on cultural heritage institutions to charge for cultural contents and services. Of course, this creates a conflict between a vision of free access for all and the desire to recover at least some of the investment. Experience from the museum world demonstrates, however, that charging entrance fees is one of the most effective ways to shut out citizens - not talking about the fact that the access fees raise only a small percentage of the total running costs per year.

A national cultural heritage policy that propagates access for all also needs to take active steps to include visually impaired or otherwise disabled persons. Similar to providing special constructions for the disabled to enter public buildings, national governments need to take precaution that they are not excluded from the information society. This will become of particular importance as, in the future, many (public sector) services will exclusively be delivered via the Internet. Of course, this remains also true for cultural heritage information offered over computer networks, which should comply to "Design for all" standards for accessibility as currently developed within the eEurope initiative.

Within the last years, many European member states have developed different approaches to enable citizens to gain access to cultural heritage resources using ICT, with greatly varying results. A commonly used strategy to join up cultural resources at a national level is to build portals or common gateways to provide a single point of access to digital cultural heritage resources.

These publicly supported single points of access differ with regards to:

- scope of service: from a simple link list to "one-stop-shops" for visitors that integrate a whole range of services along the content delivery value chain,
- depth of content: from information about resources (discovery service) to access to actual objects (e.g. picture repositories or central databases to host digital collections) or tailored, "pre-packaged" content for particular target groups,
- focus of content: broad coverage of themes to thematically focused access points,
- geographic reach: national portals as well as region or local portals,
- objectives: supporting existing traditional cultural services to building new services, and
- economic orientation: commercial or non-commercial service (universal access, free of charge).

In the future, these cultural networks and portals will be of growing importance to provide low-cost access to cultural heritage resources for citizens. However, the

demands of the users will increase too, and hence, these central gateways for culture will feel increasing pressure from users to provide more and more sophisticated services on their sites. An ordinary link list is the best way to create a portal that will soon be abandoned.

► Understanding new target groups: educational pull as future driver of the CH sector

Although there may exist many different purposes for future use of cultural heritage information that may justify the investment, the experts participating in DigiCULT stressed the importance of education as the most promising and therefore most significant area of future use. Education should therefore become the focus of every digitisation policy and a central point in every cultural heritage policy.

Beyond the obvious economic benefits of a well-educated population, education also plays a crucial role to foster integration and mutual understanding among citizens. A key factor in this understanding is a knowledge of and respect for the historical traditions and cultural expressions of a European multicultural society. Digital cultural heritage may play a key role in educational programmes, as cultural heritage institutions increasingly become important providers for new pedagogical tools.

As primary funding bodies, national governments are in a strong position to influence the market for educational material particularly in the area of cultural heritage.

► Between commercialisation and access for all: creating a sustainable cultural heritage

Although the digital age has opened up new opportunities for the cultural heritage sector, the question remains, if it can really benefit from the growing importance of the content producing industries in the emerging knowledge society. Can cultural heritage institutions become active players in the digital cultural economy?

The expectations are high, also by national governments, yet with the danger that the value of cultural heritage becomes reduced to its economic worth alone. Reducing the value of cultural heritage to its economic value as currently the trend within national government, means to only consider *one* part of what might influence the individual's choices. What needs to be understood by national governments is that the value of cultural heritage resources and the benefit that is gained in building and maintaining digital cultural heritage repositories goes beyond the economic value. In fact, it is the other cultural value characteristics and the "intellectual exploitation" that are the true value of cultural heritage. As the primary funders of cultural heritage institutions, national government should be very aware that what they are financing is a cornerstone of establishing a society's cultural identity. Consequently, a cultural vision should pay attention to first, the societal benefit and only secondly, to commercial exploitability.

Going commercial also puts severe financial pressure on cultural heritage institutions as substantial additional expenses are incurred that call for a long-term commitment. Most cultural heritage institutions will not be able to finance commercial ventures out of their regular budget, especially not within the next years when their budget most likely will remain stagnate or even decrease. Therefore, if it is a goal of cultural policy to enable cultural heritage institutions to commercially "valorise" the treasures they are taking care of, there is a need for considerable additional funding.

As experience has shown so far, in order for projects to get up and running to the point where they become sustainable, more funds are needed over longer time periods which usually exceed "normal" project periods of 3-4 years.

Overall, examples of commercial success in the cultural heritage sector are rare. Concluding from prominent success stories such as SCRAN, one must say, that even those services still need extensive investment, only to achieve some return on investment. More realistically, what might be achieved is a coverage of the running costs, yet, only after enormous amounts of public money has been invested to establish the

infrastructure, digitise a critical mass of cultural resources from many institutions, and intensively market services and products.

