

European Commission



THE FIFTH FRAMEWORK PROGRAMME

The Fifth Framework Programme focuses on Community activities in the field of research, technological development and demonstration (RTD) for the period 1998 to 2002.

OPENHERITAGE

Enabling the European Culture Economy

PART C

**RTD Proposals: Description of Contribution to EC Policies,
Economic Development, Management and Participants**



Proposal no. IST-2000-25136

Release 1.0, 8 May, 2000

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C3. Community added value and contribution to EC policies

The project has an evident European breadth, involving partners from 6 CEC countries plus not-funded partners from Russia (and Japan). The supporting memory institutions (partly funded through partner museums, partly participating to the specification and validation activities as external not-funded users) represent a wide range of European countries and convey a broad cultural and geographic dimension to the project.

The European dimension of the initiative stems, though, from other significant intrinsic qualities:

- The attention to the ‘*glocal*’ dimension with the consequent emphasis on modelling and valorising the aptitudes and assets of individual territories confronting each other in a competitive, Europe-wide chessboard;
- The attempt to leverage an European core strength (the new *culture economy*) in a systematic effort of critical-mass dimension;
- The business project underpinning the proposal, a venture based on the co-operation of 4 European companies that are teaming together to establish the “openheritage.com” *new economy* company, a major on-line resource leveraging a multimedia value chain that has its roots in the distributed deployment of innovative solutions in memory institutions all over Europe;
- The timely (but possibly already belated) attempt at stopping the silent haemorrhage of European CH rights and institutional identities actively hunted for by major economic actors from the U.S.A. and Japan, that puts our unique, irreplaceable heritage at high risk;
- The potential to enable a massive and long-lasting expansion of the accessible digital CH on a pan-European scale, encouraging the diffusion of common platforms and standards.

The *OpenHeritage* business initiative will almost certainly resort - even in case of successful access to CEC funding - to venture capital, in order to quickly ramp up its start-up and early development. Given the established criteria that regulate the intervention of venture capital, though, it is evident that an early support by non-private sources would enable the proposers to limit venture capital support to a phase 2/phase 3 participation, with the result of preserving the control of a larger share of the company and ensuring a more even balance of the *social* component with the *economic* one (definitely more directly pursued by venture capital, in need of early revenue streams). The EU co-operative research framework represents the most likely and natural source for this kind of support, and would guarantee the timely start and unbiased development of a potentially strategic initiative as *OpenHeritage* aims to be.

Technically speaking, *OpenHeritage* addresses a number of issues (among them, certainly the ones related to the application of meta-data standards) that are best treated at an international level. Also, aspects such as Intellectual Property Rights and marketing will be dealt with at an international level to reflect the present differences in systems, attitudes etc.

OpenHeritage will promote excellence in advanced technologies for the cultural environment, following a process launched by pioneer projects as early as 1989. By addressing (both directly and indirectly) an user base of at least 35 key museums in the CEC and Russia, it will enable the take up of these technologies, with impact on a broad range of activities in memory institutions.

OpenHeritage is in line with some of the mainstream CEC policies:

- building key, user-friendly applications that enable the potential of the Information Society;
- developing integrated management and personalised access to content, knowledge and information in the cultural sector, supporting new organisational schemes to enable publishing businesses, museum institutions and museum professionals to take advantage of new environments;
- enhancing the efficiency and friendliness of museums in collection management;
- creating new working environments to give European citizens broader access to their Cultural Heritage;
- establishing new museum inter-relationships for planning exhibitions, new museum/public relationships for educating people prior to their visits to their premises, and museum/publisher relationships as well, by increasing the number of electronic publications, highlighting the richness and diversity of European heritage.

The *OpenHeritage* project will generate relevant input to policy making in term of education and training in the CH field both at the Community level and within Member States and Associated States with a stronger collaboration between France, UK, The Netherlands, Austria and Italy on one part, and Russia and Japan on the other.

OpenHeritage builds on former projects in the content industries area (INFO 2000: AQUARELLE, ...), and, of course, in the cultural initiatives, in line with the European policy to facilitate the European audio-visual productions. *OpenHeritage* will also develop relationships with projects in the education and training area.

The project brings together complementary expertise existing in the partner organisations, in particular by joining the following relevant skill profiles:

- SESTANTE's work on modular museum systems and on interoperable specialised museum clients for the enhancement of physical museums;
- SSL's expertise in collections management and digital repositories, information retrieval, standards-based cataloguing systems and network-wide knowledge management;
- CSC Austria's experience in the application of Service Centre architectures to the CH field;
- MOL's ground-breaking approach to innovative business models for the on-line valorisation of museum assets and relevant normalisation work on image formats and subject indexing.

C4. Contribution to Community social objectives

4.1 Primary contribution

The *OpenHeritage* proposal is thoroughly centred on socio-economic considerations, and aims at establishing the economic and infrastructural conditions that will make it possible to meet socially relevant goals in a consistent and permanent way.

OpenHeritage addresses the key European issue of CH valorisation and can represent the groundwork for a solid European innovation in the CH sector. Given the unique richness in Europe's memory institutions, it contributes to the development of effective and consistent solutions for the valorisation of museums, museum networks, digital libraries and archives and aims at providing citizens, tourists and professionals with the technical and information infrastructure to **better access** memory institutions both locally and by means of advanced network services.

The attention *OpenHeritage* deserves at the core issue of the *glocal* positioning deeply stresses the need to balance the resources of virtualisation and seamless networking with the **preservation of local identities**. The project will develop solutions (territorial models of the CH systems, Territorial Service Centres with customer relationship management and promotional services for cultural tourism, etc.) that will effectively leverage the *genius loci* of specific territories and locations. In a general frame of integration and cultural exchange within the global heritage of Europe, localism will not be suffocated; it will, on the contrary, provide a very valuable interpretation key to the resources of each location. CH can therefore become the effective 'glue' for understanding and experiencing the territories being visited, encouraging an already evident trend towards the creation of attractive **theme parks** (e.g., the *Archeodrome* established in Bourgogne in the early '90s: <http://www.archeodrome-bourgogne.com>) stimulating physical visits and positive effects for the whole social fabric of the districts.

The establishment of a consistent collections management solution, enhancing the attractiveness of **thematic clusters of minor museums** and supported by the services of the TSCs, will help promote "minor" and less favoured CH systems that are not connected to the big attractors in major art cities. This will support and develop the average level of the "silent majority" of the European CH, providing interesting alternatives to the current mass tourism directed towards art cities (with all the preservation and logistics problem that relate to concentrated mass access) and will enable **a more balanced distribution of resources** throughout territories, revealing the hidden riches of the many provinces of Europe.

The CH of Europe will be supported through the *OpenHeritage* model to better adhere to the forthcoming stereotypes of cultural consumption, that will see a more conscious and balanced pursuit of broadly cultural experiences, encompassing tourism, self-paced discovery, gastronomy, sport and leisure in a complex, deeply personal equilibrium with historical and artistic awareness. Aim of *OpenHeritage* is that of anticipating, though the reference implementation of a best-practice CH value chain (from physical memory institutions up to the global portal), the fatal transition from today's "cultural factories" stuffed with hasty all-included-tour visitors towards tomorrow's social models of customer-centric, thematic, custom-tailored cultural experiences.

OpenHeritage may have significant employment effects. It will envisage the direct involvement of no-profit territorial organisations for the production of high-quality contents for memory institutions. Territorial Service Centres will require a workforce of about 30-50 individuals each, with resources provided by local administrations and by the services delivered to tourists, professionals and citizens.

Moreover, it will induce significant job opportunities in many CH-related businesses, with a special attention to the less-favoured “marginal” areas of territorial CH. Pursuing a self-supporting economic model, *OpenHeritage* offers the best of guarantees that the occupational potential will be leveraged through the development of the above activities on a significant scale.

There is potential for the creation of a range of new jobs, some of which are extensions of jobs known from traditional cultural and media sectors, while others are entirely new. Qualified staff will emerge, with multiple skills such as:

- "new media literacy", enabling them to exploit the advanced features offered by technology;
- expertise in both the cultural and multimedia fields;
- "virtual" communication skills to support virtual networks and network services;
- editorial skills to contribute high-quality content, repurpose existing material, etc.

By developing tools to improve the expertise of CH professionals in the Information Society, *OpenHeritage* will contribute to the recognition and the increased importance of memory institutions in the content industries, and will thus contribute to improving employment in this sector. Moreover, the establishment of a validated, interoperable technology framework for CH information systems will help Europe reach **a critical mass of relevant, high-quality content** (a crucial issue for competitiveness in the global multimedia market).

4.2 *Supporting elements*

Providing users with a unified look and feel and with direct links between museums encompassing many territories, the *OpenHeritage* model can also have strong positive implications on the common identity among European citizens.

OpenHeritage addresses some of the key issues of usability, interoperability, dependability and affordability in the CH community and will help memory institutions in several ways (enhancing the user-friendliness of the information society; improving the accessibility to the European CH, and the relevance and quality of their services to the public; empowering citizens; facilitating creativity and access to learning; helping develop a multi-lingual and multi-cultural information society, and making use of the intuitiveness of next generation interfaces in a framework of universally available access).

OpenHeritage will contribute to the improvement of the quality of life in the European Union by stimulating and supporting an equal access of European citizens to the diverse European CH. It will develop mutual understanding between European citizens by offering them a broader access to the heritage of the neighbouring countries in the Member States and the Associated States.

OpenHeritage will help preserve the European cultural environment. It participates to the momentum of renovation initiated by museums towards a greater social responsibility in educating diverse audiences, and adds for this purpose the support of advanced information and telecommunication technologies. These technologies will also help museums preserve the assets themselves by preventing unnecessary manipulation.

C5. Project management

5.1 Project management procedures

The project will be supported by careful planning and monitoring. To achieve the degree of control necessary for a collaborative project between various organisations and networks of different countries a formal management methodology will be applied. The principles of the methodology divide the project into phases, different responsibility areas and WPs with defined deliverables. As part of the management assessment process, the completeness and the quality of the deliverables will be measured and assured.

Technical and resource plans are prepared, for the overall project, for each phase and for each work-package and task. Milestones are defined for work results to be evaluated and for each phase to allow progress to be monitored. An assessment will be made on the completion of each phase. If, at the milestones time, problem areas and/or cost over-run situation are identified, it will be reported to the Consortium along with the proposed corrective action. Spend profiles will be collated and compared with the resource plan on a task basis.

As shown in the diagram below, the top-level project management structure will be represented by a **Strategic Board** not too directly concerned with day-to-day work. It will be constituted of senior persons of the industrial/commercial partners not directly involved in the project and will meet 3 or 4 times during the project. The chairman of the Board will provisionally be the chairman of the coordinating organisation. This Board will have a strategic control of the project, it will ensure that the project has a clear vision for its future and will maintain tight links with the management and strategic planning of the *openheritage.com* enterprise.

