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European Network of Centres of Excellence for Research and Education in Digital Culture

Work Package 1 – Deliverable 1

Vision and Structure

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Abstract	-Outlines how an NoE for culture can integrate the research community by sharing methods and content. -Preparation entails Research Matrices. -Outcomes are first versions of a Distributed European Electronic Resource (DEER) to make Europe's culture accessible to all citizens with an European Mirrored Repository (EMR) for preservation. -Dissemination includes European Masters, Doctorates and Training in conjunction with UNESCO and European University of Culture.
Keyword list	Semantic access; spatio-temporal access; collaborative creation; personal and collaborative e-learning.

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Executive Summary

The vision is to make Europe's culture accessible to all citizens through a multi-lingual, multi-cultural resource that includes local, regional and national culture to reflect Europe's unity of diversities.

Specialized networks have made valuable contributions in isolated fields: e.g. policy (MINERVA), libraries (DELOS). Needed is a network that:

1) integrates for the first time the major constituencies, namely cultural organisations, research institutions and industry.
2) allows scholars to share critical methods, research content
3) offers new access to national, regional and local culture to reveal the full range of Europe's cultural diversity by using a) the concept of Digital Autonomous Cultural Objects (Thaller) and b) multilingual mapping as proposed by the AMP (Accès Multilingue au Patrimoine) Consortium
4) employs the model of national and sub-networks to allow a small core group to work efficiently with many researchers needed for a critical mass that is representative of Europe's complex cultural traditions.

The long-term vision requires a modular approach. The prime objective for the 6th Framework is to create a network for sharing critical ideas, methods, content, and to create a new permanent, distributed European structure that provides multilingual, multimodal access to Europe's heritage. This will help citizens to feel European by means of their cultures and strengthen Europe's position in the international economy.

To achieve this goal requires an NoE to unite researchers from diverse communities. Together they will create a **Distributed European Electronic Resource (DEER)** in the framework of IST (Information Society Technologies) identifying and giving access to our diverse Cultural Heritage within the European Union (including European Policies and the e-Europe Action Plan).

The NoE will work with existing specialized networks to create research matrices, which will lead to a portal of standards, solutions and research topics for the DEER. Working with researchers to integrate the research community in digital culture, the NoE will focus on building prototypes for the DEER through national networks and sub-networks. These prototypes will use diverse databases from different sectors such as museums, archives, libraries, research and industry to set up a common, multilingual access limited initially to a club of members having signed a common agreement. Multilingual access to these prototypes in all the languages of the European Union is a priority. Expected results are an integrated research community in digital culture, prototypes for a permanent DEER and dissemination through European Masters and Doctorates, with public, commercial and international applications (figure 1).

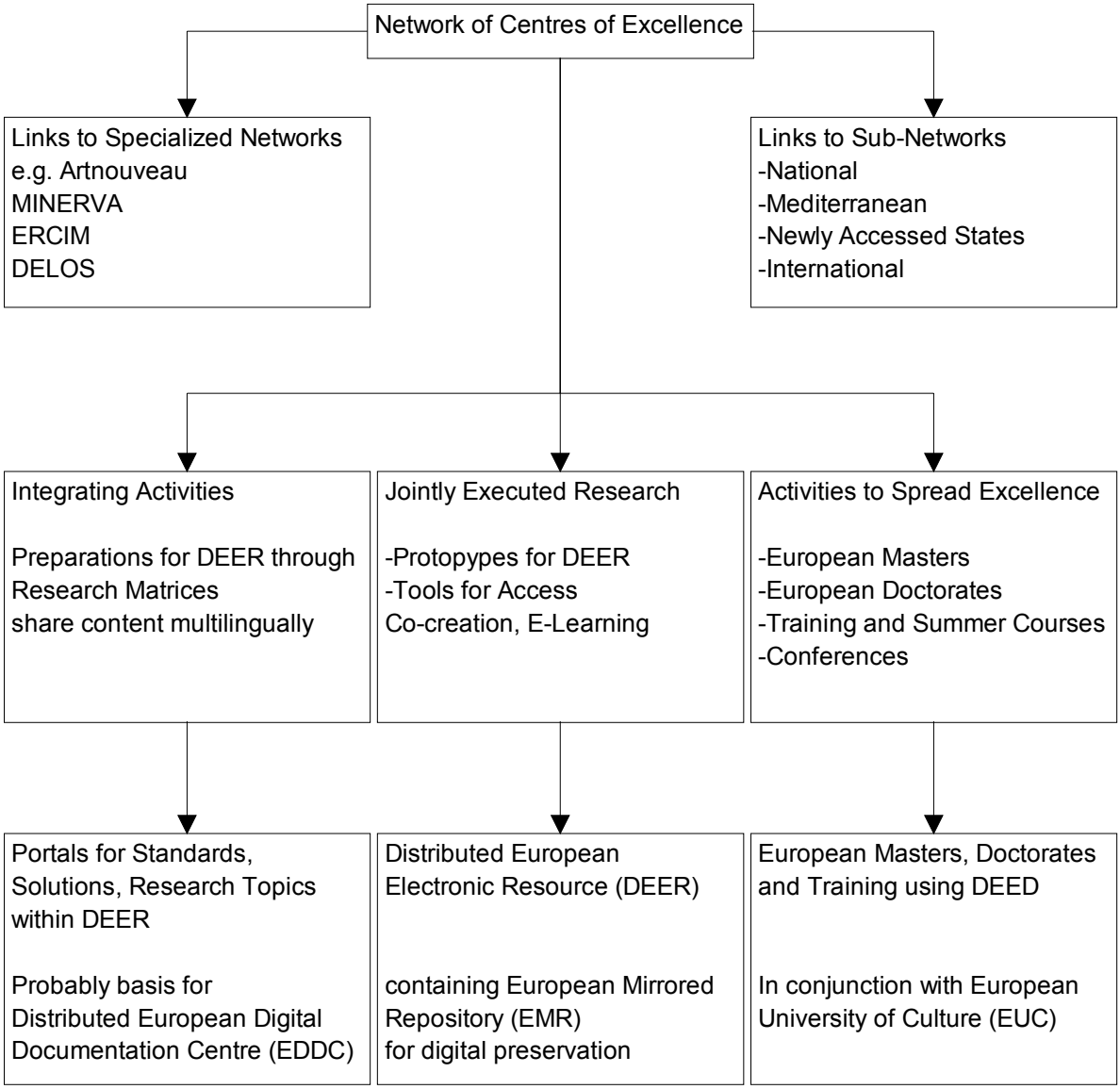


Figure 1. Basic vision of NoE leading to DEER.

Foreword

Europe has the most richly documented collections of cultural objects and expressions in the world of which only a tiny fraction is accessible in digital form. At a research level, Europe has among the most advanced resources with respect to reproductions and reconstructions of cultural objects, sites, cities, landscapes and routes. To share these on-line requires methods, which leave intact the unique dimensions of national, regional and especially local culture including multi-lingual, multicultural access and polyvalent interfaces. To share them more deeply requires complex semantic methods and knowledge organisation. To share them fully also requires high bandwidth connections such as those being developed by GEANT for an E-Science Grid. Sharing these resources can transform e-learning at all levels and widen our identities as European citizens.

These cultural resources have obvious implications for tourism. Moreover, they stimulate the economy directly by providing substantial content for information and communication technologies as well as increasing need for broadband infrastructures. Enormous economic potentials lie in these resources being adapted for publishing, film and television production, entertainment, games and in new interactive experiences. This requires new tools for knowledge organisation, management and discovery, for personal and collaborative creation, new display technologies and new virtual environments. Access to Europe's culture will thus have profound effects on the economy, research, education, and society, thus contributing to the European Union's plan for an European Research Area (ERA) and its larger vision of E-Europe (Lisbon 2000).

In the framework of Europe's new **GEANT** broadband network linking national facilities, Digital Culture could be one of the more exciting changes in the lives of people. In this new world of digital access to information, we need to build a permanent, distributed structure in Europe in the framework of its cultural institutions. In order to provide the people of Europe with mutual understanding and to give them a coherent view of their identity, their unity of diversities, full access to their Cultural Heritage is a priority.

There is the need for a **Distributed European, Electronic Resource (DEER).** Over the past 12 years the European Commission and cultural institutions have invested in digital technologies applied to the cultural field in Europe. Institutions now want to create prototypes for a DEER with a secured multilingual access. Simultaneously, a common agreement specifying limits for free usage has to be written and signed contractually between member institutions following the cultural policy of the states in Europe.

After a long period of developing software and hardware to cover a) multilingual management of data and meta-data in different countries and b) digitisation in high definition with colour accuracy, many Digital Libraries have been set up for different sectors such as Museums, Archives, Libraries, Theatres, Dance, Music and Cinema and for different applications including inventories, conservation, preservation, research and training.

There is a need for permanent integration of the whole range of these internal data as well as more systematic access to the results of research in institutes and industry. Cultural institutions have to face changes in computer technology and many of them are not able to update their equipment. The technological gap will increase in countries, which do not invest the same amount annually for culture. A more integrated approach is needed all the more so because Europe's cultural unity of diversities offers an important resource with respect to tolerance and the general development of humanity.

Meanwhile research in digital culture needs to be integrated. There are specialised networks but none brings together all the players. There is an enormous amount of research but it is dispersed in different languages with no common, multilingual access methods. An NoE for culture will address these needs.

Vision

The vision is to make Europe's culture accessible to all citizens through a multi-lingual, multi-cultural resource that includes local, regional and national culture to reflect Europe's unity of diversities.

Specialised networks, organisations, and projects have made many valuable steps in this direction. For instance, MINERVA addresses important policy dimensions with respect to digitisation. GEANT deals with infrastructure, ERCIM deals with technology, DELOS deals with libraries, EVAN with dissemination by conferences and DIGICULT with dissemination by publications. These elements need to be integrated.[i] An NoE will contribute four features to achieve this integration:

1) to integrate researchers from the major constituencies, namely cultural organisations, research institutions and industry and make the results of their research accessible,

2) to enable researchers to share critical methods and content in the new field of digital culture

3) to offer new multilingual, access to national, regional and local culture to reveal the full range of Europe's unity of cultural diversities through a) Digital Autonomous Cultural Objects (Thaller) and b) multilingual mapping as proposed by AMP

4) to develop a model of national and sub-networks that allows a core group to work efficiently with many researchers needed for a critical mass that is representative of Europe's complex cultural traditions.

The main objectives of the NoE for the 6th Framework are to share critical methods and to create a new permanent, distributed structure in Europe that provides multilingual, multimodal access to an extraordinary range of existing cultural materials including high-level reproductions and reconstructions of cultural objects, sites, cities, landscapes and routes. This new access will help citizens to feel European by means of their common culture and strengthen Europe's identity in the international economy.

Figure 2. Eight Basic Components of the Distributed European Electronic Resource (DEER).

This requires an NoE in culture to bring together diverse communities and create a **Distributed European Electronic Resource (DEER)**. Its focus will be to share critical thought, methods and content. Its product will be to prepare, and develop a Distributed European Electronic Resource (DEER). This will be used for European Masters, Doctorates, Training and other dissemination. Thus, the NoE will focus on six steps:

1) Develop research communities via networks
2) Develop research matrices to identify elements of the knowledge production life cycle and to keep the DEER updated
3) Elaborate principles for the DEER
4) Share and develop content and tools for the DEER
5) Develop European Masters and Doctorates
6) Dissemination in e-learning, public, commercial and international dimensions.

Develop Communities via Networks

Over 100 institutions in Europe and a further 100 institutions elsewhere (Mediterranean, NAS, Russia, Internationl) have written letters of intent or indicated serious interest as candidate members for a NoE in culture. Researchers at these institutions are interested in three large themes: research matrices, DEER and postgraduate research/e-learning. A NoE can integrate the work of researchers on these three fronts, thus bringing substance to the quest for an European Research Area (ERA) and contributing to the vision of an E-Europe.

As a first step, these researchers need to be integrated into national networks in order to build bridges between national activities (including regional and local culture) and those at the European level. These national networks will have the practical advantage that they enable the NoE to grow in critical mass to reach representative proportions and yet remain manageable and efficient. Thanks to the efforts of the thematic network, first approximations of national networks exist at different levels of maturity. In the first year of the NoE, 15 researchers will continue these efforts and develop national networks in each of the basic member states. In 2004, this number will increase to 25.

From the outset the NoE will have representatives from the Mediterranean, Newly Accessed States (NAS), Russia and from international networks. In future, these groups will develop sub-nets, which work closely with the NoE.