The question of what can be expected from commercial exploitation of cultural information will be covered in more detail in the last piece of this five-part DigiCULT-series.

For downloading or ordering the DigiCULT Report and Executive Summary visit:

<http://www.digicult.info>

➤ **Project title :**
Digital Culture (DigiCULT), a support measure
➤ **Cordis fact sheet**
➤ **Additional information can be obtained from the Project coordinators Mr Pereira and Mr Geser.**
➤ **The 1st DigiCULT Forum Newsletter and Thematic Issue are now available**

Events

OCTOBER 2002



International Workshop
17 October, Rome, Italy

<http://www.bibliocom.it/bibliocom-e.htm3>

☺=====☺

Collections Revealed: The Role and Practical Application of Collection Descriptions

31 October, Edinburgh, Scotland

Introduction to collection-level description, application of CLD

to the description of museum resources.

Complete details are available at the [CIMI website](#)



The 6th Sedona Conference

24-26 October 2002, Dublin,

How do we reinvent leadership to meet the emerging challenges of the 21st century? The 6th Sedona Conference address this question through a detailed evaluation of leadership in the digital age.

The Minister of Education will officially open this exciting international forum where education and business leaders will be joining Dr. Edward de Bono and a panel of international experts for a two-day debate on digital leadership.



Forum pour le développement des musées, sites patrimoniaux et équipements culturels

22-23 Octobre 2002, Cité des Sciences et de l'Industrie, Paris

Pour sa cinquième édition, le forum Ptolémée s'articule autour de trois axes forts :

- **musées et territoires**
- **politique des publics**
- **gestion des entreprises patrimoniales**

NOVEMBER 2002



FP6

IST 2002 : Partnerships for the Future

Co-organised by the European Commission & the Danish EU Presidency

4-6 November 2002, Copenhagen

its time to register!

➤ **Final programme available**

➤ **Online Registration form**

The IST 2002 Conference is much more than a showcase for successful EU IST research. It is a platform for presenting promising new fields of research, and for challenging existing priorities. It is an open forum for debating the economic and political context in which technological developments are being made, and for re-examining the rationale for conducting research in Europe. To this end, IST 2002 brings together those people setting the research agenda in Europe, those actually building the consortia for tomorrow's research projects, and those seeking to invest in the results of research.

➤➤ **Networking @ IST 2002**

Build your own networking session at this event & see what proposals have already been suggested.

For more information click on [Networking Facilities](#)

➤➤ **Our unit will be represented with a workshop entitled:**

The business of heritage – from local to global.

[See our flyer](#)



FP6

European Research 2002: The European Research Area and the Framework Programme

11-13 November, Brussels

registration has begun!

This major conference will mark the launch of FP6 and will provide the forum to present the objectives and priorities, as well as the rules for participation under this FP. There will be plenary sessions addressing all the main thematic priorities of FP6 which will run from 2002-2006. In addition the conference and exhibition will feature presentations of results from research projects carried out under previous EU research programmes.

You are offered a very simple way to get more contacts from attending this event. A MINGLE ZONE has been set up where you can network and arrange meetings with all the other attendees relevant to you.



EVA 2002 Berlin

'The Foremost European Electronic Imaging Events in the Visual Arts' since 1990

6-8 November, Germany

Supported by the European Communities EVAN Project

[Event webpage](#)

EVA 2002 Gifu

The Possibility of Digital Culture

12-13 November, Japan

Supported by the European Communities EVAN Project

[Event webpage](#)

DECEMBER 2002

EVA 2002 Moscow

Conference, Workshops, Exhibition & Cultural Visits

2-7 December

Supported by the European Communities EVAN Project

➤ Information for all: Culture and Information Society Technologies

➤ Exhibition: Multimedia in Culture, Art & Education

➤ Who should attend: The Cultural Sector, The Government Sector, Int. Organisations, Tourism & Travel Sectors,...

➤ **Internet Registration & extra information**

MUSICNETWORK WORKSHOP

December 2002, Darmstadt

Our Project Musicnetwork is organising several major workshops at which it invites experts and music industry leaders for creating a forum in which problems and potentials solutions are exposed and debated.

[Project homepage](#)

Coalition for networked information Fall 2002 meeting



Coalition for Networked Information

5-6 December, Hilton Palacio del Rio in San Antonio, TX.