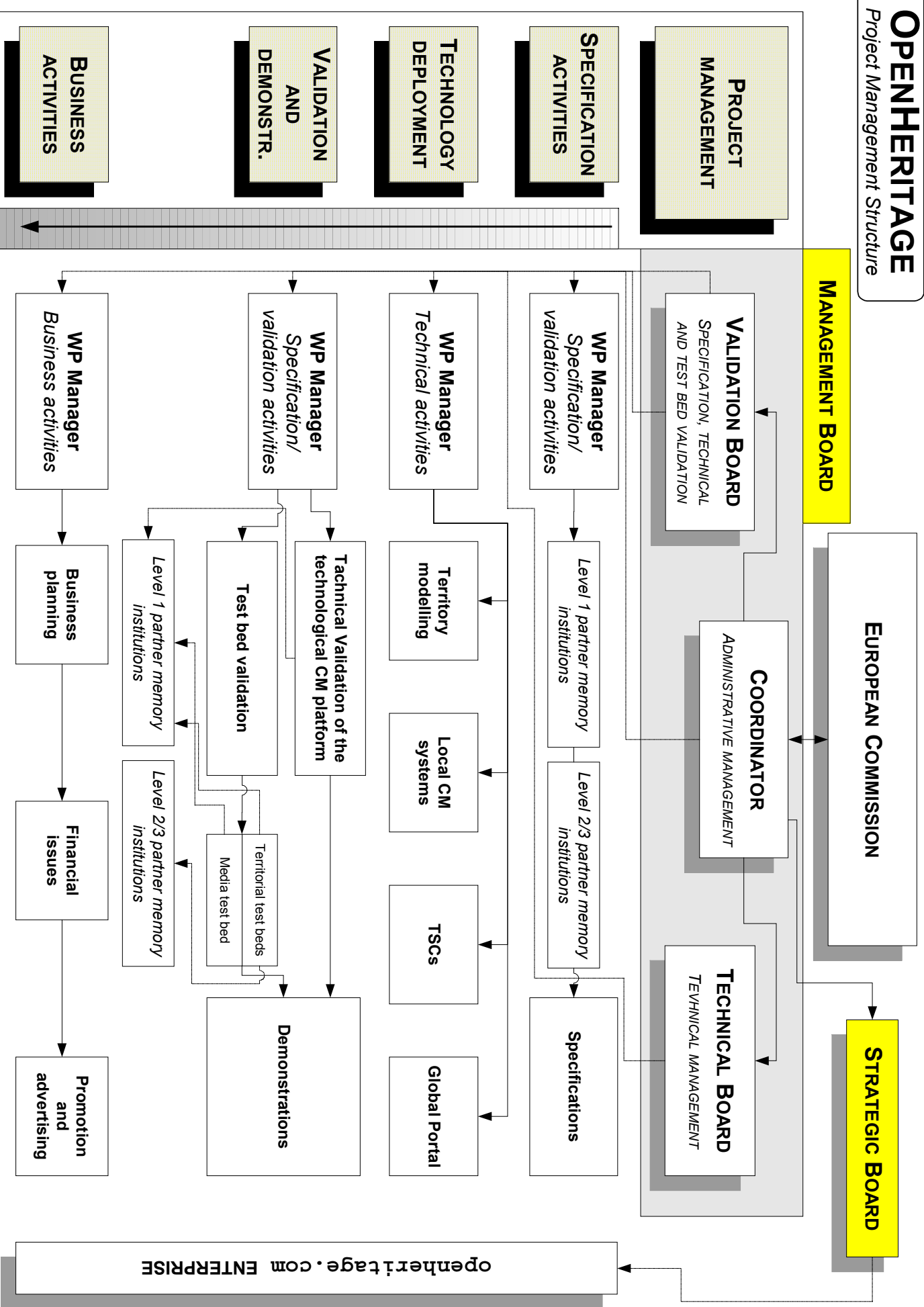
The **Project Coordinator** will have the direct administrative responsibility for financial management and for budget control, for the coordination of all activities, for organising the Consortium Meetings and preparing highlight reports, for liaising with the EC on all matters concerning the project, preparing project plans, setting objectives and approving team work plans, scheduling control points and preparing status reports for end of phase assessments, preparing exception plans, establishing and maintaining all project files, and preparing spend profiles. He will also be in charge of supervising the Technical Board and the Validation Board, two consortium bodies respectively carrying the responsibility for the methodology and quality of the technological developments (including the application/extension of relevant standards) and the responsibility for all user relations during the specification phase and the various validation activities. Any information concerning the project will pass through the project coordination. The Consortium will prevent any conflict and, if any, will manage its resolution either directly or indirectly with the assistance of senior delegated partners of each relevant organisation.

The coordinator plus the two specialised Boards (the Technical Board and the Validation Board) will jointly form a **Management Board** which will have the responsibility for running the project. The Management Board has the direct control and responsibility for the project on all technical and financial matters. The Board will have authority for the project, approve texts for information dissemination, approve project plans, give direction and guidance and conduct assessments, have responsibility for financial control, approve expenditure and spend profiles, decide on technical options, and decide on actions to be undertaken. The project coordinator will be Chairman of the Board and will be assisted by WP managers (appointed at the leading organisations) for the management of the main streams of the project activities.

WP managers will lead the activities assigned to the partners in the workplan, provide management information to the project coordinator, assist the coordinator in the preparation of WP plans and reports, and prepare exception plans if necessary. They will directly respond to the Management Board.

OPENHERITAGE

Project Management Structure



The financial management and control will be at the coordinator's charge. The detailed financial arrangements will be handled by the Finance Officer appointed by the coordinator. The accounts will be held in Euros on the coordinator's financial system, separate from the normal accounts. The project coordinator will submit spend profiles at agreed intervals for payment. Accounts indicating the financial progress of the project in relation to the budget will be prepared at regular intervals and submitted to the Board and to the Commission as agreed in the contract, together with the application for payment.

Memory institutions supporting the project as full partners (Group A), as indirectly funded supporters (Group B)¹ or as not-funded testers (Group C) will be managed through the WP Manager in charge of Specification and Validation Activities; frequent contacts and exchanges there will nevertheless be established with the Management Board and with the WP Managers in charge of Technical and Business activities.

5.2 *Planning and reporting*

Key to monitoring the progress of the project are the milestones which are assigned to each WP to ensure that results are achieved. Every 2 months, the principal contractors will provide a management report to the project coordinator who collates the inputs and assesses the technical progress and spend profiles against the workplan. Any problem areas are reviewed by the Management Board and, if required, a plan of action is agreed to correct the situation. On completion of individual WPs and project phases, the associated deliverables are reviewed by the project coordinator. Copies of relevant documentation are provided prior to the scheduled completion of a WP to allow adequate time to assess the results of the work done.

Consortium Meetings and Project Meetings are separately planned in the workplan. Project Meetings provide the opportunity for collectively discussing and agreeing technical issues and may require several days in some cases. The project coordinator issues notice of both Consortium Meetings and Project Meetings, after consultation with the Board.

Milestone points have been identified to correspond with the major project phases. At each Milestone point a Progress Report is prepared along with a statement of expenditure in Euros up to that point, for submission to the EC. Review points correspond with the proposed EC peer reviews of the project progress. A final report is written for all the WPs on completion of the project. To provide **consistency and completeness of reporting**, standard pro-forma are made available for recording status and financial information.

The following categories of reports are produced during the phases of the project:

- **Management Reports** and **Progress Reports** to the EC, produced according to the contract requirements and approved by the project coordinator and the Board. They state the progress of work, results obtained and statements of expenditure incurred. There will be three Progress Reports and 12 Management Reports, i.e. one every 2 months.
- **Deliverables**, handled by the project coordinator. They are categorised according to confidentiality (to be re-assessed at the end of the project) and forwarded to the EC.
- **Other reports**: status, project assessment and WP reports for Reviews, Consortium Meetings and Project Meetings, exception plans (as needed) and spend profiles, highlight reports to the Board, and technical Project Meetings reports.

¹ An approximate budget of 300.000 EUROS (100% financed) from the budget of the four museum partners has been allocated to services and activities in favour of the six Group B museums. While these will not directly receive any resources, therefore, they will be indirectly funded in order to be able to better support the project (while keeping the overall management structure simple).

C6. Description of the consortium

6.1 The Consortium

The core of the *OpenHeritage* consortium is composed of two software companies, Il Sestante S.p.A. in Italy and System Simulation Ltd. in the UK, which provide complementary museum solutions; of a well-know commercial Internet-based broker of CH images (Museums On Line, established in Luxembourg); of a higher-education Centre in Southern Italy (CIES, Centre for Socio-Economic Engineering) specialised in the themes of territory development and sustainable growth); and of a private no-profit Cultural Service Centre (CSC-Austria) delivering innovative ICT services to memory institutions.

The project also sees a large involvement of CH institutions in order to ensure the viability of the solutions and their successful exploitation. A cross section of the European CH institutions is represented as a Focus Group:

- clustered in five different countries;
- with collections of local or regional to collections of national or international importance;
- covering different domains: art history, history and archaeology, literature, science and technique, ethnology, natural history.

To ensure a smooth management of the project only four CH organisations participate as full partners. They are the centre of a larger “interest group” within which two different subgroups can be distinguished:

- a small group that will prepare multimedia presentations of their collections, using the *OpenMuseum* technology, and will directly contribute to the validation of the system;
- a larger group of institutions that will be involved in the trials involving the territorial and thematic test beds.

Each of the four museum partners is responsible for the co-ordination of the part of the Focus Group in its own region. The overall coordination of the user-related work will be carried out by one of the partners, appointed WP Manager.

Memory institutions supporting the project comprise:

- The four museum partners (“Group A”): National Museums of Scotland, the Musée Historique des Tissus in Lyon, the "Genna Maria" Archaeology Museum of Villanovaforru near Cagliari in Sardinia and the Museon in The Netherlands;
- The six “Group B” museums (federated as external supporting organisation, but indirectly funded through services paid by the four museum partners): The Stibbert Museum, the Prehistory Museum and the National Archaeology Museum of Florence; the Civic Natural History Museum of Verona; the Archaeology Museum of the Menhir Statues in Laconi (NU), Sardinia; and the Mauritshuis Museum in Den Haag, NL. They support the museum partners in the field testing of the collections management solution and in the tuning of the activities related to the acquisition of rich multimedia contents;
- The 20 “Group C” (external not-funded museums receiving free software and support. They will provide sample information enabling their participation to the test-beds for specification and validation activities) include 6 museums in Sardinia (coordinated by the Villanovaforru museum partner P05, in order to shape the Sardinia Territorial test bed), 5 museums in the UK (coordinated by the NMS museum partner P03, for the Scottish Border test bed), 5 museums in France (coordinated by the MHTL museum partner P04, for the Rhône-Alpes area test bed), one museum in Spain and 3 museums in The Netherlands (coordinated by the Museon museum partner P06, contributing to the thematic test bed on rich media).