Research Matrices

There is a need for research matrices in order to understand two fundamental changes in the knowledge production life cycle entailed in the shift from analog to digital media:

1) With analog media, every medium has its own form of production. For instance, manuscript production requires a scriptorium and involves a set of stages as one moves

from blank parchment to fiished manuscript. Book production requires printers, publishers and distributers. Film production requires film studios, post prodction houses and film distribution chains. By contrast, once materials are in digital form they can potentially readily be transferred from one medium to another: As a result, the production of a digital manuscript, book, film and television show are potentially all connected. Alas the tools for this are not yet in place.

2) In the analog world the production of content in a given medium was typically completely separate from processes of creating context and communication. The person who wrote a manuscript was typically different form the person who annoted it and wrote commentaries on it and the person concerned with its dissemination. By contrast in the digital world the creation of content, context and communication are intimately linked in new ways.

Deeper understanding of these changes in the knowledge life-cycle is required also in order to plan the technological infrastructure of the DEER and to keep the DEER updated. The thematic network has identified a macro-level research matrix of the knowledge production life-cycle consisting of 32 themes (Appendix 2). This research matrix might be led by consortia/networks with a firm technological basis: e.g. ERCIM/DELOS. In the first year, the NoE will provide 32 researchers to reflect user needs of those in the digital cultural community.

The thematic network has also identified a micro-level research matrix of 110 themes covering all aspects of the knowledge production life cycle from preservation and access to existing content through creation and production of new content to e-learning and dissemination (Appendix 3). This should be developed in the second year of the NoE. This micro-level cycle might again be led by ERCIM/DELOS and the NoE for culture can provide 110 researchers to reflect user needs. The contents of both the macro-level and micro-level technology watch will lead to a portal of standards, solutions and research trends, which is one dimension of the DEER (function 2 in figure 2).

Since many of these themes are already covered by isolated, specialised networks, integration of their efforts will thus lead also in the direction of a new network of networks whereby the specialised expertise contributes also to bigger pictures at both the macro and the micro level. As a first step efforts can be clustered around four fundamental problems: Preserve, Access, Create, and Learn.

PRESERVE

DEER Principles

The thematic network, E-Culture Net has established a foundation for the Distributed European Electronic Resource (DEER) through work on three fronts: framework, technology and interfaces. This initial work has confirmed that the idea of the DEER is a practical goal.

One basic challenge of the DEER is to create a Distributed European Mirrored Repository (EMR) to address problems of digital preservation (function 1 in figure 2). A team of 10 researchers, (possibly led by Professor Mitrou), will define the technological infrastructure. To address the many other challenges that still need to be resolved, 35 researchers will do further work on administrative, legal, and software and interface infrastructures.

ACCESS

DEER Content

The thematic network has confirmed that there is an enormous amount of research in European cultural institutions, universities and industry. Much is only available internally in the absence of a secure framework and through a lack of high-speed connections. A good deal is available on the Internet but only in its original language. A first requirement for sharing is thus a common, multilingual access (cf. function 3 in figure 2). With respect to access, the thematic network has also identified two specific kinds of access, which need to be achieved and integrated: 1) semantic access; 2) spatio-temporal access.

Semantic Access and Knowledge Organisation

Any attempt at multilingual access to distributed, heterogeneous databases as foreseen by the DEER requires authority files of technical keywords/terms. As a first step in this direction, the C2RMF can lead a small group of 10 researchers to make their databases accessible for the proto-DEER. Also required are authority files for culturally variant terms. The AMP (*Accès Multilingue au Patrimoine*) group can lead a team of 10 researchers to address this problem.

The question of semantic terms is the specific focus of the SEMKOS EoI. SEMKOS can lead 10 researchers to address these problems for the DEER. If the SEMKOS EoI is successful in its bid for an Integrated Project the scope of this collaboration might be enlarged. All of the efforts in this category might be subsequently combined to create an IP on Digital Libraries in a GEANT System.

Spatio-Temporal Access with Historical-Cultural Dimensions

Another fundamental method of access involves spatial information (cf. GIS, GPS, UMTS), which can also be approached temporally. Here the Centre for Metropolitan History (CMH), working with the Commission Internationale pour l'Histoire des Villes (CIHV), can lead a team of 10 researchers to focus on historical cities as a first example of spatio-temporal content for the DEER. This group could also work together in formulating an STRP on this theme, which could lead at a later stage to an IP on Augmented Cities and Environments.

The ORION thematic network can provide 10 researchers to add archaeological sites as another test case. Finally, the thematic network has produced a list of possible broadband topics. Here UCM/Segovia might lead 28 researchers to provide further spatio-temporal content for the DEER.

These initiatives will increase greatly to the scope of databases made accessible multilingually through technical and cultural keywords and introduce a semantic dimension to this access (function 3 in figure 6) and also enable researchers to share content for context creation (function 4 in figure 2). While the above two intitiatives will enhance preservation and access to existing cultural knowledge, another initiative will focus on the creation/production, preservation of new cultural knowledge.

CREATE
Collaborative Creation with Multimodal Interfaces

The thematic networks, E-Culture Net and Art nouveau have both brought together a number of players specifically concerned with Virtual Heritage Environments, notably Virtual Heritage Network (VHN), CNR-ITABC, CINECA, FHW and Fraunhofer. VHN can lead a group of 10 researchers to explore how Maurizio Forte's idea of European Virtual Heritage Centres can be implemented in a series of tests sites. These integrating activities will contribute to new creation/production through collaborative environments (function 5 in figure 2).

This research group can define an STRP to create such VH centres initially on an experimental basis for some members within the NoE. Subsequently this group might use these results in defining an IP on Collaborative creation with multimodal interfaces, which addresses also dimensions of e-creativity. This jointly executed research will further the goals of the group.

LEARN

The resources of the DEER need to be made available for the next generation of researchers and students. The thematic network has outlined preliminary requirements and needs for European Masters and Doctorates. In the first year of the NoE, SNS can lead a team of 10 researchers to develop new European Masters courses, which make direct use of the proto-DEER. Similarly, Bologna can lead a team of 5 researchers to develop European Doctorates using the DEER. The development of European Masters and Doctorates should be closely aligned with efforts to create an European Univeristy of Culture (Appendix 5) and UNESCO's chairs for graduate training in heritage.

The thematic network has identified two other topics with respect to e-learning. A team of 15 researchers (one from each member state) can explore how to use the DEER for Cross Cultural E-Learning. Similarly another team of 15 researchers can explore how to use the DEER for Resource Based E-Learning. These activities will contribute to learning digital content-context creation (function 6 in figure 2). These specific projects (summarized in figure 3 below) will enable the NoE to develop and disseminate prototypes of the **Distributed European, Electronic Resource (DEER)** using diverse databases coming from the sectors of museums, archives and libraries as well as researchers to set up a common, multilingual access limited initially to the club of members who have signed this common agreement. Multilingual access to this prototype in all the European languages of the European Union is a priority.

Preservation and Access to Existing Cultural Knowledge			
1) Semantic access and knowledge organisation		Year 1	Year 2
Technical Keywords	C2RMF	10	10
Culturally Variable Terms	AMP	10	15
Semantic Terms	SEMKOS	10	10
2) Spatio-temporal access with historical-cultural dimensions			
Cities	CIHV, CMH	10	10
Archaeological Sites	ORION	10	10
Broadband Content	Members	28	30

Creation/Production, and Preservation of New Cultural Knowledge			
3) Collaborative creation with multimodal interfaces			
Virtual Heritage Environments	VHN	10	10

Dissemination of Old and New Digital Cultural Knowledge		
4) Personal and collaborative e-learning		
European Masters	10	15
European Doctorates	05	10
Cross Cultural E-Learning	15	25
Resource Based E-Learning	15	25

Figure 3. Four topics to integrate research in digital culture and four specific projects to give practical substance to this plan.

0 Online in Original Language

1 Secure Online Environment with Agreements

2 Multilingual Access through Technical Keywords

3 Multilingual Access through Culturally Variable Terms

4 Multilingual Access through Semantics and Knowledge Organisation

5 Multilingual, Spatio-Temporal Access to Archaeological Sites

6 Multilingual, Spatio-Temporal Access to Cities

7 Multilingual, Multimodal Access to Virtual Heritage Environments

Figure 4. Seven Levels of Integration for Sharing (Research) Materials in the DEER.

To ensure that this quest for sharing materials in a secure Intranet and subsequently on the Internet becomes more than a simple dumping of resources, seven levels of integration for sharing research materials from institutions and individual researchers have been defined (figure 4). These levels can also be seen in terms of a matrix (Appendix 1) that provides a criterion for measuring degrees of access.

A fundamental principle of the NoE is to adapt already existing keywords, thesauri and inventories of major players such as C2RMF and SCRAN (for technical, scientific terms), Inventaire (cf. AMP for culturally variable terms), and memory institutions (for authority fields of names, places) as points of departures for DEER's multilingual metadata.

Dissemination

Dissemination of the DEER will also entail more traditional forms such as publications, conferences, and user awareness groups (function 7 in figure 2). Separate teams will be responsible for these activities. With respect to publications there should be integration with existing efforts such as the DIGICULT and E-CULTURE newsletters. With respect to conferences there should be integration with structures such as EVAN.

Potentials

As it evolves, the DEER will offer an increasing range of solutions, standards, methods, courses which introduce a whole range of new potentials. At the public level there will be new awareness of the unity of diversities of European culture, which helps to redefine the identities of being European

and thus contributes to Europe's sense of itself with respect to the world economy. At an international level this will also change Europe's sense of itself with respect to other cultures and thus lead to a redefinition of major cultures from a global viewpoint. At a commercial level there are enormous economic potentials in adapting these resources for publishing, film and television production, entertainment, games and in new interactive experiences. These constitute a further dimension of the DEER (function 8 in figure 2). From the outset, three teams of researchers will address these public, commercial and international dimensions.

As the NoE and the DEER evolve, these various functions will be assigned to different sections and groups. There will be four major sections: 1) Research and Education; 2) Public; 3) Commercial and 4) International, which in turn contain eight groups within them (cf. figure 5).

The Research and Education section will have five groups to: Develop Research Communities through Networks; Research Matrices (Portal for Standards); DEER Principles; DEER Content and Tools and E-Learning.

The Public Section will have one group to focus on subsets of these resources, which can be made freely accessible on the DEER for all citizens without infringing copyright or other obligations.

The Commercial Section will have one group to focus on self-sustaining (not for profit) services and other groups concerned with exploitation of some resources for new publication, film, television, entertainment, games and immersive experiences.

The International Section will have one group to address how DEER affects Europe's awareness of its unity of diversities relates to identities of other continents and affects Europe's place in the world. This group will work closely with international bodies such as UNESCO, IFLA, ICOM and the ICA.

Together the four sections will further disseminate the DEER by creating a Virtual Agora for culture. At the end of this period, the full scale DEER might well evolve as one of the central goals of FP7.

An overview of these four sections, and eight groups is provided below (figure 5). Each of the groups will typically be further divided into teams of 10-20. This layered approach means that the complex challenges of the NoE and the DEER can be assigned to specific, manageable sections, groups and teams.[ii] A more detailed survey of the sections, groups and teams with their objectives is provided below (Appendix 6).

SECTION 1: RESEARCH AND EDUCATION

Group 1: Develop Networks
Group 2: Research Matrices
Group 3: DEER Principles
Group 4: DEER Content and Tools
Group 5: Dissemination

SECTION 2: PUBLIC

Group 6: Free Public Access

SECTION 3: COMMERCIAL

Group 7: Commercial Dimensions

SECTION 4: INTERNATIONAL

Group 8: International Dimensions

Figure 5. Outline of four sections and eight groups in evolution of the DEER. While partially chronological, aspects of these groups can evolve in parallel from the outset.

Evolution of the DEER

The DEER will be modular developing via a number of prototypes into a permanent structure. As the NoE gains more members, researchers will contribute to specific dimensions along the lines outlined above. One of the tenets is that the DEER needs to evolve simultaneously in a bottom up and a top down fashion. Small bottom up projects will bring into focus the diversity of materials. To provide these will be an important contribution of the NoE. Large top-down projects can provide platforms and frameworks. Here IPS are most suited. A consequence of this tenet is that IPS alone cannot solve the myriad challenges.

The structure of the NoE will consist of a small core (EEIG), a management group (core + national representatives) and an advisory board (representatives from other networks). Daily work will be co-ordinated by a small secretariat and a small, distributed team supervising the key activities (figure 12). The national representatives will develop national networks. The NoE will have sub-nets for the Mediterranean, NAS and a section for links with international networks. On the basis of the above a first estimate of the size of the NoE is possible. More detailed versions of the vision and structure follow.