CNI is an organization dedicated to supporting the transformative promise of networked information technology for the advancement of scholarly communication and the enrichment of intellectual productivity. Some 200 institutions representing higher education, publishing, network and telecommunications, information technology, and libraries and library organizations make up CNI's

MAY 2003



Smart Objects conference

15-17 May 2003, Grenoble, France
From Networked Devices to
ambient Communication:
Hardware, Software, Applications,
Uses and Ergonomics
>>> First announcement and call
for papers

You will meet members of our unit at these events:

Bernard Smith will be speaking at:

- ◆ 15-16/10/02 Goethe Institut
Brussels "The Virtual Library"
>>>e-mail contact

Patricia Manson will be attending:

- ◆ the CALSI workshop in Valencia
on 22/23 October
See Calsi workshop

Maurizio Lunghi will be attending:

- ◆ Bibliocom 2002

Jean Goederich will be
attending

- ◆ Frankfurt Book Fair
9-13 October

Christine Michaut will be
attending:

- ◆ IST 2002 Copenhagen
- ◆ 18-19 October, Hamburg
"Survival strategies for
libraries"

Ian Pigott will be attending

- ◆ IST 2002 Copenhagen

Web-sites for bookmarking

Project sites

Musicnetwork invites you to join in!

Have a look this interactive multimedia musicnetwork,
see what it brings new for you – and sign up for
participation!

Musicnetwork is elaborating new functionalities of
multimedia interactive music (music coding). Their
main objective if this Network of Excellence is to
create a community to bring the European Music
industries and content providers into the interactive
multimedia era, paying special attention to SMEs.

To this end they are organising major

 **MUSICNETWORK workshops.**

EC site

Digital Heritage & Cultural Content

Once in a while should also talk about our own web-
pages! This time we do so because much updating
has been done recently. This means that you will find
information on all our projects with links to their
homepages and their official Factsheet on our
"projects from A-Z" pages.

You also should have a look on our "events" pages
which are more explicit than the "events" spot of this
newsletter.

Furthermore, we are in the process of a global
restructuring of the pages, to make the overall
presentation clearer but mainly to meet the
requirements of the Commission Directive on WAI
compatibility.

If you have any comments on our pages, C.Michaut,
who is in charge of these pages, would be happy to
receive them.

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LEGAL NOTICE

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behalf of the Commission is responsible for the use that
might be made of the information given in this newsletter**

IST 2002 Conference
Co-organised by the European Commission & the Danish EU Presidency
5 November 2002, 16.00-17.30, Bella Center, Copenhagen

The Digital Heritage & Cultural Content Workshop:
"The Business of Heritage - from Local to Global"

The workshop will present key RTD and policy initiatives in the cultural heritage sector and look to the priorities for FP6. It will pay special attention to digital services delivered at local level to meet the needs of ordinary citizens in line with the goals of **e-Europe 2005**, especially **e-inclusion** and to the spreading of forward-looking cross-domain agendas, strategies and service applications in culture, the economy, education, e-government across Europe.

Among the key issues which this workshop will discuss and help define are how to:

- develop friendly on-line services which meet user needs and are accessible to all;
- support a sense of localisation and personal engagement in a globalised world;
- unlock, disclose and make accessible local digital content, including that currently held by archives and museums;
- develop interoperability and provide seamless access to cross-domain content through a wider range of channels;
- enhance citizens' ability to link up the present and the past;
- increase opportunities for industry and SMEs to contribute to the development and delivery of new services;
- get the best out of semantic web applications, moving towards the eventual emergence of an ambient environment.

Programme

- Introduction.
[Ian Pigott](#), *European Commission DG INFSO, Cultural Heritage Applications unit, Directorate General Information Society, European Commission*
- A basic agenda for modern cultural services at the local level.
[Rob Davies](#), *MDR Partners (UK), representing the PULMAN Network of Excellence*
- Building bridges between libraries, museums and archives; from strategy to implementation.
Chris Batt, Acting Chief Executive of 'Resource', (UK)
- Providing cultural heritage services - the real and virtual mix.
[Flavio Tariffi](#), *F2 S.R.l. (IT), representing TRIS Take-up network,*
- The history of computers as a component of local heritage.
[Zdenek Zdrahal](#), *The Open University (UK), representing the CIPHER project*
- Growing up in an ambient world: a special place for children's interests.
Romana Krizova, Company 'Cross Czech' (Czech Republic), representing the CHIMER project
- Open discussion on opportunities for local heritage in FP6