The consortium also offers provision for international co-operation, with a strong attention to the involvement of major potential markets outside Europe: Japan (through the involvement of the Digital Publishing Japan company) and Russia (by means of the partnership with a group of major museums under the ADIT authority: the Ermitage, State Historical Museum, Russian Museum, Pushkin Museum, Yaroslav Fine Arts Museum and more, co-ordinated by the Kremlin Museum).

The Consortium has been built to make sure that the development will be carried out in close co-operation with the museum community all along its cycle, and that the solutions developed will have an efficient commercial exploitation through the involvement of well established companies in this field.

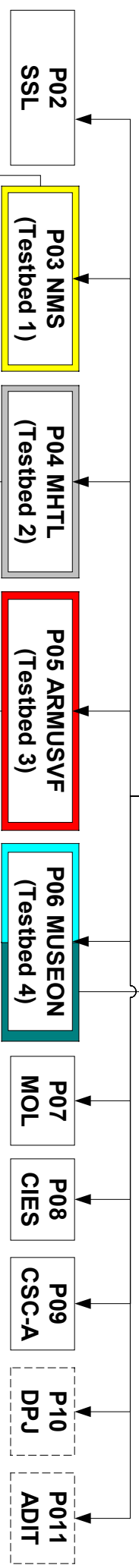
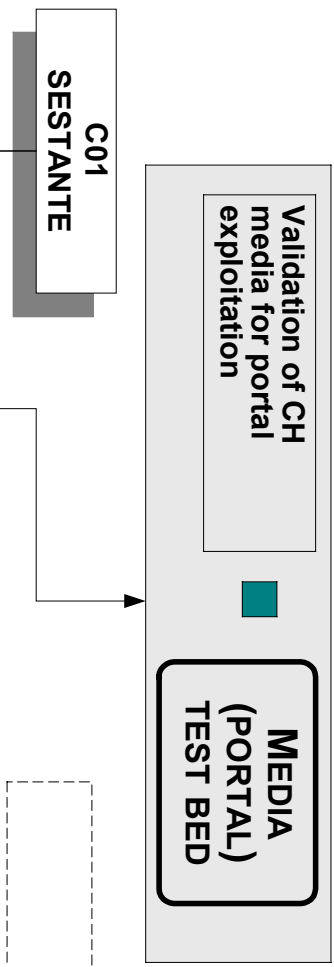
6.2 Obligations and Rights and Relationship between participants

Together with SESTANTE, the consortium partners will be co-signatories of the contract with the EU. A preliminary Agreement has been signed between the partners; in full compliance with EU regulations and in particular with Art. 12 of Annex II. It defines the methods for confidentiality and IPR handling and establishes the relationship and responsibilities between partners for the project and its results. Its main guidelines are as follows:

- As soon as the project is approved, a detailed and complete agreement will be agreed and signed between contractors to confirm their present commitment. Such document will be twofold:
 - a proper Consortium Agreement for the duration of the project;
 - a Partnership Agreement to be enforced at the end of the project and after.
- As soon as the project is approved, partners meet and confirm each one's role and responsibilities (*input, output and budget*) in the project.
- Members work under the authority of the project coordinator and of the Management Board; WP coordinators meet at the Consortium Meetings. The Board organises and checks each member's work progress.
- Major strategic and structural decisions are taken after consultation of the Strategic Board by the Co-ordinator and by the Management Board members' vote.
- Each member has access to all information and results of the Consortium for its own benefit; it is entitled to make direct commercial profit out of it provided it is clearly expressed in the Consortium Agreement.
- The Consortium will lead to the establishment of an *openheritage.com* enterprise controlled by SESTANTE, SSL, MOL and CSC Austria, where a complete licensing and franchising organisation will take advantage of the results of the work of the Consortium.

OpenHeritage Consortium

- Technical validation: Fine Arts sector ■
- Technical valid.: Archaeology sector ■
- Technical valid.: Scientific sector ■
- Technical valid.: Ethnographic sector ■
- Technical valid.: Social sector ■

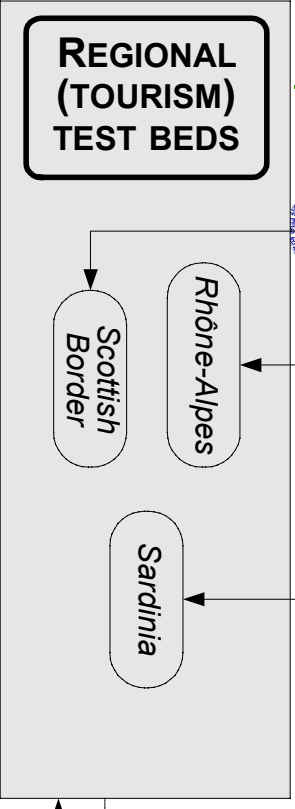
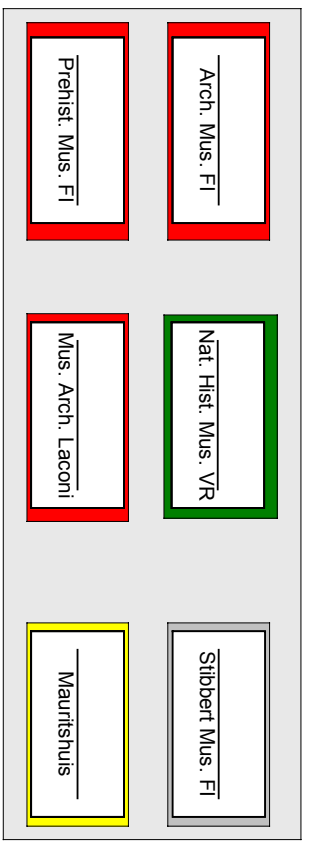


= Not funded by the CEC



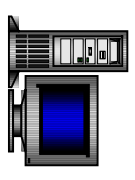
GROUP "B"

MUSEUMS WITH INDIRECT FINANCIAL SUPPORT
(role in usability validation of the CM-content development solution)

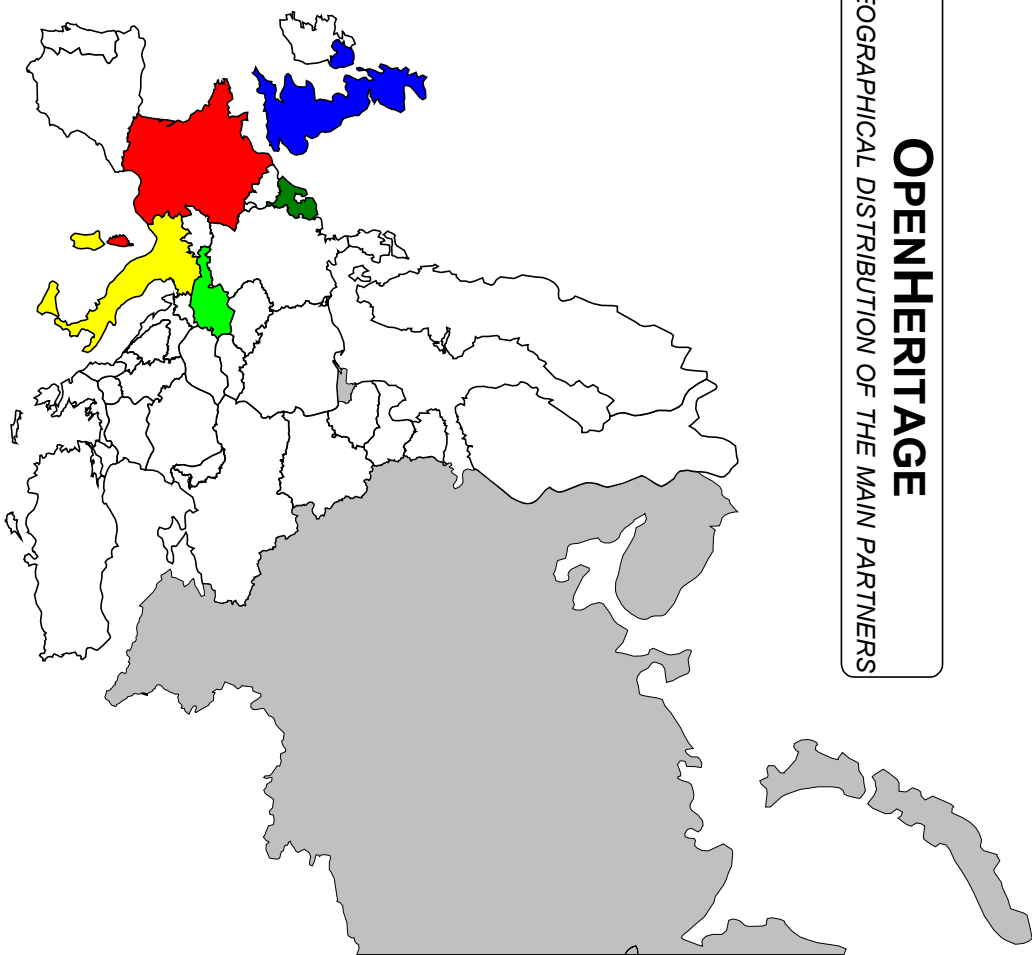


GROUP "C"