Size of NoE

The NoE will have four basic integrating activities, namely:

1) Networks -develop research community via NoE + other networks
2) Research Matrix -portal for standards, solutions, research trends
3) DEER -principles, content and tools
4) E-Learning -European Masters, Doctorates, Training.

Networks

Using the approach of national networks a small group of 25 researchers can create the structures needed to integrate research with respect to networks. (This is independent from the staff in the small secretariat, which will be concerned strictly with daily administration).

Research Matrix

Further links to specialised networks will be provided through the activities concerning the research matrix leading to the portal for standards as part of the content for the DEER (32 researchers for the macro-level leading to 110 for the micro-level in year two). Once these networks are in place a great number of researchers can share their critical thought, methods, content, resources, which will increasingly become integrated through the DEER.

Distributed European Electronic Resource (DEER)

The DEER serves as the central challenge, which will integrate a critical mass of researchers in the field/ of Digital Culture. Here 45 researchers in five teams can further establish the principles of the DEER (framework, technology, interface, legal and the European Mirrored Repository). A further 78 researchers can make existing databases and research accessible with respect to semantic access, spatio-temporal and collaborative access. A further 25 researchers will focus exclusively on making resources available in at least two languages: Original Language + English.

E-Learning

A further 15 researchers can use this content of the proto-DEER for European Masters and Doctorates, while 30 researchers explore how this content cen be implemented in Cross Cultural E-Learning and Resource Based E-Learning. Finally a group of 40 researchers will explore Public, Commercial and International applications from the outset. As the NoE develops and the DEER becomes more defined these public and commercial dimensions will become much more important. Finally a group of 10 researchers who have not yet been assigned a specific task at this stage will make a contribution within the above framework. Together these three integrating activities, which lead to jointly executed research and activities to spread excellence, will thus entail approximately 300 researchers during the first year. Once the framework is in place this number could effectively double to 600 in year two and continue to grow as the national networks and the DEER evolve. Consciously begining with a group that has very specific tasks, greatly enhances the NoE's focus and potentials for success. A possible list of work packages and researchers is given below (cf. figure 6).

			Number of Researchers Year 1	Year 2
WP 1	Develop the Network		15	25
WP 2	Liaise with other Networks		10	10
WP 3	Research Matrices (Portal for Standards)		32	110
WP 4	DEER: Principles			
	Adminstrative Infratructure		10	10
	Legal Infrastructure		05	15
	Technology Infrastructure (also for EMR)[iii]		10	15
	Software Infrastructure (DACOs)[iv]		10	10
	Interface		10	10
WP 5	DEER: Content			
	Technical Keywords	C2RMF	10	10
	Culturally Variable Terms	AMP	10	15
	Semantic Terms	SEMKOS	10	10
	Archaeological Sites	ORION	10	10
	Cities	CIHV, CMH	10	10
	Virtual Heritage Environments	VHN	10	10
	Broadband Content		28	30
	Translators		25	50
WP6	European Masters, Doctorates, Training			
	European Masters		10	15
	European Doctorates		05	10
	Cross Cultural E-Learning		15	25
	Resource Based E-Learning		15	25
WP6	Dissemination			
	Public		05	10
	Commercial		05	10
	International		30	40
	Not yet Assigned		10	150
			---	---
Total			300	600

Figure 6. Provisional overview of workpackages and the number of researchers in the NoE in its first two years.

DETAILED VISION: Integrating Activities

Group 1: Develop Networks

In order to have a structure to prepare for the DEER, and to arrive at the necessary, critical mass, the NoE needs to expand from a small core to become more representative without losing focus. The objectives are:

1) to establish national networks in EU countries that integrate cultural organisations, research institutions and industry/SMEs
2) to link the NoE with sub-networks in the Mediterranean, NAS and internationally.

Group 2: Research Matrices

A first objective is to create an ongoing, continually updated list of key solutions, standards, research topics, matrices and roadmaps needed for the DEER, which will become a portal for the DEER. This work will be achieved through liaison with existing specialised networks.

Initial research has focussed on four research topics (figure 3) to create a general research matrix (appendices 1-2) that integrates content, context and communication. A macro-level research matrix will focus on some 30 topics (appendix 3), while a micro-level research level entails at least 110 topics (appendix 4). These micro and macro levels will bring together key players representatives from the communities of a) industry; b) cultural institutions and c) universities and research institutes. Since many of these detailed topics have their own specialised networks, this will also contribute towards establishing a in the .

At the micro-level, individual researchers who are already members of specialized networks and/or members of the relevant organizations will produce an ongoing list of researchers, standards, solutions, projects, conference, key publications, theoretical methods, critical thinking and teaching. These matrices could be led by the technological community through groups such as ERCIM, INRIA, national research councils and possibly JRC. Members from the NoE will provide a user perspective. A full-scale micro-level matrix has implications far beyond the cultural field. It could in future serve as a model for a revised CORDIS database and also help in planning the work programmes in FP7 and beyond.

Domain	Headed by:
1) Policy	MINERVA
2) Infrastructure	ERCIM
3) Content Creation	Artnouveau +Netzspannung
4) Content	DELOS + NEMO + EAN +DHAN + NoE
5) Context	DHAN + NoE
6) Communication	NoE.

Figure 7. Domains led by specialized networks and NoE to create portal.

These activities will lead to a Portal for Cultural Standards, Solutions and Research Trends (PCSSR) beginning with a research matrix related to general information in the field of culture with respect to standards, solutions, conferences and key publications (function 2 in figure 2).

Group 3: DEER Principles

The objectives are:

1) to define administrative infrastructure and identify further requirements of DEER framework and. This includes:
   - nature of the staff
   - activities of the staff
   - study of possible places and conditions for DEER.

2) to define legal infrastructure. This requires lawyers of the European countries to elaborate a common framework related to ownership of and access to this unique intellectual information.

3) to define technological infrastructure (cf. Prof. Nikos Mikou's proposal) for the DEER with an European Mirrored Repository (EMR) to meet needs for digital preservation and to determine whether this requires an European Digital Documentation Centre (EDDC). This includes:
- networking between the DEER and the institutions, (a broadband line to the backbone), needs of Hypermedia on line as well as multi-dimensional museums. Filling a form on network speed requirements.
- technical security system to access and download information.

4) to define software infrastructure: e.g. to develop the concept of Digital Autonomous Cultural Objects (DACOS) as preliminary software for the DEER.

5) to define multilingual interfaces for the evolving DEER with cross-cultural accessibility.

PROGRAMME OF JOINTLY EXECUTED RESEARCH

Group 4a DEER Content: Share Content[v]

There is a need to use a number of existing resources as practical starting points for a more global approach. This will unite the research community by making existing research results accessible initially through multilingual keywords to contribute to the European Research Area (ERA, function 3 in figure 2). These will serve as bottom up demos in a proto-DEER. More specifically, the objectives are:

1) to share scientific terminology of C2RMF multilingually as a basis for sharing research on proto-DEER.
2) to use inventories of culturally variable terms as identified by AMP multilingually as further basis for sharing research on proto-DEER.
3) to share examples and methods of virtual archaeology on-line starting with those identified by ORION.
4) to share examples and methods of historical cities online starting with those defined by the Commission Internationale pour l'Histoire des Villes and the Centre for Metropolitan History.

Group 4b: DEER Content: Share Virtual Environments

The objective is to share existing virtual heritage demos and explore requirements for a sub-network of virtual heritage centres focussing on environments. Building on the position paper of Maurizio Forte, such VH Centres would be linked by broadband both for research in European Masters and Doctorates and commercial purposes (e.g. tourism and entertainment, cf. function 4 in figure 2).

Group 4c: DEER Content: Share Projects

Phases 1 and 2 will unify the research community by building mutual trust through sharing. Phase 3 will add cultural institutions and industry to this community through jointly executed research projects ranging from joint work between individuals to strategic targeted research projects (STRPs). Four such possible STRPs, which will be more closely defined in the course of the first year are:

STRP1 (Strategic Technical Research Project 1): **DEER Prototype 2**
(Manfred Thaller with the prototype members and AMP members).
Here the key onbjectives are:

1) Selection of databases with different operating systems and different DBMS (all members of the NoE have to propose databases with different contents if possible coming from numerous countries to face diverse problems;
2) Set up of a common multilingual interface;
3) Content analysis of authority lists within the different category of information
4) Integration of the databases into the prototype based on the **PROMETHEUS** results.
5) Final collection and analysis of the end-user comments and reports from the involved institutions.

These members have to sign a consortium agreement as soon as the proposal has been agreed.
These activities presuppose the creation of specialised sub-groups working through the Web and regular decision meetings.

STRP2: Multilingual Vocabularies for DEER
(Gerhard Budin with prototype members)
The objectives are:

1) To define and translate the vocabulary terms in all the languages of the European Union.
2) To translate free texts related to attributes such as the title (see: automatic translation).

These activities presuppose the creation of specialised sub-groups working through the Web and regular decision meetings.

STRP3: Semantic Access for DEER
The development of a Semantic Knowledge Organisation System between the databases to query across information using an ontologic dictionary (**SEMKOS** partners Traugott Koch and Martin Doerr), This activity will build a bridge between Scientific and the Cultural Heritage. It will constitute a multilingual service for professional indexers.

STRP4: Contextual Knowledge for DEER
The management of contextual knowledge (**KNOWIT** partners), (all prototype institution members). A set of on-line demonstrations by means of video-conference should be organised and announced through the DEER.
These four STRPS would all further the functionalities of access (function 3 in figure 2).

Group 4d: DEER Content: Adapt/Develop New Tools

A next step will be to use projects to adapt and/or develop new authoring, creation and e-learning environments whereby these resources can be made available for European Masters, Doctorates, training and eventually all e-learning. These IPS can provide top-down platforms for the DEER. Thus far four possible IPS corresponding to the four research topics outlined earlier have been identified (figure 8, cf. figure 3). These possible IPS are further discussed in Deliverable 4.

Preservation of and Access to Existing Cultural Knowledge
1) Semantic access and knowledge organisation DILIGEANT (Digital Libraries in a GEANT system) using SEMKOS EoI as a point of departure.
1) Spatio-temporal access with historical-cultural dimensions ACE (Augmented Cities and Environments) using NUME and historical cities of the CMH and CIHV (cf phase 2 above) as a point of departure.

Production, Preservation, Dissemination of New Cultural Knowledge
2) Collaborative creation with multimodal interfaces CO-CREATE (Collaborative Creativity Electronically for Monuments, Augmented Cities and Environments between Virtual Heritage Centres with multimodal interfaces) building on ACE
3) Personal and collaborative e-learning (PACE) using the results of DILIGEANT, ACE and CO-CREATE for e-learning.

Figure 8. Four possible IPS linked with the four basic research topics.

The above integrating activities and jointly executed research pertaining to SECTION 1: RESEARCH will cover the first three years of activities. Areas requiring future definition include the following:

Group 5: E-Learning

Make subsets of the research section accessible for education.

Group 6: Public

Develop SECTION 2: PUBLIC to make subsets of resources accessible freely to all citizens.

Group 7: Commercial Dimensions

Develop SECTION 3: COMMERCIAL, with a virtual agora whereby some of these resources can be exchanged, some on a self-sustaining basis, some on a profit basis in the realms of tourism, publishing, broadcasting, entertainment and games.

Group 8: International Dimensions

Develop SECTION 4: INTERNATIONAL using DEER to help an expanding Europe to re-define its cultural identities and share these with other networks around the world.

ACTIVITIES TO SPREAD EXCELLENCE

1) European Masters

It is foreseen that the Scuola Normale's courses will lead to new European Masters Courses. An initial draft for course work foresees:

a) Introductory modules + laboratory	220 Hours
b) Specialised modules laboratory	220 " "
c) Projects and internships (*stages*)	160 " "

Thus far three thematic cycles of courses have been identified which are presently longer training courses (see 3.1 below). Meanwhile, preliminary work by Arturo Colorado y Castellary has identified two European Masters' courses that are being developed in Valencia and Segovia. Francesca Bocchi has outlined initial thoughts on how Masters and Doctoral Programmes might emerge in light of the Bologna Convention and link with UNESCO's efforts.

These courses will serve as a starting point for many others developed by partners throughout Europe. These courses would be comprised of sections such that a student interested in terminology, might begin with a semester on historical aspects at the Scuola Normale, proceed to study modern developments at University College London and end their Masters degree with a semester at the University of Vienna with its links to the International Standards Organisation (ISO).

2) European Doctorates

Francesca Bocchi (Bologna) is working with Arturo Colorado (Madrid, Segovia) and Benedetto Benedetti to define criteria for European and explore how resources from the DEER could be used in this context. This work should be integrated with the initiative for an European Univeristy of Culture (cf. appendix 5).

