European Cooperation
in Science and Technology
- COST -
_____

Secretariat

Brussels, 16 December 2010

COST 4205/10

MEMORANDUM OF UNDERSTANDING

Subject :   Memorandum of Understanding for the implementation of a European Concerted
Research Action designated as COST Action IS1005: Medieval Europe -
Medieval Cultures and Technological Resources

Delegations will find attached the Memorandum of Understanding for COST Action IS1005 as

approved by the COST Committee of Senior Officials (CSO) at its 180th meeting on

1 December 2010.

_____

MEMORANDUM OF UNDERSTANDING
For the implementation of a European Concerted Research Action designated as

COST Action IS1005
MEDIEVAL EUROPE - MEDIEVAL CULTURES AND TECHNOLOGICAL RESOURCES

The Parties to this Memorandum of Understanding, declaring their common intention to participate in the concerted Action referred to above and described in the technical Annex to the Memorandum, have reached the following understanding:

1. The Action will be carried out in accordance with the provisions of document COST 4159/10 "Rules and Procedures for Implementing COST Actions", or in any new document amending or replacing it, the contents of which the Parties are fully aware of.

2. The main objective of the Action is to to increase accessibility to and integration of medieval research results and tools through improved technological instruments and skills.

3. The economic dimension of the activities carried out under the Action has been estimated, on the basis of information available during the planning of the Action, at EUR 52 million in 2010 prices.

4. The Memorandum of Understanding will take effect on being accepted by at least five Parties.

5. The Memorandum of Understanding will remain in force for a period of 4 years, calculated from the date of the first meeting of the Management Committee, unless the duration of the Action is modified according to the provisions of Chapter V of the document referred to in Point 1 above.

————————————————

A. ABSTRACT AND KEYWORDS

Medieval Cultures & Technological Resources (Medioevo Europeo) groups experts from important European entities in min. 13 countries to create a Virtual Centre for Medieval Studies: a virtual, team work space in which to collaborate, communicate and share work and research tools. Medioevo Europeo fits into the COST framework as it coordinates existing research on the use of ICT for Medieval Studies, a field where ICT has the potential to improve and substantiate research, and specifically on interoperability between databases used for storage and research in this area. Through 4 years of cooperation, Medioevo Europeo links modern technology to medieval studies and combines technological development with intensive training of researchers. The European framework offers the means to connect the wealth of scientific material available, while ensuring interoperability, data security, and suitability for differing academic contexts.

The Action includes 4 interrelated Working Groups, relating to Authors and texts; Manuscripts and textual tradition; Textual Corpora and Reading Tools, VCMS design.

Medioevo Europeo promotes social, technological and scientific advances. It promotes an understanding of Europe as a union of diverse but complimentary heritages. It develops a key scientific resource and defines improved technical standards for academic databases. It promotes researcher employability through extensive skill enhancement.

Keywords: Medieval Studies, Databases, Virtual Research Environments, Interoperability, Heritage

B. BACKGROUND

B.1 General background

Socio-economic and humanities research is a key field in the knowledge economy that addresses changes in Europe's social, economic, political and cultural make-up. Research monitors the way that societies are organised and governed and how they evolve. It considers the impact of multilingualism, values and history in constructing modern Europe. Humanities takes a new look at societal values and the impact of technological innovation on past and present societies. In this context, understanding medieval times is vital to understanding today. Medieval research is based on the knowledge that European cultural and scientific development was born from a common but diverse heritage of Western, Arabic and Jewish cultures. Medieval studies promote understanding of this heritage and foster intercultural dialogue to ensure that cultural diversity is understood and respected.

Over recent years, medieval studies have been facilitated by databases containing textual corpora, national dictionaries, bibliographies with commentaries, authority lists of medieval authors and repertoires of medieval authors and works. These databases make knowledge accessible to scholars through modern technology.

Examples of European and international databases are numerous, and include general sites on the medieval period, large scale dictionaries, large collections of texts, electronic management of manuscripts and archives and repertories and indexes of medieval codices and manuscripts. Furthermore, medieval material is present in national dictionaries and general historical resources are available at EuroDocs.

In some areas databases have evolved to Virtual Research Environments (VREs): digital infrastructures hosting texts and offering tools for textual analysis, comparison and editing. A VRE provides a framework of resources to support research, particularly for disciplines such as Medieval Studies, which are not well catered for by current infrastructure.

Given the increasing number of on-line information sources, specific concerns include: quality of material; technological quality and interoperability of databases; training of researchers in use of new technologies; on-line installation of databases; uniformisation of computerised grammar; elaboration of search engines; creation of a common format for storing and exchanging data and of common management platforms.