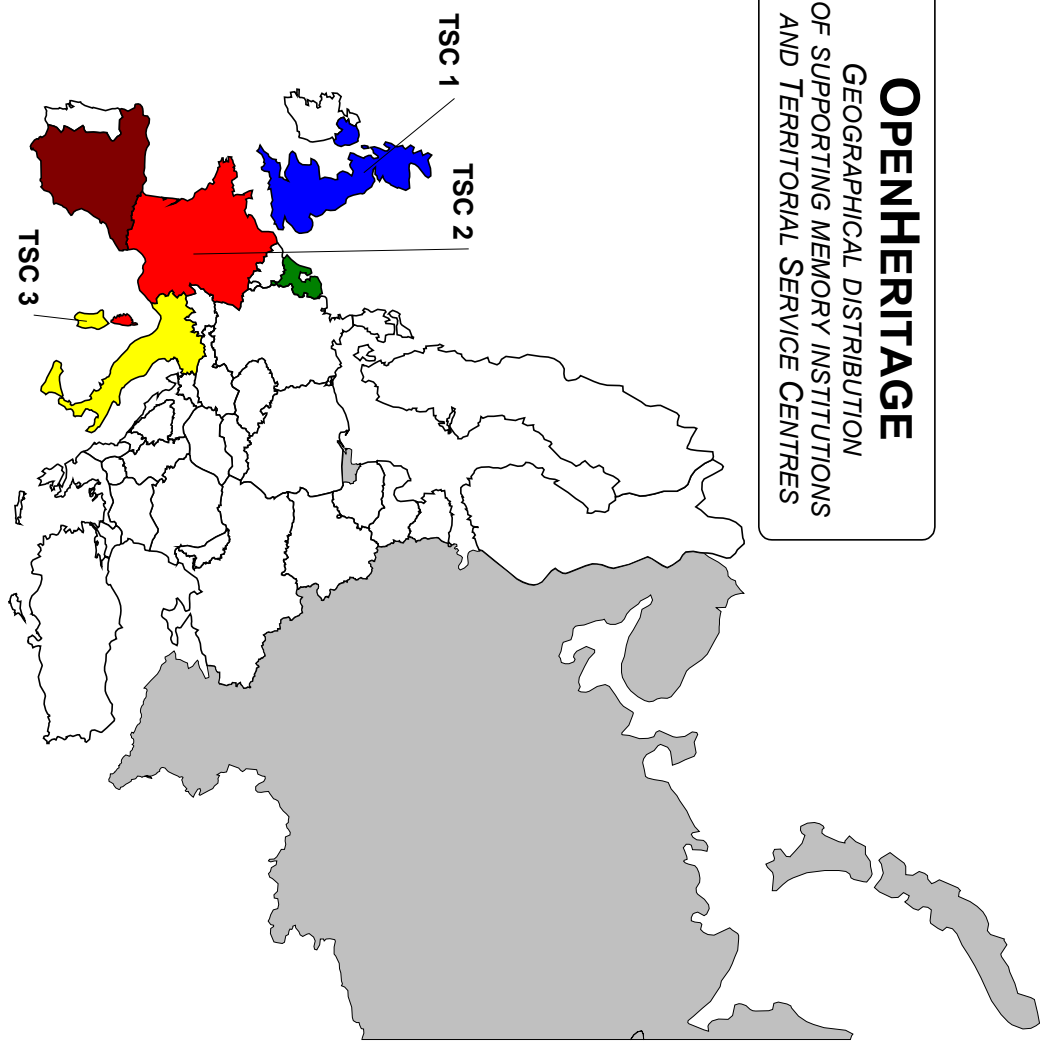
EXTERNAL SUPPORTING MUSEUMS
(role in test-bed validation)



OPENHERITAGE
GEOGRAPHICAL DISTRIBUTION OF THE MAIN PARTNERS



OPENHERITAGE
GEOGRAPHICAL DISTRIBUTION
OF SUPPORTING MEMORY INSTITUTIONS
AND TERRITORIAL SERVICE CENTRES



C7. Description of the participants

7.01 *IL SESTANTE S.p.A.*

SESTANTE is a multimedia engineering company that operates in the sector of information technology, multimedia design and communication. SESTANTE (in synergy with its controlled lab SPACE S.r.l.) offers products and services for use in interactive and scientific publishing and the world of edutainment, promotes the development of state-of-the-art engineering solutions and participates in strategic research initiatives in collaboration with national and international partners (numerous universities, the Tuscany High Technology Network, the Italian National Research Council, the Città dell'Innovazione of the Moratti Group, the Giunti Group and many others).

SESTANTE draws on its experience and know-how to offer products and services in a number of primary sectors:

- Integrated solutions for museums informatics, digital libraries and multimedia archives
- Multimedia publishing on artistic and cultural themes, edutainment, scientific documentation
- Interactive TV and WebTV systems and advanced applications for set-top multimedia terminals
- Intranet/Internet solutions for the cultural heritage
- Solutions for business communications, the publication of electronic catalogues, and the establishment of e-commerce systems
- Multimedia consoles for management control, decision support and business process reengineering
- Multimedia engineering for biomedicine: picture acquisition and communication systems (PACS), DICOM-compliant solutions, digital video editing systems, multimedia databases, 3D simulation and virtual reality systems
- Solutions for systems integration, security and connectivity
- Interactive multimedia systems for education and professional training
- Consultancy services on planning and design for innovation and systems integration, in Italy and Europe

SESTANTE has developed a range of advanced technology products and solutions for the Cultural heritage sector:

- *MuseumWare*. Modular system for setting up multimedia digital museums and providing local and remote fruition (developed in cooperation with Etruria Innovazione S.c.p.a.)
- *DLStation*. Multifunctional workstation for digital libraries and multimedia archives (developed in cooperation with the Pisa Research Consortium)
- *PhotoWare*. System of database management, information retrieval and multipurpose delivery for the digital management of photographic archives and media brokering centers
- *TextProcessor*. System for the hypermedia management of large collections of texts
- *MediaProcessor*. Digital system for the creation and management of high-quality digital archives
- *ArchiveTNG*. Multimedia system for integrated management of the new generation of historical, documentary, photographic, graphic and cartographic archives
- *MediaForge*. Modular application format and authoring system for the creation of interactive multimedia applications for the cultural heritage and scientific documentation
- *SiteWare*. Modular application format and authoring system for the documentation and virtual exploration of tourist regions and areas
- *ParkWare*. Modular system of services and applications for the logistical organisation and multimedia exploitation of territorial systems

Besides producing dozens of CD-ROMs and DVDs on Art and Culture themes, SESTANTE has already equipped 5 museums in Italy with *MuseumWare* solutions (among these, the “Similaun Man” Archaeological Museum of Alto Adige in Bolzano).

SESTANTE has participated in several European projects (Calls for Proposals TELEMATICS, ACTS, INFO2000, ESPRIT, IST).

SESTANTE is a partner of the larger Innovation Citadel, co-owned with the Moratti industrial Group. The Innovation Citadel has been conceived and designed as the qualified counterpart for public, financial and industrial operators involved with the process of global change and with the overcoming of the barriers limiting social-economic development of territories.

The Innovation Citadel has conceived an innovative methodology to plan, achieve, experiment and divulge advanced models and solutions to support territory development, by harmonising technologic innovation with organisational revision and with human factor promotion. The methodology, allowing the realisation of a real virtuous innovation cycle, is divided into different levels of intervention:

- Territory analysis
- Services system optimisation
- Innovation and competence development planning
- Technology innovation and transfer
- Development of solutions for the unified access to services
- Territory marketing and promotion, with a special accent on cultural heritage and tourism promotion

The proposed services and solutions derive from an innovative plan approved by the Italian Ministry of Treasury, where the Innovation Citadel represents the first site, and are the result of a preliminary phase of research and technologic, functional, and organisational survey carried out in pilot projects with institutional structures whose mission is territory development.

SESTANTE will have an equity share of the *openheritage.com* enterprise and will participate in the management of the company.

CVs

Flavio Tariffi, 37, a degree in Information Science and humanistic studies, deals since several years with ICT for Cultural Heritage topics and is in particular responsible for the analysis and project management of high-tech solutions in the fields of database management systems, digital imaging, library and museum systems, advanced telecommunications applications and interactive multimedia publishing both on CD and *on-line*. He is Chief Technology Officer of SESTANTE S.p.A. and project leader of the Innovation Citadel in the field of European RTD. He has been in charge of several major projects (LIBRARIES “BAMBI”, INFO2000 “MEDIA68”, ACTS “MUSIST”, TELEMATICS “ARIADNE2”, and more).

Francesca Romana Conti, 37, holds a degree and a Ph.D. in the Humanities. Since several years, she deals with Information Science topics and is in particular responsible for the analysis and project management of high-tech solutions in the fields of database management systems, digital imaging, library and museum systems, advanced telecommunications applications and interactive multimedia publishing both on CD and *on-line*. She is the project leader for SESTANTE in the field of Cultural Heritage, and has been in charge of several major projects (Italian Ministry of Research and Tuscany Region projects; LIBRARIES “BAMBI”, INFO2000 “PALIO”, ACTS “MUSIST”, ESPRIT “MENHIR” and more).

7.02 *System Simulation Ltd*

System Simulation Ltd is a software engineering company specialising in text and multimedia information systems. SSL's software provides support for large and small scale applications on networked and stand alone systems. SSL develops information products and services for a range of demanding professional and commercial clients.

Recently SSL have specialised in museum information systems, commercial and archival image library systems, information management and delivery for publishers, news services and professional and commercial organisations. MUSIMS, SSL's museum information management system, supports collections management, digital archives and interactive public access. SSL's clients include the British Museum, the London Transport Museum, the V&A Museum, Getty Images, SCRAN (Scottish Cultural Resources Access Network) and The 24 Hour Museum. SSL develop content management systems, and CD-ROM/Web products and services for the publishing sector and for information service providers.

SSL have made a significant investment in developing software tools and techniques, resulting in World class software, *Index+*, and professional design and build capabilities. *Index+* is a powerful and robust text and multimedia database system with comprehensive application development tools including Web and internet facilities.

System Simulation was founded in 1970. Since then SSL have maintained a position at the leading edge of computer applications for the support of professional and creative information management.

The guiding principles of SSL's approach are:

- *Collaborative Design* - SSL work with clients and partners to explore, and develop requirements using rapid prototypes and simulations where necessary.
- *Evolutionary Systems* - No requirement ever met an organisation's changing needs. SSL design systems which are scalable and adaptable.
- *Long Term Commitment* - SSL give the assurance of stability and have developed close enduring relationships with clients where SSL's software often comes to form the strategic core of a client's business.
- *Research and Development* - An important element in SSL's activities is working on ideas for future exploitation through a continuing R&D programme. From these projects new systems emerge which maintain SSL's position at the leading edge of application development.

SSL's goal is to make software which provides clients with competitive advantage in dynamic markets, and SSL's growth will continue through flexible, creative, business partnerships. SSL will have an equity share of the openheritage.com enterprise and will participate in the management of the company.

CV

George Mallen, BSc PhD CEng MBCS. George Mallen is co-founder and Managing Director of System Simulation Ltd, a software development company, specialising in multimedia information management systems. Since the company was founded in 1970 Dr Mallen has led development, consultancy and research on many aspects of software support for decision making. He has published some 40 papers, articles and essays on the application of information technology and computer graphics. He is also a Director of the Business Futures Network.

He became involved with computers in 1962 working on the development and use of digital simulations of air traffic control systems. His PhD explored the extension of simulation techniques to the study of information flows in organisations and in human learning.

In 1977 he founded the Computing Activities Unit in the Department of Design Research at the Royal College of Art where he was Deputy Head of Department. From 1983 to 1985 he was Head of the Department of Communication and Media at Bournemouth University and initiated a multi-disciplinary degree course in Communication and Media Production. He is a Fellow of the Royal Society of Arts.

7.03 *The National Museums of Scotland*

The National Museums of Scotland show Scotland to the world and the world to Scotland through extensive collections built up over more than two centuries. Visitors can enjoy displays of the collections at six sites, including the magnificent Royal Museum and the new Museum of Scotland, while extensive research collections which contribute to our knowledge of the human and natural world are available for study.

Ten of Scotland's most popular museums are to join forces for the first time in a ground-breaking initiative to bring collections of national significance to the widest possible public - for as little as £5.