3) Training

Formal training projects should be linked with UNESCO's heritage training efforts.

1) Longer Training Courses

The Scuola Normale (CRIBECU) at its Palazzone in Cortona and at Volterra has developed longer courses with visitng staff from all over Europe. During the Academic year 2002-2003 there will be three such courses lasting 2-3 weeks with 7 hours per day, namely:

1) Databases integrating text and images
2) Processing and managing of materials for conservation and intervention in monumental complexes in conjunction with the Istituto Centrale del Restauro, Rome
3) Museum conservation and exhibition in conjunction with the Victoria and Albert Museum, London.

2) Annual Short Training Courses

It is planned that there will be at least nine more specialized 3 day courses for the following topics:

1) Museums
2) Libraries
3) Archives
4) Archaeological Reconstruction
5) Intellectual Property Rights
6) Publishing
7) Learning
8) Tourism
9) Policy

3) Annual Summer Course with Amsterdam/Maastricht Summer University (AMSU)

In addition to these more specialized training courses an annual summer course is generalist in orientation This summer course brings together experts concerned with linking libraries, museums and archives, focusing on one of these three annually in a three-year cycle. This course, now in its fifth year, limited to 50 persons, is intended to inform those in management positions of trends linking memory institutions.

4) Conferences

1) Annual Members Conference

Lacking thus far is a European event, which brings together all the important players from across the knowledge production and knowledge life cycle. An annual conference will bring together all the members of the NoE, plus representatives from other networks who are members of the macro- and micro-level groups. In addition the conference could be open to a small number of observers who are interested in becoming members. This conference will survey latest developments in the Knowledge Production Life Cycle qua culture.

2) Macro-Level Conference

Once a year a Macro-level conference will bring together representatives from major specialist networks (cf. appendix 3) with national representatives of the NoE and a number of regular members to maintain an overview of major trends with respect to the research matrix and to make suggestions with respect to integrating projects which could further links between infrastructure, content, context and communication.

3) Micro-Level Conference

Once a year there will also be a micro-level conference with individuals from networks and organisations representing all the activities of the research matrix, cf. appendix 5), plus a number of members from the NoE. This conference will bring together representatives from the four basic domains: preserve, access, create, and learn (figure 9, cf. appendix 4). These domains will meet both as independent groups and also in plenary as a whole to discuss detailed developments in the knowledge production life cycle for the research matrix.

PRESERVE
    Content Holder, Protector
ACCESS
    Context Creator and Broker
CREATE
    Content Creator, Producer
LEARN
    Education (Implications)
    Applications

Figure 9. Four basic domains covered by the research matrix.

4) Traditional Dissemination

In addition to the above there also will be more dissemination in the form of analog and digital newsletters (cf. function 7 in figure 2). This task might be co-ordinated by a group such as that presently responsible for the Digicult newsletter.

5) International Conferences

The European Visual Arts Networking (EVAN) conferences have made an important contribution particularly in places such as Japan, Russia, and China where they have brought together members from different factions who would not normally meet (cf. function 8 in figure 2). Hence the networking of EVAN should continue. Provision should be made, however, that contributions from such conferences be taken up in the research matrix database under specific activities in the knowledge life cycle.

Outcomes

The above integrating activities, jointly executed research and activities to spread excellence of the NoE will thus have three main outcomes:

1) To develop research communities in digital culture through **Networks** by bringing together for the first time the major constituencies of cultural organisations, research institutions and industry/SMEs to achieve a critical mass for sharing critical thought, methods, prototypes, content.
2) To develop Research Matrices to gain understanding of the new knowledge production life cycle implied by digital media.
3) To prepare for and develop prototypes of a **Distributed European Electronic Resource (DEER)** that provides citizens with full access to European Culture with a forum for communication between researchers, content creators, the commercial sector, and users: a virtual agora. The DEER will have at least eight functions relating to preservation (function 1 in figure 2) and access (functions 2-3 in figure 2), creation (4-5) and e-learning (6-8).
4) **European Masters, Doctorates and Training,** which build on these resources. This can be coupled with plans to create a new European University of Culture (Appendix 5).

To achieve these outcomes it is suggested that a first phase of the NoE might have nine Workpackages (figure 10. cf. Appendix 6).

		Corresponding DEER functions (figure 2)
WP 1.	Develop Networks	
WP 2.	Research Matrices	2
WP 3.	DEER Principles	1
WP 4.	DEER Content and Tools	3-5
WP 5	E-Learning	6-8
WP 6.	Public	2, 4, 5, 7
WP 7.	Commercial	4-5
WP 8.	International	1-8
WP 9.	Project Management	

Figure 10. List of basic workpackages for an NoE in digital culture.

Structure

For the administrative framework especially with respect to the European Union, the NoE will have an European Economic Interest Group (EIIG) consisting of at least four members.

The NoE will have a co-ordinator with a small Secretariat to deal with daily administration. This should include the functions of a Permanent General Manager; Administrative Secretary, Organiser of Meetings, Liaison Officer with Networks and Research Matrices, Programmer and a Webmaster.

A distributed secretariat composed of researchers will deal with day-to day developments re: the Distributed European Electronic Resource (DEER). This group will be responsible for administrative, technological, legal infrastructure and help to plan STRPs and IPS within the NoE.

An Executive Board consisting of a chairperson, the members of the EEIG, plus five other founding members will meet periodically to deal with basic issues and problems. This core, which is also concerned with the development od Euroepan Masters and Doctorates will have academic institutions only. More general issues will be dealt with by a Board of Management consisting of the Executive Board, plus national representatives from the EU countries.

An advisory board consisting of members from related networks would meet annually to compare notes and offer advice. This would also serve for concertation of actions. This would include networks already members of the thematic network (e.g. C2RMF, ERPANET, SCRAN, NEHRN) plus MINERVA, ERCIM/DELOS, ORION etc.

While a small core group consists of academic institutions, national networks will ensure that representatives from cultural institutions and industry/SMEs are also duly represented. The core group Will begin with at least one representative from each member state: 15 soon to become 25. These representatives will themselves or appoint a national member to:

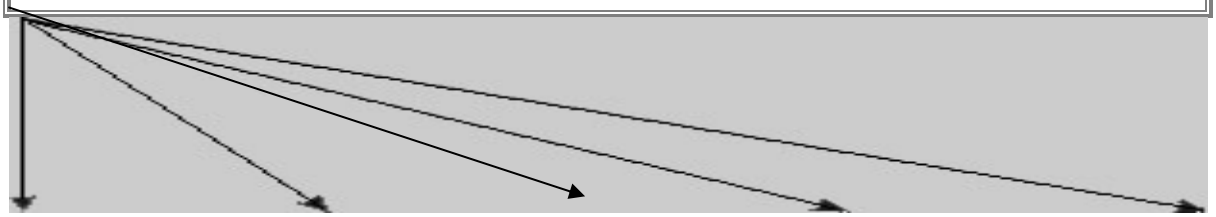
a) develop a national network consisting of representatives from cultural organizations, universities and industry
b) represent them on the board of management of e-Culture Net.
c) In addition they may wish to develop national harmonizing teams to ensure that the digitization policy determined by MINERVA has practical consequences (cf. figure 11).

As noted earlier there will, from the outset be representatives from the Mediterranean, the NAS, Russia and internationally. These will in time form further sub-networks to rnsure that a number of other members can be linked with the activities of the NoE, without creating a monolithic structure that is too large to manage. Countries such as Russia will be linked at least two levels both as founding members and through their own national network.

EEIG and Core Members

National Members: 1 Full Time Rep per Country to Integrate National with EU Activities.

National Harmonising Team: A small team of 5-10 persons paid by the national governments could work with the MINERVA national rep and this national member to produce directives to assure that their country takes up the standards/solutions developed at the European level or at least employs methods which are compatible with these standards. Compliancy with such directives could become a criterion for federal and EU funding.



Local/Regional	Gov't Agencies[5]	**Networks**	Organizations	Projects
National	Gov't Agencies	**Networks**	Organizations	Projects
European	Gov't Agencies	**Networks**	Organizations	Projects
International	Gov't Agencies	**Networks**	Organizations	Projects

Figure 11. Schematic chart of elements for the management of an NoE in Culutre. Those in bold indicate aspects already partly in place.

One of the important goals of the sub-networks in the Mediterranean, NAS and Russia is not just for them to become more aware of Western Europe's culture, but also for Western Europe to become more aware of how European heritage has undergone fascinating interpretations and transformations in the South- and East-ward lying countries. This awareness will increase Europe's sense of its own identities and enrich our awareness of a unity of diversities, which is fundamental to the European tradition. The big picture of these connections is seen in a diagram (figure 12).

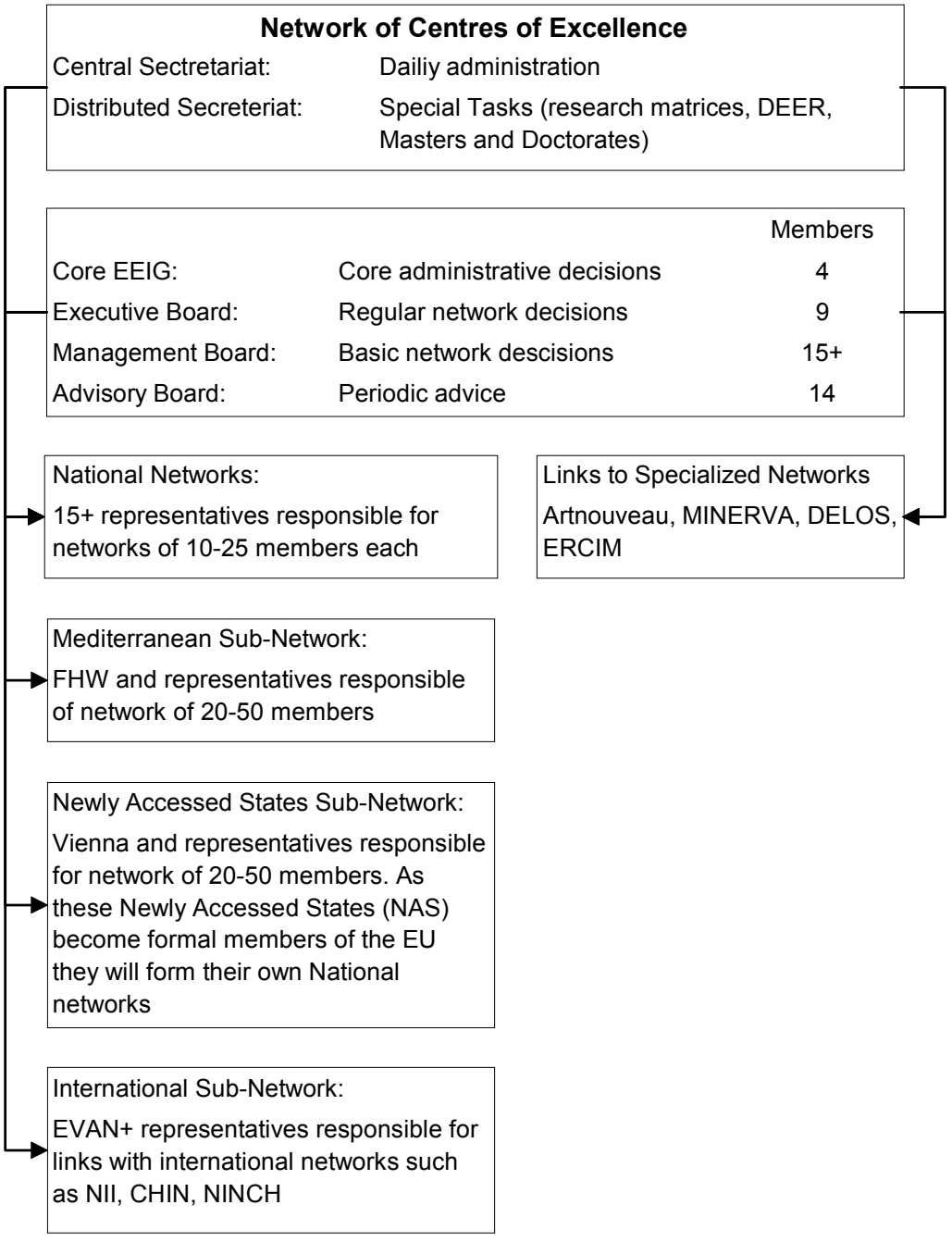


Figure 12. Basic structure NoE and its connections with national networks, sub-networks and specialised networks.