This Action groups entities from min. 13 COST countries (and potential participation of at least 1 non COST Country, Canada), who have long standing experience in scientific and editorial activity and either own or utilise databases for academic research. Brought together by their concern over the above cited issues, they have prepared this COST Action in order to initiate common reflection on technological infrastructure for research on the cultures and civilisations that make up European Middle Ages. Within this Action, a Virtual Centre for Medieval Studies (VCMS), based on the VRE concept and building on a scientific tradition of collaboration between institutes of excellence, will be created, in order to ensure:

- Integration of available databases and tools;
- A virtual team work space in which academics and researchers can upload information and collaborate in indexing, cataloguing and examining manuscripts in standardised forms;
- Training of key researchers and professors in the use of the VCMS.

This Action is in line with COST as:

- Research is underway at national level and can benefit from a European platform for cooperation on a specific project (the VCMS). Focus on a specific project, rather than various projects within a scientific theme, makes the Action more suitable to COST than ESF networking programmes. As funding is required for coordination, not research, the Action is unsuitable to Framework Programme 7 (FP7).

- The focus on ISCH and non-competitive research makes that Action more suitable to COST than EUREKA, which has a more high tech / business concentration.
- It promotes coordination of Medieval Studies research efforts and strengthens Europe's physical and virtual scientific networking capacity.
- It encourages capacity building and mobility of early-career researchers, through training sessions, Short Term Scientific Missions and participation in all Action initiatives.
- The activities funded by COST are adapt to achieving the Action's aims of cooperation and integration.

The COST framework:

- Guarantees the essential transnational nature. Moves towards a common, interoperable system, with highly trained staff, would be impossible without pan-European cooperation. The Action starts off with experts from 13 COST countries and will involve more experts through its activities.
- Provides a forum for networking and debate. The Action is designed to gain benefits from COST cooperation and networking opportunities, through tools such as scientific meetings, conferences and seminars. Each are structured to address the overall Action objective and its specific themes.
- Allows for training and involvement of early-stage researchers. This Action will use the opportunities offered (Training Schools and Short Term Scientific Missions (STSM), to develop new technological skills among medieval studies researchers.

B.2 Current state of knowledge

This Action addresses the following research areas: archiving and source management within Medieval Studies; on-line research environments and interoperability.

- In terms of archiving and source management within Medieval Studies projects carried out by European universities and research institutions include: *MIRABILE* (hosting large database on history of medieval culture, medieval bibliography *Medioevo Latino* and indexation of 80000 medieval manuscripts); *CALMA* (repertoire of Medieval Latin authors); *BISLAM* (authenticity list of medieval Latin authors); Éditions *en ligne de l'École des chartes*; and *DEAF* (bibliography containing references to studies, medieval manuscripts, authors and scholars).

- In the area of electronic lexicography and vernacular languages of the Middle Ages, projects of relevance include: electronic edition of *Du Cange* (Ecole des Chartes, Paris), *Novum Glossarium Mediae Latinitatis* (Académie des Inscriptions et Belles Lettres et CNRS, Paris), *Mittellateinisches Wörterbuch* (Munich), *Tesoro della Lingua Italiana delle Origini*, *Anglo-Norman Dictionary* (University of Aberystwyth), *Dictionnaire du Moyen Français* (Nancy), and *Dictionnaire Etymologique de l'Ancien Français* (DEAF, Heidelberg). *DEAF électronique*, which will offer on-line access to the entire dictionary contents supported by powerful search functions, will be launched in 2010. *SISMEL* is elaborating a project on digitalisation and electronic indexing for the 13 most important medio-latin lexicon. A wealth of other projects could be cited here.

- On-line Sources for European History. Medieval research databases also exist elsewhere in the world. These include the database of the Institute of Microfilmed Hebrew Manuscripts, Jerusalem, representing more than 90% of all known existing Hebrew manuscripts and well known American such as *Avalon Project* at Yale Law School; *Labyrinth Resources for Medieval Studies* at Georgetown University; and *Internet Medieval Sourcebook* from Fordham University.

- Concerning ICT interoperability, research has been undertaken within the 6th and 7th Framework Programmes. In FP6 projects included: Query and context based visualisation of time-spatial cultural dynamics (*QVIZ*); Open replication of databases (*GORDA*); Statistical multilingual analysis for retrieval and translation (*SMART*). The *DRIVER* project (Digital repository Infrastructure vision for European research), was complimentary to *GEANT2*, the infrastructure for computing resources, data storage and data transport, in delivering content resources. In FP7, the most relevant action line is Digital libraries and technology-enhanced learning. Examples include: Sustaining heritage access through multivalent archiving (*SHAMAN*); Cultural heritage knowledge exchange platform (*SMARTMUSEUM*); Coordination action on digital library interoperability, best practices, and modelling foundations (*DL.ORG*).