The museums have launched a unique £50,000 Scotland-wide joint ticketing initiative, which is expected to boost visitor numbers by almost a quarter and generate an additional £3.5m expenditure within the Scottish tourism industry. The National Museums of Scotland comprise:

- MUSEUM OF SCOTLAND, Edinburgh;
- ROYAL MUSEUM, Edinburgh. The Royal Museum houses the NMS's international collections in a magnificent Victorian building. There are displays of Science and Industry, The Natural World - mammals, birds, insects, fish, fossils and geology, and Decorative Arts - European sculpture, ceramics, glass, jewellery and costume, China and Japan, the Middle East and Ancient Egypt, African, American and Pacific ethnography.
- SCOTTISH AGRICULTURAL MUSEUM, Ingliston, Newbridge, Midlothian. A remarkable collection of machinery and implements connected with the countryside, as well as old photographs showing different aspects of country life.
- MUSEUM OF FLIGHT, East Lothian. This Museum occupies the site of a historic World War II airfield and has an extensive collection of aeroplanes, rockets, models and memorabilia, housed in two massive hangars.
- SHAMBELLIE HOUSE MUSEUM OF COSTUME, New Abbey, Dumfriesshire. Set in a Victorian country house, this Museum has a remarkable collection of period costumes displayed in appropriate room settings.
- MUSEUM OF PIPING, Glasgow. The Museum of Piping presents the NMS's unique collection of bagpipes and piping artefacts.
- SCOTTISH UNITED SERVICES MUSEUM. The public galleries of the museum are currently closed for redevelopment. The Museum will reopen around Easter 2000 with a set of six completely new exhibitions.

CVs

Dr R **Michael Spearman** has worked with computer applications for archaeological and historical projects since 1982. He has experience of a wide range of different hardware and software and project types. After graduating in 1978 Dr Spearman worked in urban archaeology for five years. He received his PhD from Glasgow University in 1988. He was curator of the National Museums of Scotland's Celtic and Viking collections during the years 1986 - 96. During this time he worked with the British Museum and National Museum of Ireland to realise the "The Work of Angels" exhibition. He was responsible for the re-display of the Dark Age Sculpture Gallery and the Lewis Chess Pieces exhibition. He has led the Museum of Scotland Project's Multimedia work since 1990 and formed the NMS's Multimedia Team in 1992. Dr Spearman has lectured and published widely on both his collections and multimedia responsibilities. As the seconded Acting Director of SCRAN he successfully led the RCAHMS, NMS and SMC in their joint bid to establish the Scottish Cultural Resources Access Network, a Millennium Project with a total budget of £15M. He continues to work closely with SCRAN and is now responsible for the further development of The Multimedia Team. The Team has recently completed the production of an educational CD-ROM entitled 'The Scottish People 1840-1940' for distribution by SOEID to all Scottish Schools.

7.04 *The Musée Historique des Tissus de Lyon*

The Musée Historique des Tissus de Lyon provides a first-class survey of the development of the art of weaving. The museum hosts the largest collection of textiles in the world.

CV

Catherine Calba is an historian of art, fashion and costume and since 1987 the Director and Curator of the Museum. She has published several essays and monographs, and has participated in several EC projects (the latest the ESPRIT "Menhir" project).

7.05 *Archaeology Museum "Genna Maria" of Villanovaforru*

The testimony of human culture from the material of the museum's collection, derived from excavations and surface area research, have been ordered according to differentiated criteria, unified in one circular itinerary. Starting in the great hall on the ground floor (first section), with the presentation of equipment coming from the nuragic village Genna Maria (IX-VIII cent. BC.). It reveals the specific functions for each of the various rooms of the habitations, which were laid out in a centralised plan.

The time-ordered view leads to a diachronic order of the material exhibited in a side gallery at the ground floor (second section). Beginning with the first period of the iron age, and continuing with the recent and final bronze age, and then receding in time to the final period of antique bronze age (XVI sec. BC.), there is documented the various classes of ceramics that had been in vogue among the antique inhabitants of the village Genna Maria, that were recovered from the sample excavations which reached down to the deepest layers of the archaeological deposit.

The finds, displayed according to topographic criteria, in the two showrooms at the entrance of the upper floor (third section) demonstrate the cultural correspondence between the material of the previous section and the surface finds made in the rural territory. The richness of the hillside village settlements from the beginning of the medium bronze age up to the first iron age is well exemplified by the settlement of Pinn'e Maiolu, stratified in the deepest layer of the modern village of Villanovaforru. The more recent archaeological phases of the territory are represented in the big hall of the upper floor (fourth section).

The finds, exhibited according to chronological and topographic criteria, illustrate the archaeology of the Punic and roman Marmilla, starting with the time period in which nuragic communities were opening themselves to contacts with the Carthaginians, Greeks and Etruscans (VII-VI cent. BC.). The last hall before descent (fifth section) concludes the itinerary with limited documentation of the more antique settlements and funerary testimonies of the ancient and prehistory Marmilla, then ascending in time to the recent neo- and aeneolithic periods (IV-III millennium BC.).

CVs

Ubaldo Badas is a well known Archaeologist and - since 1980 - the Director of the "Genna Maria" Archaeological Museum of Villanovaforru. He has been in charge of several campaigns all over the territory of Sardinia, and is the author of several relevant finds. He has promoted and chaired several symposia and University seminars, in topics ranging from Prehistoric Archaeology to metallurgy and Museum science. He has co-ordinated countless exhibitions and has edited a large number of catalogues, papers and other publications.

Since 1993, he has approached the field of electronic publishing editing the *Nuragica* CD-ROM and other video-based productions. He works in close contact with the Cultural Heritage department of the Sardinia Region.

7.06 *Museon (The Hague)*

The Museon in The Hague dates from 1904. It was established as a museum of industry, with a main purpose to stimulate students to become craftsmen. It developed however quickly into a multi-disciplinary institute with collections in the field of ethnology, physical science and technology, natural history, history and archaeology. The museum started as a private institute, but was taken over by the municipality of The Hague 1920.

Education remained an important service throughout the museum's existence, expressed by its previous name that was "Museum for education". At the moment it offers over eighty different museums lessons to primary and secondary education. The educational character is also reflected in the current building, which dates from 1986: smaller rooms that can be closed for museum lessons surround the central part of the exhibition space.

The staff consists of 71 regular and about 35 temporary employees. The number of objects in the collection is 300,000, excluding all different species of the natural history collections. The building that is established in 1986 contains 5,000 square meter of exhibition space. The number of visitors is about 250,000 per year. Each year two large and a number of smaller temporary exhibitions are organised, covering all domains that are represented within the museum. Next to the museum lessons the museum offers a broad variety of lectures, courses, demonstrations and workshops.

The museum participated in various European projects: EMN, RAMA (RACE program) and SIMILE (ISPO program). During the last few years the Museon also functions as an external museological consultancy, dealing with the organisation of exhibitions, responsible for the contents as well as the project management. Since January 1997 the museum is privatised again and registered as a foundation.

CVs

Hub Kockelkorn

Function: IT project leader

Background: historian. University subjects: contemporary, social and economic history, cultural anthropology, sociology

Deals with IT projects and co-ordinates the collection registration. Participated to two European projects (RAMA and SIMILE) and was responsible for several external projects (exhibition about the Marshall Plan, research into the user requirement for a visitor information system at EXPO 2000 in Hannover, consultancy for a collection management system).

Member of the advisory committee for the Foundation for the Ethnological Collections in the Netherlands. Various publications in the field of socio-economic history and automation matters in museums.

Rob Schouten

Function: Head department of Collections

Background: Biologist. University subjects: research projects on: Toxicology trails; Botany; Phylogeny of insects.

Specific experience within the museum:

1987-1999: educational activities, design of permanent exhibition, as regards content; Project-leader for internal and external Museon projects

1996-1999: chairman of Museon's representative advisory board

1999: Head department Collection. Member of the Management Board

Miscellaneous: Editor for the Journal of Entomology 1990-1999. Position in several committees

Publications: Various publications in the field of phylogeny and systematics on insects.

7.07 *Museums on Line S.A.*

MUSEUMS ON LINE S.A. was incorporated on September 21, 1995 as a regular Société Anonyme in Luxembourg by the Fiduciaire Générale de Luxembourg, Deloitte Touche Tohmatsu.

MUSEUMS ON LINE S.A. intends to address commercial electronic publishing applications as a packager, conveyer and broker of museum images and related products.

MUSEUMS ON LINE S.A. will assist cultural institutions by networking and marketing their images to the public-at-large, educational and cultural institutions, and the commercial sector by engaging in at least three lines of business :

- providing **consulting services** such as assisting museums in preparing digitisation, indexing and protection of their images for distribution over the networks.
- **network** management, marketing and distribution of digitised images.
- **licensing of images to third parties.**

MUSEUMS ON LINE S.A. goal is to target at least five markets/user groups who will subscribe to its electronic networking service. The service will provide users with options for downloading images on a defined access basis and with a corresponding schedule of fees either for limited use or as a licensed user. The five market/user groups are defined below :

- museums - provide network management services to cultural institutions. Assist the organisations with the growth of their database within their own closed user group network.
- Other cultural institutions - facilitate exchange of digitised images and text of collections and archival resources by universities, libraries and museums for scholarly use, research and other non-profit networking activities.
- Public school system - make images and text available for use as reference tools in school libraries for teachers in preparation of lesson plans, and for students to prepare their homework or participate in classroom projects using the images.
- Commercial users - license images to advertisers, publishers, multimedia producers etc
- Public-at-large - provide images and text to home PC users and the growing market of SOHO user group.

1997-1998 Development phase

- industrialisation of the prototype software system
- operation of a search service
- consulting software/equipment installations, building of information databases framework and digitisation services.

1999-2000 Ramp-up phase

- operation of information services on a large scale
- negotiations with major publishers in Europe, Canada, USA and Japan for marketing of the publishing services.
- increase of the database up to 50 cultural organisations / 250 000 images.

2000 onwards Full scale operation

- operation of the services on a large scale
- full consulting activities (software, equipment maintenance) and digitisation services
- negotiations with major institutions for the set up of an e-education service
- increase the database to 100 Cultural Organisations / 500 000 images.

MUSEUMS ON LINE S.A. seeks strategic alliances with key players in the software, publishing, media, networking and manufacturing sectors relevant to the marketplace, as well as individuals with contacts in these industries. MOL will have an equity share of the `openheritage.com` enterprise and will participate in the management of the company.

CVs

Gérard Bonnevey President of Museums On Line S.A., brings a background of cultural consulting and business development in Europe, Asia and the U.S. He managed a Publishing House (facsimile and regional books of art and history). He earned a law degree and a Master of International Business Administration.

Dominique Delouis (Computational Engineering and Management at the Centrale School in Lille, France and Information System Analysis and Design from Sup'Telecom in Paris) As a project manager of France Telecom, he has been in charge of a number of information technology projects, such as The New French Library in Paris, Multimedia European Network of High quality Image Registration (MENHIR / ESPRIT) and Remote Access to Museum Archives (RAMA / EU RACE II.). Dominique Delouis is also a consultant for UNESCO.