Postscript: June 2003

Security
Legal Arrangements
Storage
Multilingual Terminology
Semantic Mapping
DACOs
Interfaces
Multimodal Interfaces
3-D Spatial Access
Spatio-Temporal Access (GIS)
Virtual Environments, Agora
Virtual Heritage Centres

Figure 13. Twelve modules for the DEED leading to a DEER.

The original vision was developed on the assumption that there would be co-operation and concertation with the EC in helping to create an integrating and coherent approach to the various Integrated Projects, Strategic Projects and Networks in the field of digital culture. This proved not to be the case.

Nonetheless, there have been several significant developments. The proposed European Univeristy of Culture (Strasbourg) is going ahead and has agreed to offer E-Culture Net with a permanent home. Professor Anna Maria Silvana de Rosa, who has been instrumental in creating the first Marie Curie Training Network in the Humanities has agreed to join forces with E-Culture Net. Individual agreements to work with some of the leading candidates for IPS and NoEs (notably PROKNOWNCE, BRICKS and SIMILAR) were also reached.

It was decided, therefore, to focus on requirements for a prototype version of the DEER, which could be achieved in the context of an NoE. In order to distinguish this from the long term DEER, it was decided to call the prototype a Distributed European Electronic Dynamic (DEED) resource. Ten basic modules for this prototype were identified. Two further modules were identified for broadband environments. A series of concrete pilots was identified in order to provide content to the prototype from the outset.

The notion of national networks was retained as a means of providing further content in the future as was the concept of research matrices as a means of keeping the technologies of the DEED/DEER up to date. These three goals: to build a tool for sharing, to fill it with content and to keep it updated became the basis for a formal proposal submitted on 24 April 2003 by seven contractors representing 537 researchers.

Appendix1. Levels of integration in access to cultural heritage.

Level

1	Secure Access to Existing Examples				
2	Secure Multilingual Access to Existing Examples				
3	Secure Multilingual Access to Existing Examples	+ Semantic Access			
4	Secure Multilingual Access to Existing Examples	+ Semantic Access	+ Spatio-Temporal Access		
5	Secure Multilingual Access to Existing Examples	+ Semantic Access	+ Spatio-Temporal Access	+ Multimodal Access	
6	Secure Multilingual Access to Existing Examples	+ Semantic Access	+ Spatio-Temporal Access	+ Multimodal Access	+ E-Learning
7	Secure Multilingual Access to Existing Examples	+ Semantic Access	+ Spatio-Temporal Access	+ Multimodal Access	+ E-Learning E-Tourism, E-Entertainment

Appendix 2: General Research Matrix for key challenges in digital culture.

Semantic Access to Documented Media in Memory Institutions	Spatio-Temporal Access to (Physical) Objects	Multi-Modal Interfaces for Context, and Collaborative Creation	Personal and Collaborative E-Learning E-Publishing E-Tourism E-Work
Full Contents Manuscripts Archives Documents Letters Protocols Books Drawings Paintings Maps Cultural Objects Scientific Objects Radio Film Television Music Born Digital Art Internet Art Intangible Customs Dance Ceremony Ritual Performance	Object Room Building Site Archaeological City Landscape Route Changes Temporal Political Cultural	Virtual Reference Rooms Classifications Dictionaries Encyclopaedias Authors, Titles Partial Contents Languages Transcriptions Translations Dialects Senses 2D Vision 3D Vision Autostereoscopy Stereoscopy 3D Sound Haptic Smell Taste Displays Cellular Phone PDA Notebook Desktop Immersadesk Wall Screen CAVE Blue Room IMAX IMAX 3D	Personal Authoring Collaborative Authoring Online Courses Online Resources

Appendix 3: Macro Research Matrix. Bold characters indicate networks with which E-Culture Net has direct links. Those in large letters represent topics of focus. Those in small letters indicate areas and networks which should be related to E-Culture Net.

Portals		**UNESCO** Portal
		European Portal
Digitisation, Policy		ESCHER (MINERVA)
Research and Education		**E-CULTURE NET**
Infrastructure	Software	OSDN
	Hardware	ERCIM
	Physical Networks	GEANT
Content	Memory Institutions	
	Libraries	DELOS
	Museums	NEMO
	Archives	EAN
	Broadcast Media	DHAN
	Unstable Media	**artnouveau**
	Music	MusicNetwork
	Built Environment	**CIHV**
	Conservation	**ENCORE**
	Preservation	**ERPANET**
Context	Catalogues, Inventories	**AMP**, MINERVA Inventories
	Meaning	**SEMKOS**
	Language	ELSNET
	Space (GIS,GPS)	EPISTAGE
	Knowledge	KDNet 2006

	Discovery	
	Visualisation, Senses	CGVE
	Interfaces	CHARIS
Communication	Knowledge Management	CoCoDis-KM
(Applications,Implications)	Publication	El-Pub
	E-Learning	European Schoolnet
	E-Work	cf.ITW
	Design	GeneDIP-Net
	Games	GAMERESEARCH-NET
	Entertainment	CROCE
	Tourism	TICKET
	Economics:	REDEEM:
	Societal Implications	EURO inc.

Appendix 4. Micro-Level Research Matrix of Knowledge Life Cycle

At the Micro level the Knowledge Life Cycle covers at least 110 activities. Networks, Organisations and Projects printed in **bold** are already members of E-Culture Net. E-Culture Net will provide new links between these areas and stimulate innovative interplay between Technologies and Infrastructure, Content Creators, Content Holders, Content Brokers, Context Creators. Content and Context Communication, Applications and Implications.

These Links will help to create a Research Matrix to serve as basis for the Distributed Electronic Resource (DEER).

	Network	**Organisation, Project**
Technologies and Infrastructure		
1. Technology (Software Tools and Freeware)	OSDN	WWW, **CWI**
2. Hardware	ERCIM	
3. Physical Networks (Broadband Pipelines)	GEANT	
4. Distributed Computing Systems Architectures	CaberNet	
5. Language and Speech	ELSNET	
6. Spatial Information: GIS, GPS	EPISTAGE	EUROGI, GALILEO, Web3D
7. Information and Data on Open Media	IDOMENEUS	
8. Agent-Based Computing	AgentLink, Agent-Cities	
9. Model-Based and Qualitative Reasoning Systems	MONET	
10. Neural Networks	NEURONET	
11. Uncertainty Techniques in IT	ERUDIT	
12.Complex Systems	EXYSTENCE	
13. Statistics	EUROSTAT, CESDA	
14. Quantification	QUANTUM	
15. Assess, Benchmark (QOS)	EFQM-EQFM	MINERVA Benchmarking, ISO
16. Law	IDG	

17. Economics (cf. 42-44, 105)	ENTER	
18. Ethics	EEN	
19. Policy	ESCHER (MINERVA)	
Content Creation and Production		
20. Work	Prodaec	AFTT
21. Requirements Engineering, FEDEP	RENOIR	
22. Design	UDN, GDN, o2	
23. Manufacture	GEN	
24. Produce	-----	
25. Create	-----	AMAS
Content Holder, Protector, Supplier		
26. Capture (Scan)	-----	**CRISATEL**
27. Store	-----	ISO SC11
28. Archive	-----	ICA ISAD(G),
29. Database (Distributed Heterogeneous)	-----	ISO SC 14 ISO/FDIS 12200, ISO/FDIS 12620 ISO/TR 12618
30. Compression	-----	MPEG 4 (7, 21)
31. Conserve, Preserve	**ENCORE, ERPANET**	ECPA, PRESTO
32. Access	**ERPANET**	ECPA, ARTISTE
33. Display, Interface		AVI, ACM SIGCHI
34. Restore	**ENCORE**	**C2RMF**, ICR
Content Broker		
35. Determine Veracity	-----	
36. Authenticate	-----	INDECS
37. Render Secure	-----	SETC, DOI, MOU E-Commerce
38. Copyright (Legal)	-----	WIPO ,INDECS

39. (IP) Rights Management	-----	INDECS
40. Encrypt	-----	EEC LAB DS, W3 Dsig
41. Licence	-----	CELIP
42. Transact (Financial)	-----	e-Gate
43. Administer	-----	EDIFACT
44. Exploit, Service Bureau	Regnet,OpenHeritage	
Context Creator		
45. Term	**Termnet**	**Infoterm**, ISO TC37, SALT
46. Describe, Analyse	-----	ISO TC 46, ARTISTE
47. Class	-----	ISKO
48. Encode	-----	TEI, W3 XML
49. Index	-----	Sol, FAT
50. Create Ontology	Ontoweb, CHIOS	
51. Meta-Data (Disclose and Discover)	**SEMKOS**	UKOLN, W3 SW, DC,EMII-dcf
52. Reference	DELOS	DLF, IFLA, CIMI
53. Annotate	-----	Annotea, COLLATE
54. Search (Engines)	------	FORTH
55. Concept Browse	-----	Interspace, Aquabrowser
56. Retrieve	-----	IRiX, ISO DFR
57. Data-mine, Knowledge Discover(y)	KDNet	
58. Knowledge Manage(ment)	CoCoDis-KM, VISION	
59. Filter	-----	ACM SIGIR
60. Analyse Scenes	SCHEMA	
61. Reconstruct (Virtual Heritage)	**CIHV** (VHN **IVHN**, HN, ORION)	
62. Augment (-ed Reality)	-----	Archeoguide
63. Transform, Morph	-----	
64. Translate	CHLT, CLEF	

65. Access Multilingually	**AMP**, ELSNET	ISO TC 37, G Group
66. Access Multiculturally	**AMP**	
67. Perceive	-----	AVI
68. Visualize (3-D Vision)	-----	AVI
69. Hear (3-D Sound)	-----	
70. Touch (Haptic)	-----	
71. Simulate		
72. Intelligent Objects	-----	
73. Intelligent Environments	-----	
74. Process Manage(ment), Workflow	WFMC	EPP (EEF) 3ITS
Communication		
75. Broadcast (cf. 85)	DHAN	
76. Narrowcast	-----	Ipv6
77. Mobile	Mobile VCE	
78. Disseminate (Conferences)	**EVAN**	
79. Disseminate (Publications)	CULTIVATE, DICE	
80. Teach (cf. 93)	E-Schoolnet, ELEN	
81. Forecast	------	IPTS Seville
Applications		
82. Libraries	DELOS, PULMAN	IFLA, GABRIEL, CENL, CERL
83. Museums	EUROMUSE, **SCRAN, C2RMF**	ICOM
84. Archives	DLM Forum	ICA
85. Broadcast Media (Television Film) (cf.75)		CCAAA, ICOM-AVICOM , EBUITU, MCAIIASA, AFCI, ASIFA,
86. New Media (Digital Photography)	**artnouveau**	
87. Unstable Media (Internet Art)	**artnouveau** (I-CAST, IKT)	INCCA , COVA
88. Performance Media	**artnouveau** (I-	AFAA

	CAST)	
89. Tangible Heritage		**UNESCO**
90. Intangible Heritage	-----	**UNESCO**
91. Built Environment (Cities)	**CIHV**, ORION, VHN**,** **IVHN**,	ICOMOS, **NUME**, SANTI
92. Environment (Landscapes)	-----	Cultural Landscapes
93. Routes	-----	Hanseatic Routes, Silk Routes
94. Education (cf. 80)	European Schoolnet	
95. Tourism	FETISH, ETOUR, IFITT	ETA, TICKET
96. Entertainment	-----	IIC
97. Government	-----	GILS
98. Health, Medicine	-----	WHO, CEN TC 251
99. Industry	-----	MIRA
100. Military	-----	MIL-STD-1388
Societal Implications		
101. Philosophical	-----	
102. Epistemological	-----	
103. Knowledge Engineering	-----	
104. Historical	**NEHRN**	
105. Art Historical	-----	**Prometheus**, CHART
106. Art Theoretical	-----	
107. Sociological	-----	SOSIG, SCR
108. Anthropological	-----	
109. Political	-----	
110. Economical (cf. 17, 42-44)	-----	Eu. Historical Economics Society

Appendix 5: Plans for a New European University of Culture. Documents kindly provided by Professor Jacques Poulain.

NOTE concernant la proposition de création d'une UNIVERSITÉ EUROPÉENNE DE LA CULTURE regroupant la Philosophie, les Arts, la Littérature et les Cultures de la communication et habilitée à délivrer des doctorats européens

Alors que l'organisation économique et politique de l'Europe se précise, son développement culturel a dû affronter, dès les années 70, des crises de rationalité, de légitimation et de motivation. Leur traitement a contraint la philosophie, les arts, la littérature et les sciences humaines de la communication à opérer un effort transdisciplinaire d'analyse sans précédent et à effacer leurs frontières de tradition et de langue pour converger dans la découverte et l'exploitation de la dynamique de la communication inhérente aux arts, à la littérature mais aussi à l'exercice du jugement critique, qu'il soit quotidien, scientifique, artistique, littéraire ou plus spécifiquement philosophique.