- Work on VREs includes the project *Building a Virtual Research Environment for the Humanities*, supported by the Humanities Division at Oxford, hosted by the Oxford e-Research Centre, and funded by the Joint Information Systems Committee. Academic research has also concerned different usage of VREs, such as social sharing of workflows (De Rourea, Gobleb and Stevens – 2009) and integration between VREs and existing institutional infrastructure (Fraser, 2005).

None of this research focuses on the specific characteristics and needs of the humanities sector, and much less of Medieval Studies. Thus, this Action is complementary with this research, but takes an innovative approach by:

- Linking medieval studies to modern technology. Use of ICT in this field is overlooked, despite its potential to improve and substantiate research. Medioevo Europeo takes a new approach by supporting the application and testing of advanced e-science initiatives in a specific sector of humanities research, which is often identified more for its historical resources than potential to inform e-science.

- Linking technological development with training of researchers. Documentation is gradually migrating to electronic internet based repositories. To manage that migration and take advantage of the possibilities, trained professionals must understand both humanities and ICT. However, this is insufficiently promoted in European universities or research centres. Thus, the innovative nature of the Action lies in offering training (with a focus on early-stage researchers) to apply advanced information technology to the intellectual content of the humanities.

B.3 Reasons for the Action

The Action addresses problems faced by medieval studies researchers: lack of integration and resource coordination; lack of technological skills; insufficient provisions for quality control. Medioevo Europeo will improve accessibility to results of medieval research, through increased technological standards and skills, by committed participation in Action activities. Partners collaborate through scientific workshops, STSMs, Training Schools and Research Conferences, to gain in-depth knowledge on existing databases and means of access. They also participate in outreach and communication activities, thus spreading the benefits of the work.
The immediate benefit is clear from the concrete outcomes:

- 1 VCMS, which provides an invaluable and constantly updated scientific / technological resource for those working in this field;

- 1 pool of European researchers, coming from min.13 European countries, with the skills to access and manage the VCMS. This addresses an economic and societal need to improve training and prospects for European researchers.

Concerning future scientific and technological benefits, the Action fits into the concept of e-science and the use of new technology to promote knowledge. It will support the creation of advanced web based tools and interoperable databases. Collaboration will be sought with other sectors that can spread the use of VREs in science. Sectors of interest include computer engineering, where products can be applied to humanities, and other faculties in the field of arts and humanities.

The Action integrates texts, authors and manuscripts on various European cultural areas, thus promoting the idea of common European identity. Participants will actively include entities outside of the usual medieval research circuit, including schools, cultural and civil society organisations, in order to spread this message.

The Action responds to an economic need to promote the employability of researchers. The mixture of research skills, expertise of a field of humanities and advanced technological skills is key to current employment. These capacities are needed in different employment areas, e.g. museums, libraries, archiving, teaching, publishing, government, communications, and entertainment. From the Action, and activities continuing beyond its duration, participants should have a broad but practical sense of challenges to overcome in making humanities content tractable to computational methods and an idea of how to meet such challenges.

B.4 Complementarity with other research programmes

This Action is in line with the *European Digital Library* (Europeana), introduced in 2006 to boost the digital economy and make Europe's cultural heritage available on-line. The Europeana Regia project is of particular interest. Promoted by the Bibliothèque Nationale de France, the project groups 5 European libraries and over 900 manuscripts on the political, cultural and artistic history of Europe.
Other important interlocutors are the currently running FP7 projects. They will be contacted and involved in Action activities.

C. OBJECTIVES AND BENEFITS

C.1 Main/primary objectives

The main objective of the Action is to increase accessibility to and integration of medieval research results and tools through improved technological instruments and skills. This will not only upgrade quality and efficiency of research in this field, through the use of advanced ICT, but will also ensure increased employment potential for early-stage researchers.

C.2 Secondary objectives

The outcome of the Action is a Virtual Centre for Medieval Studies (VCMS) and a pool of researchers with the skills to access and manage the centre.

The VCMS, made possible through exchange and networking within COST, is a portal providing information on digitalised manuscripts, authenticity lists of medieval authors, bibliographies on medieval cultures and a library of medieval texts. The VCMS integrates existing databases containing texts on medieval cultures, bibliographical references and dictionary articles.

The VCMS will be the result of intense collaboration between partners at international level and will ensure the most open accessibility possible to integrated information.