7.08 *CIES (Centre for Socio-Economic Engineering, Rende (CS), Italy*

The CIES – Centro di Ingegneria Economica e Sociale is a research centre promoted by the Università della Calabria and it counts among its members Regione Calabria (regional law n°7/95 in which the CIES is qualified as “a supporting organization for study, research, planning and regional activity monitoring centre), Telecom Italia S.p.A., Telespazio S.p.A., SI-IES S.r.L., Sistemi Informativi S.p.A. (IBM), Pitagora S.p.A., Nomisma S.p.A., Istituto Superiore delle Comunicazioni (Ministero delle Comunicazioni), Ferrovie dello Stato S.p.A., Ericsson Telecomunicazioni S.p.A., Anap Leone XIII and Arssa (Agenzia Regionale di Sviluppo Agricolo).

The CIES carries out research, training and experimentation activities in the field of global innovation and it runs the “Majise” project, financed by the ex-legge 64/86 for the amount of about 22 billion Italian Lire, articulated in a three-year activity and monitored by the Italian Ministero per l'Università e la Ricerca Scientifica e Tecnologica (MURST), Ufficio Aree Depresse (CIES-MURST convention drawn up on January 30, 1998). The “Majise” project is carried out under the High Patronage of the Prime Minister Cabinet (Alto Patrocinio della Presidenza del Consiglio dei Ministri).

Its theoretical basis lays in the frame of the debate about cognitive society and it refers to the concept of system innovation or, to use the Anglo-Saxon terminology, “global innovation”, a concept approached by means of interdisciplinary methodologies and paradigms of the so-called complexity theories.

The project is committed to found a small-high cultural scientific community that will realize:

- the Higher School of Innovation Policy . The School consists in biennial courses and origins from the French “hautes ecoles” models modified and adapted to the Italian cultural context. It is addressed to graduates with different study backgrounds. The educational aim is to provide methods, knowledge and instruments to carry out syntheses of reality which underline innovative phenomena, to develop skills and sensitivities to perceive and analyze the change and to elaborate theoretical and applied innovation strategies.
- Elaboration of an integrated project, entitled Marica, for the development of off-shore fishfarming in the Mediterranean and especially in Calabria, in cooperation with some important international institutes.
- Elaboration of an integrated project for the exploitation of cultural resources to produce goods and services that can be placed, in economic terms, in Education, Tourism and Entertainment fields.
- Elaboration of a feasible study to carry out, in Calabria, an “International School of Development“, in cooperation with the Jacques Maritain Institute.
- Elaboration of a feasible study to carry out, in Calabria, a “City Manager School“, in cooperation with the Scuola Europea di City Manager of Milano.
- It is founding the new Department of Technological, Philosophical, Philological and Archeological Disciplines.

CVs

Francesco Del Monte, born in 1942. Associate Professor in Economy of Industrial Systems at University of Calabria (1995-). From 1989 he is President of the CIES (Centro di Ingegneria Economica e Sociale) at University of Calabria. Graduated in 1968 in Nuclear Engineer at University of Bologna, he spend almost all of his academic life in the University of Calabria. He teaches in the University from 1974. He is Past President of Cassa di Risparmio di Calabria e Lucania and Past Vice President of Banca Nazionale del Lavoro. He is in the scientific board of "L'Industria" a review directed by Prof. Romano Prodi. He published several articles and books in Economic Engineering and Industrial Economy. Among them: Il piano telematico della Calabria (1990) and Innovare per competere (1993).

Giovanna Miglionico, born 1971. Project Manager of CIES (1999-). Graduated in 1998 in Management Engineering at University of Calabria. She worked in the University of Calabria in the Department of Electronic, Information Theory and Systems (DEIS) and organised seminars and courses at the faculty of Engineering in University of Calabria.

7.09 CSC-Austria

The CSC Austria is a society for the development and application of New Information Technologies and Information Networks for Cultural Heritage. The Cultural Service Centres have been established as an outcome of the 1997 European Union Project (TenTelecom) MOSAIC - Museums over states and virtual culture. In the project the principal guidelines for multimedia applications and information technologies for cultural organisations have been compiled. According to these guidelines a best practice concept for the creation and exploitation of high quality multimedia cultural content has been defined.

In Austria the first cultural service centre, The CSC AUSTRIA, was founded in June 1998. CSC AUSTRIA was established a non-profit organisation, and is based in Graz, the capital of Styria.

The Service Centre is specialised in multimedia archiving databases, distributed international search and retrieval of cultural objects and information management consulting activities for cultural organisation. It offers its services to museums, archives, galleries, libraries, researchers, and industrial companies, etc.. The basic services encompass:

- interoperability, distributed databases, search engine (CIMI)
- external database interfaces, libraries, museums, archives, other cultural organisations
- information centre, procurement, development of multimedia applications
- internet, virtual reality, cybercafe...
- Local and Remote Cataloguing
- assistance with the preparation and realisation of
- European Community projects (EU, databases, digitising)

Among the most recent projects, the accompanying measure CULTIVATE-EU will establish a European Cultural Heritage Network consisting of 145 partners based in 123 European countries. The network intends:

- to raise awareness of the IST Programme for the development and the use of cultural heritage applications in all memory institutions in Europe.
- to enhance the quantity and quality of submitted proposals under the IST programme by various means like electronic information services, information days and individual advice for proposers and intends to link European institutions with national administrative bodies and professional organisations and institutions in order to bring European activities and directives faster to the citizens and vice versa.

CSC-A will have an equity share of the openheritage.com enterprise and will participate in the management of the company.

CVs

Ao. Univ.-Prof. Dr. Walter KOCH was born on the 16th of February 1947 in Graz. He received a PhD in Mathematics and Physics from University of Graz in 1970. He is shareholder and director of AIT Ltd. (Angewandte Informationstechnik Ges.m.b.H.), Associate Professor at the University of Graz and Guest Professor at the University of Krems. Prof. Koch's relevant experience includes:

- Head of different research institutes at JOANNEUM RESEARCH Ltd. In Graz:
- Consultant to different national and international organisations:
- Member of several national and international scientific associations:
- Project experience in the design and development of information systems for industries, administrations and museums;
- Several EU-funded projects in the TAP (Telematics Application), Raphael, TEN-Telecom Sectoral Programme, and IST Programme

Prof. Koch has published more than 70 papers and technical reports, presented papers in four continents at least at 100 conferences, seminars and workshops.

7.10 *Digital Publishing Japan (J)*

DPJ was established in 1996 as "Digital Publishing Japan Ltd." In Kita-ku, Osaka, Japan with initial capital of yen 3,000,000, by president Jiro Shindo. DPJ was established for the purpose of seeking new business possibilities to develop accumulation, distribution and optimal utilisation of images through computer networking. Sharp expansion for this new communication system via the internet was expected.

In their Research and Development centre in Kyoto, work is undertaken on image digitisation in association with universities and commercial research centres in western Japan. It has created a new high resolution digital format which enables, by means of the use of 3D vector information, high levels of zoom whilst maintaining image quality. In 1997, it brought to market "Express-Shot" in partnership with various other companies, for the creation of image databases and their distribution via the Internet.

In 1998, it developed the "PADS" process (a security system which enables protection from unlawful copy and downloading) for the distribution of ultra-high definition images. This process works under UNIX with a Web *Java*-based user interface. In November 1999 DPJ concluded a contract with Kyoto National Museum for the use of VFZ to collect archived image format.

DPJ manufactures:

PADS Controller	Server application software for registering and supervising its security information for controlling VFZ file
VFZ Stream Server	Server application software for stream controlling of VFZ file
VFZ File Server	Software for producing VFZ file from conventional image data format, for extending image by VFZ method, and for translating VFZ file to conventional image data format
VFZoom	Software for producing VFZ file from conventional image data format, for extending image by VFZ method, and for translating VFZ file to conventional image data format
VFZ Client	Software for viewing VFZ file, for extending image by VFZ method, and for translating VFZ file to conventional image data format
VFZ Viewer	Software for viewing VFZ file and for extending image by VFZ method

CVs

Mr. **Jiro Shindo** is CEO & CTO (Chairman of Technical Officer) of DPJ.

7.11 *Association for Documentation and new Information Technologies (ADIT) (RU)*

The Association for Documentation and New Information (ADIT) is established on the basis of the Regulations the Russian Committee of ICOM. ADIT is non-commercial organisation. It acts in close contacts with the Russian Committee of ICOM and CIDOC, and maintains close links with museums and international bodies on selected subjects.

The ADIT is a non-commercial public organisation and acts in close contacts with museums on selected subjects. Goals and main activities of the ADIT include the following:

Goals

- uniting Russian specialists in the field of museum informatics;
- maintaining contacts with UNESCO, ICOM, CIDOC and National Computer Museum Associations, such as MDA in UK, MCN in USA, CHIN in Canada;
- organisation of the annual National Conference of the ADIT;
- translation and distribution of museum informatics papers;

To achieve these goals the ADIT gathers, studies, analyses and publishes information on corresponding topics, thus assisting Russian museums in their activities.

Activities

- all seminars and the annual Conference;
- participation in international programs of ICOM, European Community etc.;
- cooperation in design, production and distribution of new information technologies;
- consulting, establishing groups of experts;
- contacts with international professional bodies through CIDOC and Russian Committee of ICOM;
- working out an Electronic Publishing Concept for museums;
- creation and coordination of Russian Heritage Network
- the museum activity co-ordination on the problems mentioned above.

The ADIT includes private members and collective members collectively representing about 200 Russian museums and cultural institutions among which:

- State Hermitage Museum
- State Historical and Cultural Museum-preserve "Moscow Kremlin"
- State Tretyakov Gallery
- The State Russian Museum, St. Petersburg
- Pushkin State Fine Arts Museum
- State Historical Museum
- The Andrei Rublev Central Museum of Early Russian Culture and Art
- Peter the Great Museum of Anthropology and Ethnography "Kunstkamera" RAS
- State Central Museum of Contemporary History of Russia (Museum of the Revolution)
-

To fulfil the above mentioned activities, the ADIT establishes the following Working Groups:

- documentation and terminology;
- multimedia and information technologies in education;
- data-bases and electronic imaging;
- telecommunications and INTERNET;
- international relations;
- legislation;
- publishing.

CVs

Alexandre V. Dremailov was born in 1960. A degree of power engineer, he got degree of circuit engineer in Moscow Technical University of Bauman. In 1989 he organized Scientific Department of the Information Systems of State Historical and Cultural Museum-preserve "Moscow Kremlin".

Mr. Dremailov has initiated and managed several information technology projects such as automatic systems for managing Kremlin Museums assets, electronic images archives, local network of Kremlin Museums, automatic system for booking and selling of tickets, multimedia electronic publications on CD-ROM, Internet programme.