L'objectif de cette Université Européenne de la Culture est d'intensifier, de valoriser et de rendre permanent cet effort d'analyse en promouvant l'espace d'une élaboration intellectuelle de la culture directement liée aux disciplines de la création artistique et littéraire et philosophique et en diffusant ses résultats de façon à assurer aux centaines de millions de citoyens européens l'intelligence de leurs conditions d'invention culturelle d'eux-mêmes dans tout l'espace social Elle aura ainsi à valider les valeurs collectives et individuelles émergeant de ces analyses et les nouveaux modes de citoyenneté qui leur sont associés.

On y rassemblera donc les quatre disciplines qui assurent à l'homme européen une reconnaissance de lui-même dans cette invention de nouvelles formes de vie : **la philosophie**, représentant l'instance critique à l'œuvre comme discipline universitaire, mais aussi comme exercice universel de la faculté de juger, **les arts et l'esthétique** présentant les divers modes d'inventivité créative des mondes de vie et les modes d'harmonisation des individus et des groupes à ces mondes, **la littérature**, où l'écriture opère comme un modèle d'identification des individus à ce qu'ils pensent d'eux-mêmes, et enfin, **les cultures de la communication**, développant les diverses façons dont les sciences humaines transforment la communication en mode de régulation de la culture des individus et des groupes.

Les différentes fonctions de cette université dérivent de l'urgence qu'il y a pour l'Europe à humaniser le futur et à civiliser notre civilisation en construisant l'espace européen de la culture sur les résultats de cette analyse transdisciplinaire menée par ces disciplines depuis 30 ans :

1) valoriser l'enseignement et la recherche universitaires européens dans ces disciplines en délivrant des doctorats européens, œuvrer en permanence comme un organe européen d'incitation, d'expertise et d'accueil travaillant à l'articulation des programmes doctoraux dans ces disciplines et mettre à la disposition du public le plus large possible un centre de ressource intellectuelles situé à la pointe de la recherche en le faisant participer à un véritable dialogue interdisciplinaire par le biais

d'une diffusion médiatique de ses séminaires, en s'appuyant sur un pool européen de maisons d'éditions, de médias et sur un dialogue internet;

2) de participer ainsi à la ***transformation de l'Union européenne en Union culturelle***, en lui donnant les moyens universitaires de surmonter ses crises culturelles et ses propres incompréhensions, mais aussi de répondre aux attentes de dialogue et d'élaboration culturels qu'élèvent à son égard les autres régions du monde en affirmant les valeurs de savoir dans le respect desquelles s'est construite l'Europe et qui contribuent à son rayonnement spécifique. Elle aura donc également vocation à fédérer les Instituts d'études européennes de différents pays européens autour des résultats de ces recherches.

PROPOSITION de création d'une Université Européenne de la Culture regroupant la Philosophie, les Arts, la Littérature et les Cultures de la Communication et habilitée à délivrer des doctorats européens

Proposition présentée par **Jacques Poulain**, Directeur du Département de philosophie de l'Université de Paris 8 et professeur titulaire de la Chaire UNESCO de Philosophie de la Culture et des Institutions (à vocation européenne) et par **Heinz Wismann**, Directeur d'études à l'École des Hautes Études en Sciences Sociales

1. Objectif et fonctions d'une Université Européenne de la culture

La déclaration de Sorbonne du 25 mai 1998 soulignait l'urgence "de construire un **Espace européen ouvert de l'Enseignement supérieur**" et d'accomplir "les efforts vigoureux nécessaires pour abolir les barrières et développer un cadre d'enseignement attractif" et lisible internationalement comme tel. **La déclaration de Bologne** du 19 juin 1999 invitait à développer "**une Europe des connaissances plus complète et ambitieuse**", apte à constituer "**le facteur irremplaçable du développement social et humain**" qu'elle est appelée à être. La **Commission de la Culture et de l'Éducation du Parlement Européen** n'hésitait pas "à inviter, le 5 février 2001, la Commission Européenne et les États-membres à soutenir la création d'un Centre européen de philosophie et des sciences du langage sur le modèle de l'Institut universitaire européen de Florence" (Rapporteur : Geneviève Fraisse; PE 197.122, p.21) arguant du fait que les sciences humaines doivent y être introduites comme disciplines de plein exercice dans la construction de l'espace européen de l'enseignement supérieur et de la recherche.Ces déclarations et la détermination dont ont su faire preuve l'**Association européenne des universités** à Salamanque, les 29 et 30 mars 2001, le **Bureau d'Information des étudiants Européens** à Göteborg, les 24 et 25 mars 2001 et la rencontre européenne de Prague, les 18 et 19 mai 2001 , répondaient à **une urgence de plus en plus criante**, celle, disait M. Schwartzenberg, "**d'humaniser le futur et de civiliser notre civilisation**", en donnant à la formation culturelle des citoyens européens autant d'attention qu'on a su en donner à la formation de l'Union Européenne.

Alors que l'organisation économique et politique de l'Europe se précise, son développement culturel a dû affronter dès les années 70 des crises de rationalité, de légitimation et de motivation. Leur traitement a contraint la philosophie, les arts, la littérature et les sciences humaines de la communication à opérer, au sein d'une discussion internationale, un effort transdisciplinaire d'analyse sans précédent et à effacer leurs frontières de tradition et de langue pour converger dans la découverte de la dynamique de la communication inhérente aux arts, à la littérature mais aussi à l'exercice du jugement critique, qu'il soit quotidien, scientifique, artistique, littéraire ou plus spécifiquement philosophique.

Cette même dynamique de communication était mobilisée par les écrivains et les artistes pour intégrer les mutations de mentalité dérivées des mutations scientifiques et techniques, mais également pour faire face aux dérégulations de l'espace civil dues aux luttes concurentielles des entreprises, à leurs délocalisations et à une mondialisation effrénée, pour surmonter les frictions et les affrontements entre les diverses cultures de l'Europe accompagnant l'intensification des flux d'immigration et les rechutes collectives dans des archaïsmes nationalistes après la dissolution de l'empire soviétique, pour tempérer la tribunalisation des acteurs sociaux et la dépolitisation des citoyens. Comme l'après-guerre des années 40 avait suscité une prise en charge culturelle de l'Europe par ses intellectuels, la dissémination diffuse, dans les années 80 et 90, de ces diverses neutralisations culturelles des institutions européennes a provoqué des innovations créatrices dans les arts et la littérature européenne aussi bien que dans leurs analyses universitaires.

La discussion internationale qui y a présidé, a eu lieu en Europe dans des sites tels que l'École de Korcula, puis le Centre international d'études universitaires de Dubrovnik dès les années 60, le Centre international d'études sémiotiques d'Urbino dès les années 70, le Collège International de Philosophie à Paris, le Conseil Supérieur des Recherches Scientifiques de Madrid et les Universités d'été espagnoles, le Collège de la Science de Berlin, l'Institut d'anthropologie historique de l'Université Libre de Berlin, l'Ecole des hautes Études pour les Arts appliqués de Vienne, l'École des Hautes Études de la construction des formes et le Centre d'études des média de Karlsruhe, etc. dès les années 80, puis dans les différents réseaux nationaux et régionaux des Chaires UNESCO dès les années 90.

Les résultats de ces innovations créatrices et de leur transformation en formes de vie au sein de cette discussion internationale sont restés cependant trop confinés aux milieux intellectuels et artistiques qui les ont produits. Leur prise en compte médiatique n'a pas encore réellement eu lieu et ils n'ont pu opérer les transformations culturelles profondes appropriéesà notre situation présente. Leurs efforts pour inverser la défiance mutuelle des différentes cultures européennes en motif de coopération et de renforcement mutuel ne leur ont pas encore permis de réaliser **leur enjeu principal : la transformation de l'Union européenne en Union des cultures, en Union Culturelle.** La réalisation de cette union est pourtant la seule base d'un **espace public européen**, d'un espace où l'union politique et économique de l'Europe puisse advenir et se renforcer dans l'opinion publique européenne elle-même. Car le respect de la diversité de ces cultures ne doit pas y demeurer un vain mot, il doit pouvoir identifier les complémentarités culturelles et les mettre au service de la réalisation de cette Union politique et économique dans la conscience des centaines de millions de citoyens européens qu'il rassemble. Cette proposition de création de l'**Université européenne de la Culture**, vise à intensifier l'effort de ces disciplines universitaires et des arts et à réaliser cet enjeu en forgeant, grâce à elle, dans

l'espace européen de l'enseignement supérieur, ***une intelligence de la culture qui accompagne les innovations scientifiques, techniques, industrielles aussi bien qu'artistiques et qui puisse être transmise à ces centaines de millions de citoyens européens en s'appuyant sur une anthropologie de la communication aussi assurée de ses résultats que le sont les sciences dites exactes. L'objectif de cette Université Européenne de la Culture est ainsi de promouvoir l'espace d'une élaboration intellectuelle directement liée aux disciplines de la création artistique et littéraire, de la critique philosophique et d'une diffusion des connais-sances et des moyens permettant d'assurer à chacun l'intelligence des conditions d'invention culturelle, dans tout l'espace social, bref de permettre à chacun de transformer ses modes de communication en formes de vie.***

Elle est donc appelée à valider des jugements individuels et collectifs portés sur l'objectivité de modes de vie humaine appropriés au présent de façon aussi ferme et assurée que le sont les jugements portés par les scientifiques des sciences exactes. On y rassemblera dans 4 départements **les disciplines** qui assurent à l'homme contemporain une reconnaissance culturelle de lui-même dans cette invention communicationnelle qu'il tente de l'humanité : l'un, de **philosophie**, représentant l'instance critique à l'œuvre comme discipline universitaire mais aussi comme exercice universel de la faculté de juger, un autre, d'**arts et d'esthétique**, présentant les divers modes d'inventivité créatrice des modes de vie et d'harmonisation réfléchie des individus et des groupes dans les œuvres, un troisième, de **littérature**, présentant l'écriture comme mode paradigmatique de transfert de la créativité artistique dans l'identification de l'homme à ce qu'il pense de lui-même, un quatrième, de **cultures de la communication** développant les diverses façons dont les sciences humaines de la communication peuvent transformer la communication en mode créateur de vie et en mode régulateur de la culture des individus et des groupes.

Comme la communication entre scientifiques demeure un paradigme de dialogue d'expérimentation du monde parfaitement applicable dans cet horizon d'expérimentation sociale de l'homme qu'est devenue la culture, il semble opportun d'adjoindre à ces quatre départements un **Centre de recherches de philosophie et d'histoire des sciences**. Il pourrait s'y intégrer à la façon dont le Centre Robert Schuman s'intègre à l'Institut Européen de Florence.

Les **différentes fonctions** de cette université dérivent aisément des urgences définies par les divers partenaires engagés dans la construction de l'espace européen de l'enseignement supérieur et de la nécessité de mobiliser les efforts sans précédent accomplis par ces 4 disciplines depuis 30 ans :

1. Valoriser l'enseignement universitaire européen et les recherches dans les disciplines concernées en délivrant des doctorats européens dans ces disciplines, et ce, dans une institution publique européenne appropriée à cet effet parce que sa compétence serait à la fois assurée, reconnue et contrôlée, dans **une étroite collaboration** avec les réseaux européens des écoles doctorales ou programmes doctoraux, assurée par la participation de leurs enseignants grâce à un système de décharge à mi-temps. Cette université offrirait ainsi **aux enseignants et aux étudiants une mobilité à la fois réelle et sélective : liée aux thèmes de recherche choisis et aux bourses affectables par les différents États contractants à ces recherches, mais qui leur permettrait également d'y valider les thèses rédigées en co-tutelle dans deux universités appartenant aux États-membres.**

2. œuvrer en permanence comme un organe européen d'incitation, d'expertise et d'accueil, travaillant à l'articulation des divers réseaux nationaux d'écoles doctorales ou de programmes doctoraux centrés sur les disciplines concernées;

3. mettre à la disposition du plus large public possible un centre de ressources intellectuelles situées à la pointe de la recherche en le faisant participer à un véritable dialogue interdisciplinaire par le biais d'une diffusion de ses séminaires et manifestations dans des médias appropriés, en s'appuyant sur un pool européen de maisons d'édition et en menant par internet un dialogue systématique avec son public ;
4. développer une analyse des conditions historiques d'une Union Culturelle Européenne, en articulant les recherches contemporaines et leurs résultats à l'histoire culturelle : scientifique, artistique, philosophique et politique de l'Europe et aux résultats présentés par les différents "**Instituts d'études européennes**" dispersés dans l'Europe et dans le monde, ouvrant ainsi l'espace européen à une réflexion pleinement internationale dans le domaine de l'intelligence de la création et des singularités culturelles. Elle s'appuiera à cet effet en particulier sur un **Institut de recherches étudiant la réappropriation de l'héritage antique dans les cultures nationales européennes** et visant à assurer **la transmission**, dans les différents systèmes d'éducation secondaire de l'Union Européenne, **d'un tronc commun** de références à cet héritage antique. C'est ainsi qu'elle compte ***participer à la transformation de l'Union européenne en Union culturelle*** en lui donnant les moyens universitaires de surmonter ses crises culturelles et ses propres incompréhensions, mais aussi de répondre aux attentes de dialogue et d'élaboration culturels qu'expriment à son égard les autres régions du monde, en affirmant les valeurs de savoir dans le respect desquelles s'est construite l'Europe et qui contribuent à son rayonnement spécifique. Elle aura donc vocation à fédérer les Instituts d'études européennes des différents pays européens autour des résultats de ces recherches.