- Quantifiable targets: 1 state of the art, user friendly VCMS (technological development funded with institutes' own resources), integrating and improving existing resources and tools, including at least 25 existing large scale databases, containing over 300,000 documents ; potential pool of users covering the whole scientific community of scholars from Antiquity to Early Modernity. Min. 200 researchers trained.

The secondary objectives can be summarised as follows:

1. Verify existence, status and interoperability of databases, in order to structure the VCMS.

- Quantifiable targets: identification and analysis of min. 25 of most important European databases; involvement of min. 200 researchers.

2.   Verify quality and content of medieval manuscripts available on-line, with a view to enlarging cooperation and increasing accessibility.

- Quantifiable targets: min. 200.000 manuscripts analysed (bibliographic notices for more than 150.000 are already available).

3.   Promote research into texts and textual corpora to ensure a greater understanding of cultural exchanges between different medieval ethnic groups, religions and cultures.

- Quantifiable targets: min.1000 texts analysed**.**

4.   Define, test and disseminate a portal hosting the VCMS

- Quantifiable targets: 1 VCMS, integrating min. 25 databases, widely accessible through a user friendly portal (all expenses related to database integration are external to the COST Action); 1 set of technical standards, tested on min. 25 European databases; inclusion in testing phase of min. 250 EU and extra European research institutions, min. 26 secondary schools and min. 200 other entities.

5.   Intensify Exchange between European regions on projects relating to on-line Medieval resources, thus increasing territorial know-how and capacities

- Quantifiable targets: min. 13 countries represented; min.10 experts per country and 200 researchers involved.

C.3 How will the objectives be achieved?

Achievement of Action objectives is made possible through collaboration of key European institutes that have developed large scale databases, become familiar with relative problems and attempted to identify targeted solutions. The group of researchers involved in the Action will make use of joint networking and communication activities foreseen by COST.

Wide scale discussion of core research issues will take place within the Founding Research Conference and yearly workshops bringing all participants together. Scientific Working Groups will address specific issues and work throughout the year through information exchange, thematic seminars and meetings. To promote joint interrogation of existing and future databases, seminars will be dedicated to discussions on standard technologies allowing for partial or complete interrogation. Training Schools and Short Term Scientific Missions (STSM) will be organised to train researchers (both expert and early-stage) in the use of new technologies in medieval studies. The Final Research Conference will present results and plans for future extension.

In parallel, participants will undertake wide-scale and targeted communication activities to ensure involvement of external actors in the testing phase and continued VCMS use.

Human resources needed to achieve these objectives are: expert and early-stage researchers in medieval studies and other disciplines; technological experts, with capacities in on-line systems, databases, programming languages, VREs; communication experts.

The Action requires ICT tools, such as internet systems and relative programming tools.

C.4 Benefits of the Action

This Action unites new technology with research and understanding of our shared European history, and offers the following benefits

- Societal: the Action promotes an understanding of the genesis of Europe as a union of diverse but complementary cultures and heritages. An understanding of who we are can help to overcome division and help Europe to present itself as a plural reality to those who disregard its multicultural nature. Medioevo Europeo organises scientific, communication and training initiatives to ensure that intercultural dialogue and debate is given space. It brings together specialists from different cultural and linguistic areas of the medieval Mediterranean (Arabic, Greek, Hebrew, Latin, Roman, Old Slavonic and Scandinavian languages) and fosters interest of actors outside the scientific community, in order to support wide-scale awareness of the variety of cultures making up European roots.

- Scientific: the Action provides scientific benefits in Medieval Studies, by supporting the creation of a key, widely available resource for research. The Action provides the scientific community with a new instrument, establishing the concept that scientific works can be inserted into integrated databases. The Action also provides training for a new generation of academics. The benefits of the tool can be shared with and adopted by academics in other fields.

- Technological: the Action promotes cooperation to define improved technological standards of academic databases, including advanced management platforms, search engines and features of interoperability. The VCMS uses latest technology to achieve these improvements. While some licence-based computerised resources may be required, the Action will optimise the use of open-source technology. Efforts are made to connect this centre with an ever increasing number of technological tools, in order to ensure that databases are up to date and compatible.

- Economic: in line with the Lisbon strategy for Growth and Jobs, the Action enhances employability and training for young researchers. The scientific workshops, Short Term Scientific Missions and training sessions are targeted at providing young researchers with multidisciplinary skills, allowing them to progress in academic careers or otherwise. Furthermore, through the digitalisation of documents, the Action helps reduce costs of their conservation and of data divulgation.