He has a set of publications in the field of museum information technologies. He is a member of the International Council of Museums. Keeping the positions of the Head of the Scientific Department of the Information Systems of the Moscow Kremlin Museum, Mr. Dremailov is a President of the Association of Documentation and New Information Technologies - ADIT.

7.12 *Supporting Memory Institutions*

The project is supported by two different groups of external memory institutions:

- Six “Group B” museums (federated as external supporting organisation, but indirectly funded through services paid by the four museum partners):
 - The **Stibbert Museum of Florence**, containing vast and eclectic collections of paintings, furniture, textiles, books, costumes, arms and armour (all pieces of great rarity stemming from countries and cultures all over the world);
 - The **Prehistory Museum of Florence**, a centre for the collection, cataloguing and preservation of the various Florentine paleontological collections, dedicated to restoring, analysing and studying archaeological materials and to promoting new research in the field of prehistory;
 - The **National Archaeology Museum of Florence**, featuring splendid collections of large bronze sculptures including the world famous "Chimaera", collections of painted Attic ceramics, of marble sculptures and a vast and extremely valuable Egyptian collection (vases, sculpture, sarcophagi with mummies and papyri);
 - The **Civic Natural History Museum of Verona**, with vast collections of more than two million objects organised in the four major Departments: Botany, Geology and Palaeontology, Prehistory and Zoology;
 - The **Archaeology Museum of the Menhir Statues in Laconi (NU)**, Sardinia, a small but fascinating thematic museum devoted to the special heritage of pre-nuragic monoliths;
 - The **Mauritshuis Museum in Den Haag, NL**, a major collection of European paintings and fine arts.

Together with one of the Group C museums, they support the museum partners in the field testing of the collections management solution and in the tuning of the activities related to the acquisition of rich multimedia contents.

- 20 “Group C” institutions (external not-funded museums receiving free software and support) that will provide sample information enabling their participation to the test-beds for specification and validation activities:
 - 6 museums in Sardinia (coordinated by the Villanovaforru museum partner P05, in order to shape the **Sardinia Territorial test bed**): Sanna National Museum in Sassari, Archaeological Museum in Dorgali (NU), Ethnographic Museum of Aritzo (NU), Archaeological Museum of Pula (CA), Archaeological Museum of Carbonia (CA) Theatre Museum of Orosei (NU).
 - 5 museums in the UK (coordinated by the NMS museum partner P03, for the **Scottish Border test bed**): the Halliwells House Museum in Selkirk, the Hawick Museum & Art Gallery in Hawick, the Kelso Museum & Gallery in Kelso, the Mary Queen of Scots House in Jedburgh and the National Trust Scotland in Innerleithen;
 - 5 museums in France (coordinated by the MHTL museum partner P04, for the **Rhône-Alpes area test bed**): the Musée de l’Imprimerie et de la Banque in Lyon, the Musée d’Art et d’Industrie in Saint-Etienne, the Musée d’Histoire Naturelle in Lyon, the Musée Dauphinois in Grenoble and the Musée du Peigne of Yonnax;

- one museum in Spain (the Civic Museum of Peralada) and 3/4 museums in The Netherlands (coordinated by the Museon museum partner P06, contributing to the **thematic test bed** on rich media): the Haags Historisch Museum, the Museum voor Communicatie (Museum for Communication, technical), the Nederlands Letterkundig Museum (Netherlands Literature Museum), and the Museum van het Boek (Museum of the Book, applied art).

Group B museums have exchanged with the coordinator the following letter of endorsement:

To:
Dott. Flavio Tariffi
Il Sestante S.p.A.
Via Dorsale, 13
54100 Massa (MS) - Italy
Fax +39 0574 607929

_____, 26/04/2000

Re: *EC Project OpenHeritage*

Dear Sirs,

I was very pleased with the discussion we had with Dr. Francesca Romana Conti about the *OpenHeritage* project. I think this is an important development for our type of museum and I am pleased to confirm our wish to participate.

I understand that we will be asked to provide a set of digital images and related object descriptions. We will discuss with you which items will best suit your needs. I think we will be able to provide about 1.000 such object descriptions extracted from our current database.

In return I understand you will provide us with software which we will use to develop the object descriptions. We will also receive - through the museums participating in the project as full partners - free support in digitising the images we provide and in setting up multimedia presentations of our collections.

Our primary objective is to increase the number of visits to the museums by making the information about our collection available via the *OpenHeritage* system. But we also expect to be able to sell our images and object descriptions via OpenHeritage and we will, in due course, agree appropriate business arrangements with you.

I am pleased to provide this letter as formal notification for the EC of our intention to participate.

Yours sincerely

The Managing Director

Group C museums have exchanged with the coordinator the following letter of endorsement:

To:
Dott. Flavio Tariffi
Il Sestante S.p.A.
Via Dorsale, 13
54100 Massa (MS) - Italy
Fax +39 0574 607929

_____, 26/04/2000

Re: *EC Project OpenHeritage*

Dear Sirs,

I was very pleased with the discussion we had with Dr. Francesca Romana Conti about the *OpenHeritage* project. I think this is an important development for our type of museum and I am pleased to confirm our wish to participate.

I understand that we will be asked to provide a set of digital images and related object descriptions. We will discuss with you which items will best suit your needs. I think we will be able to provide about 1.000 such object descriptions extracted from our current database.

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Our primary objective is to increase the number of visits to the museums by making the information about our collection available via the *OpenHeritage* system. But we also expect to be able to sell our images and object descriptions via *OpenHeritage* and we will, in due course, agree appropriate business arrangements with you.

I am pleased to provide this letter as formal notification for the EC of our intention to participate in the *OpenHeritage* project to be issued to the Commission of the European Communities (3rd IST-Call).

Yours sincerely

The Managing Director

C8. Economic development and scientific and technological prospects

8.1 Overview

The project has a strong orientation towards what is a **rapidly developing market**. Recent research carried out by Consorzio Civita, an Italian public private consortium aimed at Cultural Heritage promotion and valorisation (March 1999), has estimated the market at at least € 5 billion in the coming years and that 30,000 new jobs could be created in Italy alone. This policy seems to be confirmed by the relevant resources being allocated by the Regional plans within *Agenda2000* for Mediterranean southern Regions in the coming years, and is in line with the ongoing territory development processes in several European countries (Italy and Spain among the first) aiming at the valorisation of characteristic local assets, including Cultural Heritage assets.

In UK, the National Museum Directors' Conference launched in 1999 the concept of the "Digital Museum" where they will digitise 400 museums until 2002 in UK for a budget of UK £55 million. They estimate this project will employ 10,000 persons (see the *Netful of Jewels* at <http://www.artlibrary.com/museums/motwlogon.htm>).

OpenHeritage offers an advanced technological and business infrastructure with real potential to create value from Cultural Heritage assets and from cultural tourism.

In scientific and technological terms, it addresses in a co-ordinated and finalised way several core issues in CH accessibility, organisation and valorisations, that represent the focus of the activities being carried out by many consortium partners. It will therefore represent an ideal ground for relevant continual research and development activities to be carried out by the partner organisations both in the institutional (CIES, CSC Austria) and in the industrial (SESTANTE, MOL, SSL) domains. Most of these activities will be carried out in the frame of the new *openheritage.com* enterprise, that will represent an ideal joint operation base for the finalisation and verification of these research activities.

SESTANTE Exploitation Objectives

SESTANTE is the developer of the *MuseumWare* technology and is developing a comprehensive industrial expansion policy in the fields of Museum solutions and Digital Libraries. In the frame of the broader Territory Development project SESTANTE is carrying out in cooperation with the Atlantis Group, SESTANTE plans to introduce museum innovation and valorisation packages aimed at a potential market of over 3.000 museums in Italy alone. In the frame of the development of the *OpenHeritage* project, SESTANTE plans to join forces with MOL, CSC Austria and SSL to create the new *openheritage.com* enterprise, that will market a new modular collections management solution and will offer global business-to-business on-line services in the fields of CH and tourism.

System Simulation Ltd Exploitation Objectives

System Simulation Ltd has a growing customer base in UK mainly in large museums and galleries for its MUSIMS collections management package. SSL's purpose in working with the *OpenHeritage* project is to diversify its customer base by addressing the wider market of the small and medium museums in Europe, offering them a well packaged and low cost solution derived from MUSIMS. SSL's work on the Framework 4 projects, *Aquarelle* and *Term-IT*, has provided valuable experience and technologies extending its scope considerably. The project will continue this process but with increased emphasis on the way in which this technology can be marketed in the complex public/private, large scale/small scale, partnerships characteristic of the culture economy. SSL plans to join the new *openheritage.com* enterprise for these new development activities.

Museums On Line Exploitation Objectives

The main Museums On Line objective is the world-wide development of business activities in the field of European cultural heritage through the utilisation of advanced multimedia technology for the digitisation, registration and brokerage of cultural assets. The main target is the education market world-wide which will be met by establishing partnership contracts with publishers. Museums On Line will be a distributor of the *OpenMuseum* software package and solutions as it is seen as the best vehicle to attract museums to its on-line licensing services. *OpenHeritage* solutions will also help Museums On Line and its museum partners position themselves at the cutting edge of the multimedia publishing scenario. In addition to actively develop the business and marketing plans of the new *openheritage.com* enterprise, MOL plans to be part of the new company.

CSC-Austria Exploitation Objectives

The participation in the *OpenHeritage* project is for CSC-A an important occasion to develop the ongoing strategy for the delivery of technical, scientific and organisational services to memory institutions in Styria and all over Austria. CSC Austria plans to join the new *openheritage.com* enterprise, possibly through the commercial ICT enterprise run by Prof. Koch, Angewandte Informationstechnik GmbH (AIT, Applied Information Technique Ltd.) specialised in information engineering and development of information systems in the fields of public administration and industry management applications.

DPJ Exploitation Objectives

The participation in the *OpenHeritage* project is Digital Publishing Japan is the result of the long-lasting involvement of this dynamic company in the field of image processing and pre-press solutions, with a direct specialisation in the field of high-quality publishing where CH topics represent one of the most important application fields. DPJ will aim at complementing the *OpenMuseum* offering and the services of the Territorial Service Centres with state-of-the-art publishing and image archival and retrieval systems, and will develop a host of advanced solutions (based on the PADS and VFZ core technologies) for the *OpenHeritage* global portal in order to enable customers to easily browse and securely trade images and other rich media objects.

8.2 *OpenHeritage Business plan*

The *openheritage.com* enterprise will be a joint venture between the SMEs of the consortium: SESTANTE, SSL, MOL and SCS Austria. Each has considerable experience of working in the CH sector and they now plan to join forces in order to get to a critical mass for gaining a substantial share of the digital cultural assets market.