II Choix des disciplines impliquées et organisation de ces disciplines en quatre départements

Ce choix nous paraît devoir être fait en fonction du rôle de l'université en général par rapport à la création des œuvres aussi bien que pour la formation culturelle des personnes.

L'Université européenne de la culture se manifeste à la fois comme université et comme université de la culture, dans le contexte d'une confrontation avec toutes les formes de l'invention culturelle, où la tentative de construire une humanité européenne "en déployant toutes les possibilités latentes de sa raison", selon la formule de Husserl, s'opère de fait dans un horizon plus vaste : celui où l'on veut faire surgir toutes les possibilités pensables de vie humaine.

Les théories et les philosophies de la communication des trente dernières années ont mis en lumière le rôle primordial de la faculté de juger dans l'auto-régulation du consensus. Située dans ce contexte général de communication, l'université se manifeste comme l'instance qui doit faire valoir et valider ce qui a une force régulatrice pour toute communication : le partage de vérité qui s'y produit. L'université se révèle être ainsi bien plus qu'une institution : l'institution du savoir, car elle n'est cette institution du savoir qu'à condition de retenir comme savoir opérant ce qu'elle parvient à faire valider comme forme de vie objective. L'enjeu contemporain de l'universalisation de l'université est en effet de trier et de renforcer les systèmes juridiques, moraux et politiques en validant les formes de vie qui s'y inventent, de façon à ancrer dans le savoir qu'elle transmette les jugements qu'elle valide. Et elle ne se valide elle-même comme forme de vie, qu'en se validant comme la seule institution qui n'institue que ce qui constitue essentiellement l'être humain comme être de communication : sa faculté de juger de

l'objectivité de ses mode de désirs et d'action, de façon aussi assurée qu'il juge de la vérité de ses vérités scientifiques.

On peut dériver le choix des disciplines représentées et de leurs départements respectifs à partir de cette mutation de l'université comme université de la culture, comme université appelée à valider des jugements individuels et collectifs portés sur l'objectivité de modes de vie de façon aussi ferme et assurée que le sont les jugements portés par les scientifiques des sciences exactes car ces derniers, eux aussi, valident mutuellement la vérité de leurs hypothèses confirmées. On y rassemblera donc les 4 départements académiques qui assurent à l'homme contemporain une reconnaissance de lui-même dans cette invention totale et illimitée qu'il tente de lui-même : l'un, de philosophie, représentant l'instance critique à l'œuvre comme discipline universitaire mais aussi comme exercice universel de la faculté de juger, un autre, d'art et d'esthétique, présentant les divers modes d'inventivité créative des modes de vie et d'harmonisation réfléchie des individus et des groupes dans les œuvres, un troisième, de littérature, présentant l'écriture comme mode paradigmatique de transfert de la créativité artistique dans l'expérimentation de l'identification de l'homme à ce qu'il pense de lui-même, un quatrième, de cultures de la communication développant les diverses façons dont les sciences humaines de la communication peuvent transformer la communication en mode créateur et régulateur de la culture des individus et des groupes.

Ce choix de disciplines est directement lié à la création artistique et littéraire, à la production des œuvres et à la créativité propre à la communication contemporaine, qu'il s'agit bien de mettre au centre de la réflexion, mais il s'accompagne, pour chacune d'elles, de l'intégration d'une réflexion historique développée depuis ces disciplines elles-mêmes, avec le souci de situer le rôle de la conscience historique dans la définition des formes culturelles, et de formuler les effets et les fonctions de la réflexion historienne appliqués à l'Europe. Ces quatre départements poursuivront leur effort d'analyse transdisciplinaire en interaction avec un **Institut de recherches sur la réappropriation de l'héritage antique dans les cultures nationales européennes.** Loin de prétendre à la fiction d'une science universelle de l'héritage antique, la réflexion s'y donnera comme objet les pratiques savantes d'appropriation de l'antiquité pour identifier les conditions nationales et historiques qui ont inspiré et entouré ces pratiques. Elle y visera à assurer ainsi une reconnaissance interculturelle des cultures nationales européennes les unes par les autres sur la base de leurs spécificités et de leurs dynamiques respectives et en vue de les aider à s'enrichir mutuellement. Ces spécificités nationales, tout comme les différentes spécificités confessionnelles et historiques qui les accompagnaient, constituent les ressorts cachés des diverses tentatives d'appropriation de l'antiquité ainsi que des diverses façons dont ces pratiques savantes ont auto-légitimé ces tentatives d'appropriation. Ces tentatives d'appropriation ont donné lieu aux diverses **"renaissances"** qui sont advenues dans les diverses cultures européennes. L'explicitation de ces ressorts cachés et la reconnaissance de leur validité encore actuelle conditionnent la possibilité d'extraire de ces cultures et de rendre disponibles ces noyaux culturels de créativité critique que visent à faire renaître ces quatres disciplines culturelles. L'objectif de cet institut sera donc également **un objectif pédagogique** : l'objet de ces recherches y est d'identifier, à travers ces différentes cultures, **le tronc commun de références antiques** auquel elles s'articulent et qu'il s'agit de pouvoir identifier et transmettre comme tel à tous dans chacun des systèmes européens d'éducation secondaire comme **matrice de culture commune** rendant possible le dialogue entre les différentes cultures européennes tout en rendant accessible à chacun la dynamique de la culture qui lui est propre.

III . Principes relatifs à la création et à l'organisation administrative de l'Université européenne de la culture

Comme l'**Institut Universitaire Européen de Florence**, l'**Université Européenne de la Culture** est créée comme personnalité juridique par une convention signée entre les quinze États de l'Union européenne, appelés à cette occasion États contractants, puis elle est appelée à être élargie aux États rejoignant par la suite l'Union Européenne.

L'Université européenne de la culture est placée sous la triple autorité du Conseil d'administration, du Président de l'Université et du Conseil scientifique. Elle est organisée en départements qui constituent les unités de base de la recherche et de l'enseignement et au sein desquels sont regroupés des séminaires. Dès sa création, l'Université européenne de la culture comporte quatre départements respectivement consacrés aux disciplines suivantes : philosophie, arts et esthétique, littérature, culture de la communication

Le Conseil d'Administration est composé des représentants des États parties à la convention portant création de l'Université, qui en assurent la présidence à tour de rôle. Il se réunit deux fois par an. Le Conseil d'Administration est responsable de l'orientation générale de l'Université et fixe les règles de son fonctionnement. Il approuve le budget et nomme le président et le secrétaire général. Pour l'assister dans la préparation de ses délibérations, il institue un conseil de recherche, un comité budgétaire et un comité des bourses. Il peut également, après avis du Conseil scientifique, modifier la répartition de l'Université dans ses quatre départements ou créer de nouveaux départements.

Le Président dirige l'Université Européenne de la Culture. Il assure l'exécution des actes et des décisions prises en application de la convention.

Le Conseil scientifique possède une compétence générale en matière d'enseignement et de recherche. Il fixe les règles d'organisation de la vie scientifique de l'Université. Il désigne les membres du corps enseignant et prononce l'admission des chercheurs. Il donne son avis sur toute transformation de la répartition entre départements ou sur la création de nouveaux départements. Le Conseil scientifique est présidé par le Président de l'Université. Il est composé de tous les professeurs, des représentants des chargés et attachés de recherche et des chercheurs.

Le corps enseignant de l'Université comprend quarante postes de professeurs à temps plein (10 par département) et douze postes de professeurs invités (soit à temps partiel, soit pour une durée de six mois, soit pour un an), chargés de l'enseignement et de la recherche. Les quarante professeurs formant le noyau des quatre départements sont engagés par contrat d'une durée de quatre années, qui peut être renouvelé pour quatre autres années. Pour prévenir tout risque d'isolement et ménager un cycle de communication permanente avec les universités nationales européennes, il serait bon de prévoir de remplir 6 ou 7 des 10 postes de professeur prévus par département par 12 ou 14 demi-décharges d'enseignement de professeurs ou maîtres de conférences enseignant dans les unversités nationales et qui enseigneraient à mi-temps à l'Université Européenne de la Culture pour une durée de 4 ans. La réduction du temps global d'enseignement et de direction de la recherche à mi-temps rendrait par ailleurs attrayant ce statut comme il le fait à **l'Institut universitaire de France.** Cette disposition assurerait la circulation de communication souhaitée entre les universités nationales et l'Université européenne de la culture et diminuerait par ailleurs les charges financières des États contractants.

L'Université accueille également, pour des périodes de 6 ou de 12 mois, des professeurs visiteurs dont l'enseignement et la recherche sont destinées à combler des lacunes dans les disciplines impliquées dans le développement de l'Université et à faciliter l'interaction entre les « Instituts européens », qu'ils soient situés en Europe ou en dehors.

Les projets de recherche des jeunes chercheurs (100 chercheurs par département, issus des divers États contractants, mais également des autres pays du monde, niveau 3ème cycle) entrepris à l'Université font l'objet d'une évaluation par un Conseil de recherche, qui se réunit deux fois par an sous la présidence du Président de l'Université. En dehors des membres de droit (qui appartiennent aux divers organes de l'Université), ce Conseil de recherche est composé de professeurs et de personnalités extérieures à l'Université (nommées pour un mandat de six ans, non renouvelable) et de représentants du Conseil d'administration (nommés pour un mandat de quatre ans, renouvelable une fois). Il peut se réunir en sections spécialisées. Il détermine les moyens à consacrer à chaque projet de recherche et en évalue la progression et les résultats.

Le président dirige l'Université. Il procède ou veille à l'exécution des actes et décisions pris en application de la convention et prend les décisions administratives qui ne relèvent pas de la compétence des autres organes de l'Université. Il est chargé de l'administration de l'Université. Il assure la représentation juridique de celle-ci. Il établit le projet de budget annuel et le projet de prévisions financières triennales et les présente au Conseil d'administration après consultation du Conseil scientifique. Il nomme les chefs de département et les membres du corps enseignant, désignés par le Conseil Scientifique. Il nomme les membres du personnel administratif de l'Université. Le président est choisi par le Conseil d'administration, sur une liste de trois noms proposés par le Conseil scientifique. Il est nommé pour trois ans. Son mandat peut être renouvelé une fois.

Le Conseil scientifique possède une compétence générale en matière de recherche et d'enseignement, sans préjudice des compétences des autres organes de l'Université. Il est présidé par le Président. Sont membres du Conseil scientifique : le président de l'Université, le secrétaire général de l'Université qui participe aux travaux sans droit de vote, les chefs de département, tout ou partie des professeurs attachés à l'Université, des représentants des autres membres du corps enseignant, des représentants des chercheurs. Le Conseil scientifique élabore les programmes d'études et de recherches, participe à l'élaboration du projet de budget annuel ainsi que du projet de prévisions financières triennales, prend les dispositions d'exécution en matière de recherche et d'enseignement qui ne relèvent pas de la compétence des autres organes de l'Université; siégeant en formation restreinte, réservée aux seuls enseignants dont la qualité est au moins égale à celle des personnes concernées, il désigne les chefs de département, les professeurs et les autres enseignants appelés à faire partie du corps enseignant de l'Université. Il détermine les conditions dans lesquelles sont attribués les doctorats européens correspondant aux différentes disciplines enseignées dans les quatre départements de l'Université.

IV Validation des études : délivrance d'un doctorat européen de Philosophie, d'Arts et d'esthétique, de Littérature et de Culture de la Communication

L'Université est habilitée à décerner dans les disciplines faisant l'objet de ses études et recherches, un doctorat de l'Université européenne de la culture aux chercheurs qui ont accompli au

moins deux années d'études dans l'Université et présenté un travail de recherche présentant des résultats significatifs pour le développement de leur discipline.

Les chercheurs de l'Université sont les étudiants ou chercheurs titulaires de titres universitaires nationaux justifiant de leur aptitude à entreprendre ou poursuivre des recherches doctorales (maîtrise ou diplôme d'études approfondies) dans le cadre des disciplines propres aux quatre départements. L'Université est ouverte aux ressortissants des pays contractants. Des ressortissants d'autres États peuvent être admis dans les limites et les conditions prises dans des dispositions réglementaires spécifiques. L'admission à l'Université est prononcée par un jury d'admission sur la base des règles fixées dans la convention et par les dispositions réglementaires arrêtées par le Conseil d'administration.

Il apparaît également que ***cette Université constituerait aussi un cadre adéquat d'accueil pour de jeunes chercheurs ayant déjà accompli 1 ou 2 années de recherches dans une École doctorale ou un programme doctoral, et pour lesquels il pourrait être intéressant de faire une part de leur formation dans cette université européenne de la culture, par des procédures d'échanges à déterminer***. Outre les doctorats européens que cette université se verrait habilitée à décerner dans les disciplines qui y sont représentées et qui sont destinées à œuvrer en interaction constante les unes avec les autres, on peut envisager que cette Université européenne de la culture serait également habilitée à valider comme diplômes européens de l'Université Européenne de la Culture les thèses de co-tutelle déjà validées comme telles par les Écoles doctorales d'origine si le caractère significatif des résultats obtenus dans cette recherche le justifie et si les docteurs concernés en font la demande, appuyés par leurs directeurs de recherche, auprès de l'Université européenne de la culture. Car ces thèses de co-tutelle n'offriront de débouché européen réel que si elles permettent à leurs détenteurs de postuler des emplois d'enseignant, de chercheur ou d'enseignant-chercheur dans n'importe quel pays européen, ce qui ne va pas encore de soi pour ceux qui ne sont détenteurs que des thèses de co-tutelle. ***Un séjour post-doctoral dans l'Université européenne de la culture pourrait également leur être offert par les États de l'Union européenne, s'il paraît aux enseignants-chercheurs de l'Université européenne de la culture, après lecture de leur thèse, que ce séjour pourrait permettre de transformer ou de compléter celle-ci de façon à ce qu'elle puisse être validée par un diplôme de doctorat européen délivré par l'Université européenne de la culture.***

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FR

Espace européen de la connaissance

Résolution du Parlement européen sur les universités et l'enseignement supérieur dans l'espace européen de la connaissance (2001/2174(INI))

Le Parlement européen,

1. déclare que la réalisation d'un espace européen de l'enseignement supérieur implique un soutien accru de la part de l'Union aux universités et estime que le respect de la subsidiarité est parfaitement compatible avec ce soutien;

2. affirme que l'Union doit davantage investir dans l'éducation, dans la mesure où la connaissance est la clé de la compétitivité et du développement économique et social européen;

3. demande à la Commission d'accorder une plus large place aux universités dans ses programmes et ses actions et souhaite que celles-ci jouent un plus grand rôle dans le processus de mise en oeuvre de l'acquis communautaire;

27. demande à la Commission et aux États membres de soutenir la création d'une université européenne de la culture consacrée aux disciplines artistiques, littéraires, philosophiques et aux sciences de la communication afin de contribuer à l'élaboration d'un espace européen de recherche pour ces disciplines et de répondre à l'exigence d'un dialogue interculturel avec les autres régions du monde;

27. demande à la Commission et aux États membres de soutenir la création d'une université européenne de la culture consacrée aux disciplines artistiques, littéraires, philosophiques et aux sciences de la communication afin de contribuer à l'élaboration d'un espace européen derecherche pour ces disciplines et de répondre à l'exigence d'un dialogue interculturel avec les autres régions du monde;

Appendix 6. Outline of four sections, eight groups and 24 teams in evolution of the DEER. While partially chronological, these groups will evolve in parallel from the outset.

SECTION 1: RESEARCH AND EDUCATION		Members			
Group 1: Develop Research Communities through Networks		Year 1		Year 2	
Team 1: Develop the National Networks		15		25	
Team 2: Liaise with Specialised Networks		10		10	
Group 2: Research Matrices (Portal for Standards)		32		110	
Team 3: Preserve					
Team 4: Access					
Team 5: Create					
Team 6: Learn					
Group 3: DEER Principles					
Team 7: Administrative Infrastructure (London)		10		10	
Team 8: Legal Infrastructure		05		15	
Team 9: Technology Infrastructure (also for EMR)[vi]		10		15	
Team 10: Software Infrastructure (DACOs)[vii]			10		10
Team 11: Interface (Helsinki)		10		10	
Group 4: DEER Content and Tools					
Team 12: Technical Keywords	C2RMF	10		10	
Team 13: Culturally Variable Terms	AMP	10		15	
Team 14: Archaeological Sites	ORION	10		10	
Team 15: Cities	CIHV, CMH	10		10	
Team 16: Virtual Heritage Environments	VHN	10		10	
Team 17: Broadband Content		28		30	
Group 5: E-Learning					
Team 18: European Masters		10		15	
Team 19: European Doctorates		05		10	
Team 20: Cross Cultural E-Learning		15		25	
Team 21: Resource Based E-Learning		15		25	
SECTION 2: PUBLIC					
Group 6: Team 22: Free Public Access		05		10	
SECTION 3: COMMERCIAL					
Group 7: Team 23Commercial Dimensions		05		10	
SECTION 4: INTERNATIONAL					
Group 8: Team 24: International Dimensions		30		40	
Not yet Assigned		0		125	
Total		250		400	

Appendix 7: Provisional list of workpacakges for the first phase of the E-CultureNoE.

INTEGRATING ACTIVITIES

SECTION 1: RESEARCH AND EDUCATION

Workpackage 1: Develop Research Communities through Networks **Group 1**

Unite the research community by sharing requirements, standards, solutions, critical methods through research matrices to prepare for DEER .

In order to have a structure to prepare for the DEER, and to arrive at the necessary, critical mass, the objectives are:

a. to establish national networks in EU countries that integrate cultural organisations, research institutions and industry/SMEs
b. to link E-Culture Net with sub-networks in the Mediterranean, NAS and internationally. This will prepare for a future section 4: International

Workpackage 2: Research Matrices **Group 2**

Unite the research community creating a Portal for standards, solutions.

The objectives are:

1) to create an ongoing, continually updated list of key solutions, standards, research topics and roadmaps needed for the DEER, which will become a portal for communities of practice within the DEER.

Workpackage 3: DEER Principles **Group 3**

Unite the research community by sharing expertise re: principles for the DEER.
The objectives are:

1) to identify needs for administrative infrastructure
2) to identify needs for legal infrastructure.
3) to identify requirements technological infrastructure including for an European Mirrored Repository (EMR) linked with the DEER and to determine whether this requires an European Digital Documentation Centre.
4) to develop further the concept of Digital Autonomous Cultural Objects (DACOS) as preliminary software for the DEER.
5) to continue developing multilingual interfaces for the evolving DEER with cross-cultural accessibility.

PROGRAMME OF JOINTLY EXECUTED RESEARCH

Workpackage 4: DEER Content: Group 4

Unite the research community by making existing research results accessible through multilingual keywords to contribute to the European Research Area (ERA) and an E-Culture Grid: e.g..

1) Technical Keywords	C2RMF
2) Culturally Variable Terms	AMP
3) Cities	CIHV, CMH
4) Archaeological Sites	ORION
5) Broadband Pilots	Madrid
6) Virtual Heritage Environments	VHN

The objectives are:

1) to share scientific inventories of C2RMF multilingually as a basis for sharing research on proto-DEER.
2) to use cultural inventories as identified by AMP multilingually as further basis for sharing research on proto-DEER.
3) to share examples and methods of historical cities online starting with those defined by the Commission Internationale pour l"Histoire des Villes and the Centre for Metropolitan History
4) to share examples and methods of virtual archaeology on-line starting with those identified by ORION.
5) To share broadband examples to widen the scope.

WP 4: DEER Content: Share Virtual Heritage Centres Group 4

The objective is to share existing virtual heritage demos and explore requirements for a sub-network of virtual heritage centres focussing on environments.
Add cultural institutions and industry to this community through research projects ranging from joint work between individuals to strategic targeted research projects (STRPs). Develop new semantic access, authoring, creation and e-learning environments with polyvalent interfaces through jointly defined integrated projects (IPS). These IPS can provide top-down platforms whereby these resources can become available for European Masters, Doctorates, Training and eventually all e-learning. Four areas are targeted:
1) Semantic access and knowledge organisation
2) Spatio-temporal access with historical-cultural dimensions
3) Collaborative creation with multimodal interfaces
4) Personal and collaborative e-learning.

ACTIVITIES TO SPREAD EXCELLENCE

WP 5: E-Learning — Group 5

Use the above for European Masters, Doctorates and for e-learning.
The objectives are:
1) to develop EU Masters, Doctorates and Training
2) to develop cross-cultural learning through European Studies
3) to use the proto-DEER to explore potentials of resource based e-learning.

WP 6. Public — Group 6

The objective is to explore how subsets of the resources of a proto-DEER (WP3) can be made available freely for all citizens. This will prepare for a future Section 2: Public.

WP 7. Commercial — Group 7

Develop a virtual agora whereby these resources can be exchanged, some on a self-sustaining basis, some on a profit basis in the realms of tourism, publishing, broadcasting, entertainment and games.

The objectives are:

1) to explore how the resources of a proto-DEER (WP3) and the new environments (WP 4) can be applied to tourism.
2) to use these resources for future book, film, television production and new forms of e-creativity.

This will prepare for a future section 3: Commercial.

WP. 8. International — Group 8

Use DEER to help an expanding Europe to re-define its cultural identities and share these with other networks around the world.
This will prepare for a future section 4: International.

WP 9. Dissemination

The objective is to make available the expertise and methods developed in WPs 2-6 through conferences, meetings, seminars and publications. Part of the challenge is to develop separate sections to address Public, Commercial and International Dimensions.

WP 10. Project Management

The objective is to manage the E-Culture NoE.

Notes

[i] Projects such as the TRIS trials are a first step in the direction that is needed. They make accessible concrete results of various projects. The DEER will go further by making such distributed results accessible through multilingual keywords, search strategies and interfaces.

[ii] Typically these teams will be 10-15 in size. An exception is the section on research matrices, which will involve 32-110, but will have subsections for the categories: Preserve, Access, Create and Learn.

[iii] European Mirrored Repository (EMR)

[iv] Digital Autonomous Cultural Objects (DACOs).

[v] **Background**

All over Europe there are enormous amounts of resources in digital culture, which are produced but not shared. For instance, the Centre de Recherche et Restauration des Musées de France (C2RMF) is scanning paintings and cultural objects at 30 Gigabytes per image and has a database of over 3 terabytes. The NUME project has over 4 terabytes concerning an historical treatment of Bologna from the 10th century to the present. In a recent survey Manfred Thaller (Cologne) identified at least 50 major databases available but not linked in Germany alone. He has also developed a new method for coherent access to such distributed resources, which keeps intact their national, regional and local diversity: Digital Autonomous Cultural Objects (DACOs).

Pilot 1 German Databases

For the pilot phase of the thematic network (July 2002-June 2003), Manfred Thaller (Cologne) is creating an initial demonstration of his approach using one million pages from at least four of these heterogeneous, distributed sources.

Pilot 2 EROS for PROMETHEUS

The C2RMF has a **multilingual** database named **EROS** that contains **technical and scientific** information related 15,000 paintings and 35,000 objects. This could be used as digital content for a prototype of the future Distributed European Electronic Resource (DEER). As advanced standardised multilingual content, the C2RMF proposes to organise an **EROS Sub-Working Group** in the frame of a WP of the e-CultureNet project related to multilingual aspects (agreement of a common vocabulary with their definition and their translation in all the European languages) in the field of **Conservation-Restoration** to manage the indexing of scientific or restoration reports for research in museums institutions.

The huge multilingual EROS database with high definition images at the C2RMF (3 terabytes), plus materials from Scottish Cultural Heritage Access Network (SCRAN) will be combined with Manfred Thaller's PROMETHEUS database for distributed sharing of art historical slide collections to demonstrate the feasibility of a multilingual network in 6 months time (June – December 2003).

[vi] European Mirrored Repository

[vii] Digital Autonomous Cultural Objects.