System Simulation Ltd, which has already a strong and leading position in UK and participates in several advanced initiatives supported by the UK government, Museums On Line which has established itself internationally and which set up a variety of partnerships with manufacturers and software providers such as Hewlett Packard (to support the acquisition of equipment by museums and archives), SESTANTE which has introduced an innovative approach to collections management systems for small and medium museums, and CSC Austria which has already developed a Territorial Service Centre in Austria, will join their respective skills to offer European CH institutions a leading, comprehensive solution enabling them to manage, add value to and market their digital collections.

In front of the dramatic emerging development of Internet, the governments of most of the European countries favour digitisation programmes and the access to the digital archives thus created. *openheritage.com* will propose to small and medium museums a realistic offer to both meet their mission (preserving their collections) and offer an easier access to these collections on the Internet, despite the scarcity of funds made available by the central or regional cultural administrations.

The best way to attract regional funds to such digital e-projects of regional nature is to demonstrate the economical impact that such "digital museum" projects can have on a region. Clearly such impact has two dimensions:

- an employment dimension: digitising projects require personnel (see in the overview). "Digital museums" are clearly projects that regional or national governments can support with a high political advantage, as they will employ people to strengthen communities around their common heritage;
- a local development dimension: publicising the cultural heritage on Internet will attract visitors to a region as visits of heritage sites or museums are part of a travel to foreign countries allowing a better understanding of the visited regions.

Most of the regions of Europe have ambitious tourism development plan to take advantage of the development of tourism world-wide. Among them, this approach is key for the development of the less favoured regions of Europe, and the European Union is investing large amounts of structural funds for such projects. France and Italy have also wide cultural resources and, therefore, they are the most visited countries around the world. Highlighting more cultural spots will develop the tourism economy.

Combining the business of the future constituent organisations of *openheritage.com* is already a profitable business. Contrary to the current opinion, uniting these four leaders on their market will make a relevant and high margin business as it will realise the right mix between public authorities' needs and underdeveloped economical capacities of European regions that many see as a treasure of cultural diversity.

After six months of integrating products and adjusting strategies of the four organisations, implementing three regional portals and starting up its own distribution and marketing portal, *openheritage.com* will be operational in January 2001 by serving at least 30 customers in 3 regions of Europe (Sardinia, Rhône-Alpes and Scotland) and two main CH cities of Europe (Florence and The Hague).

Products and Services

The *openheritage.com* enterprise will offer products and services to the museum, archive and heritage library communities, also called memory institutions, i.e. to all institutions holding artefacts or caring sites of cultural relevance in Europe. In addition to that it will market on its portal the assets museums will have in digital format in their systems.

Business Model

The business model is based on public - private partnerships where public institutions hold treasures of high cultural value and their knowledge, and where a private company can valorise these hidden treasures to new audiences, as publishers are already doing it with books and other publications.

By selling to memory institutions at a low price software packages that allow them to manage and to add value to their assets, *openheritage.com* will take a leading position to exploit these cultural assets commercially and directly from the service centres. This is a clear competitive advantage. The model relies on selling customised software packages at low cost to networks of museums including 5 year maintenance services at about 75,000 Euro for five installations in a region. In addition, *openheritage.com* will negotiate with local authorities the design and implementation of regional websites that can amount reasonably at 75,000 Euro each for publicising on a regional portal the regional cultural heritage.

Positioning

openheritage.com is positioning itself both as a software and service providers for memory institutions and as a packager, conveyer and broker of the assets of these institutions over the Internet. In its early development, openheritage.com envisions to develop its distribution channels into the Internet tourism industry by making alliances with on-line transaction sites for travellers and booking systems.

Market Analysis for software packages and related services

The potential market is large and especially in Italy where most of the museums are not yet equipped with collection management systems to even record their artefacts. According to The Official Museum Directory, published by Reed Elsevier Inc. Update: November 1997, there are about 15,000 museums in the main European countries; out of this figure only 3,000 have a website (according to the ICOM's Virtual library museum page).

OH estimates from the analysis of various sources (from ministries of culture to associations of museums such as the UK Museum Documentation Association) that about a third should have a collection management system, in many cases a very simple and low cost one. This means that the market is large, and if one company finds the way to fund such acquisition, it will have access to a wide range of museum information.

In France, UK and Italy, the first markets that openheritage.com will target, the potential market is estimated at 4,000 museums. In Italy, due to scarce competition, it is estimated that for the next 5 years openheritage.com can have a leading position with 800 installations. On the contrary, in UK and France, there is competition (particularly high in UK with about 20 vendors, 2 main ones and 8 with significant numbers of installations). The market for the next five years including renewal of systems is estimated at 600 sites for the next five years.

By including step by step the other European countries, openheritage.com targets a 3.000 user base in the next 5 years. This is an ambitious target, but with regard to the very successful Gallery Systems in the U.S.A. it appears to be feasible at the European level.

Market Analysis for regional CH portals

As shown in Part B, there are a number of CH portals, but none is of marketing nature, nor linked to tourism. There is a real opportunity here to be the first European vertical portal on Cultural Heritage that will integrate and value regional portals on tourism and cultural heritage. Linking CH and tourism is also an opportunity for regions to market their territories. openheritage.com targets about 12 contracts per years at an average price of EUROS 60.000 each.

Market Analysis for reproduction rights and multimedia products

The market for the brokering of rights on museum digital assets and for on-line and off-line publications is a very large market. The assets of museums are linked to traditional and limited marketing model meanwhile they represent large resources that can be leveraged using the new digital economy model. openheritage.com will exploit this underestimation of the potential of the museums and other memory institutions.

From a study performed by Museums On Line for its own business out of the many reports that give market estimates and trends such as PriceWaterHouseCoopers, Jupiter Research, Fletcher Research, Forrester Research, the market that openheritage.com targets after 2 years is as per the following table:

Sector	Annual volumes	Annual revenues EUROs	OH market share EUROs
Traditional publishing licensing	1.500.000	300.000.000	3.000.000
New media publishing licensing	500.000	100.000.000	1.000.000
Direct consumer subscriptions	50.000	25.000.000	250.000
Advertising		25.000.000	250.000
E-publishing		50.000.000	500.000
Total			5.000.000

Strategy and Implementation Summary

The openheritage.com strategy is very straightforward. In order to gain customers in the regions of France, UK and Italy, its initial target market, it will market its open software packages towards the national and regional governments and the cultural bodies in charge of memory institutions, as soon as three test-beds, one in each country, have been started and proved efficient to show how *OpenHeritage* solutions meet the local authority requirements.

This strategy will allow openheritage.com:

- 1) to sell software packages to groups of museums;
- 2) to sell portals to valorise regional cultural heritages;
- 3) to ensure digital material for its own international portal.

The financial table below summarises the business opportunity of openheritage.com from an investment point of view. As shown in the table below, the business will be profitable after less than 2 years of operation:

openheritage.com Business Plan
REVENUES DETAILS (all figures in Euro)

	2000	2001	2002	2003	2004
Consulting revenues	100.000	150.000	200.000	250.000	300.000
Software and Hardware Packages & Servicing	0	500.000	1.000.000	1.500.000	1.800.000
Multimedia Publishing	50.000	250.000	1.000.000	1.300.000	1.500.000
Museum Asset Distribution	100.000	500.000	700.000	1.000.000	1.200.000
Advertising and Affiliations	0	100.000	250.000	400.000	600.000
Totals:	250.000	1.500.000	3.150.000	4.450.000	5.400.000

EXPENSES DETAILS (all figures in Euro)

	2000	2001	2002	2003	2004
Personnel	500.000	700.000	750.000	800.000	900.000
Contracted Services	100.000	200.000	250.000	400.000	500.000
Travel	150.000	250.000	300.000	320.000	350.000
Consumables	150.000	180.000	200.000	220.000	250.000
Marketing, Sales and Promotion	200.000	500.000	700.000	900.000	1.000.000
Total Direct Expenses:	1.100.000	1.830.000	2.200.000	2.640.000	3.000.000

Total Gross Margin:	-850.000	-330.000	950.000	1.810.000	2.400.000
Gross Margin Percentage:	-340%	-22%	30%	41%	44%

Overhead Expenses:	50000	50000	100000	150000	200000
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Total Debit:	-900.000	-380.000	850.000	1.660.000	2.200.000
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CAPITALIZED INVESTMENTS & EXPENSES (Euro)

	2000	2001	2002	2003	2004
Infrastructure	200.000	350.000	400.000	50.000	50.000
Technologies	300.000	600.000	400.000	200.000	200.000
Total Capitalised Investments:	500.000	950.000	800.000	250.000	250.000

Depreciation 3 years:	166.667	483.333	750.000	666.667	433.333
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Net assets:	333.333	466.667	516.667	100.000	-83.333
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Taxes 40%:	0	0	40000	397333	706667
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Total interest, taxes, amortisation:	166.667	483.333	790.000	1.064.000	1.140.000
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Net income:	-1.066.667	-863.333	60.000	596.000	1.060.000
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Net Margin Percentage:	-427%	-58%	2%	13%	20%
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CASH FLOW (Euro)

	2000	2001	2002	2003	2004
Opening cash		-1.100.000	-1.130.000	10.000	1.012.667
Sources of cash: EBITDA	-90.000	-380.000	850.000	1.660.000	2.200.000
Outside funding	300.000	200.000			
Uses of cash: taxes	0	0	40.000	397.333	706.667
Capitalised investments & expenses	500.000	950.000	800.000	250.000	250.000
Closing cash position:	-1.100.000	-1.130.000	10.000	1.012.667	1.243.333

8.3 *Dissemination scheme*

Disseminating information about the project is an integral part of all Workpackages and a responsibility for all partners. There is a line in the Co-ordinator's budget to fund the common costs of dissemination.

During the course of the *OpenHeritage* project information about the project will be disseminated to a wide range of stakeholders in the museum, cultural heritage, tourism and regional development sectors.

There will be four main strands of dissemination activity:

1. The project Website This will be designed and implemented to contain descriptions of the project and its progress.
2. International and national bodies. Bodies at the global, European, national and regional levels will be kept informed about the OpenHeritage development. These will include the MEDICI co-operation framework, CIMI (Consortium for the computer Interchange of Museum Information) at the international level and at the national level organisations like the MDA, the Museums Association and the Association of Independent Museums in the UK. An important forum will be regional economic development bodies and related academic and government agencies.
3. Conferences and journals. Opportunities will be sought to present papers and write articles for conferences and journals concerned with each of the subject areas of the project, the technical, the cultural and the economic.
4. Finally a launch programme preceding roll-out of the *OpenHeritage* system will announce the project, its results and development plans to appropriate public and professional media channels.

Dissemination will also be achieved through the whole spectrum of media (traditional publications, on-line publications and specialised conferences - ICHIM, MUSEUMS AND THE WEB, EVA, MILIA). Support from the communication services of the European Commission will be requested. the Board of the project will review and decide on the plans for demonstration and dissemination.