C.5 Target groups/end users

- Scientific communities – Universities and Research Entities: this group includes entities involved in the Action, entities working on Medieval Research and representatives from other scientific disciplines, with a focus on socio-economic and humanities research;

- Institutions - Each participant will make contact with policy and decision makers (at regional, national and European level) to ensure that the Action's methodology and tools can be used as widely as possible and can provide input to related policy decisions;

- Secondary Schools – Each participant will involve a large number of teachers and students from secondary schools, who can make use of the VCMS for their studies;

- European citizens – Through contact with libraries, museums and cultural / civil society organisations, a range of citizens can make use of the VCMS and implement similar initiatives.

D. SCIENTIFIC PROGRAMME

D.1 Scientific focus

The most important research tasks to be coordinated by the Action focus on 4 scientific areas:

Area 1 - Authors and texts: repertoires, *authority lists*, bibliographies

In humanities, interpretation and synthesis can only be based on carefully examined corpus of sources, which are representative and are correctly edited and referenced. Currently a large proportion of source manuscripts from Ancient and Middle Ages are under-studied, or indeed inedited, and not catalogued. The chain of work must 1) make an inventory, 2) describe, 3) edit 4) review all sources, before being able to 5) utilise, interpret and synthesise content.

On the other hand, the fragmentation of available information (due partly to scholarship that dates back to the period of Humanism and the XVI-XVII centuries and that accelerated from the second half of the XIX century onwards) makes it increasingly necessary to integrate information, through sharing large databases. Only in this way can academics receive real time, critical information on authors, texts, manuscripts and linguistic deposits.

Interoperability between these large databases also allows for dialogue between different medieval cultural areas. Authors, texts, manuscripts and linguistic deposits can be used in an integrated manner to provide a complete image of European cultural diversities (from end of Roman Empire to Italian and European renaissance). It also allows for swifter access to information of interest to large cultural exchanges between medieval European and Mediterranean civilisations.

Critical bibliographies, catalogues of manuscripts, repertoires of authors, works, copyists, lead-ins of ancient libraries, are all indispensible tools for medieval research. They allow scientists to access greater knowledge of manuscript sources spread out over libraries all over the world, to identify, date and trace millions of texts that are often partially or completely unknown.

European databases have been elaborated at different times and use different and sometimes incompatible software. While numerous bibliographical tools and databases are available in electronic form, the resources are heterogeneous in format and quality, and mutual integration of data is limited. Computerised dialogue can be used to reduce these differences.

Therefore, research tasks in this area are directed towards the elaboration of:

- Common standards for interrogation of bibliographical databases relative to medieval studies;
- Best practices on bibliographical databases;
- Common norms for authority lists of medieval authors in various European cultures and joint interrogation of large repertoires of medieval authors and works.

The research tasks that will be undertaken by participants, and coordinated within the COST Action include:

- Verification of the *status quaestionis* of databases of medieval authors and texts;

- Identification and sharing of good practises to constitute repertoires, authority lists and bibliographies;

- Verification of relevance and interoperability of procedures and methods from different cultural areas;

- Evaluation of common standards in this field;

- Evaluation of cross-national and translingual repertories of texts.

Human resources included in this WG include: expert and early-stage researchers in medieval studies; technological experts, with capacities in on-line systems, databases, programming languages and VREs.

Area 2 - Manuscripts and textual tradition
Manuscripts and texts have been produced, copied, read, interpreted and modified by a long chain of intermediaries. Research focuses on this chain of transmission of human thought, running from Antiquity to the Renaissance. Promoting interoperability between large-scale databases related to Medioevo Europeo helps complete the large reservoir of medieval writing related to all European cultural areas. Instruments are made available for a reconstruction of the circulation of texts and manuscripts.

In recent years the on-line availability of digital manuscript images, mostly managed by archive libraries, has grown hugely. However, this new wealth of sources does not correspond to an adequate system of data management concerning manuscript descriptions, textual content and relationship within the tradition of an author or a single text. Descriptive information is normally stored separately in standard databases, and different national and linguistic traditions have no contact.

Thus, research focuses on real time collection and integration of texts and manuscripts on medieval culture. The possibility to interrogate and relate information on medieval manuscripts to texts from various medieval European cultures is analysed, in order to develop common standards.

The research tasks that will be undertaken by participants and coordinated within the COST Action include:

- Developing a proposal for processing data on manuscripts, including reflections on manuscript data standardisation. This will be based on dialogue between existing databases, some of which already contain bibliographical indexes on thousands of medieval manuscripts. Going beyond international standards on manuscript description, researchers will respond to the need to supply integrated data on texts contained in relative codes and bibliographies. In this way, they will ensure that the descriptions are functional to the study of each object described and can be cross-referenced in a transversal manner, independently of their storage place.

- Verifying the presence on the web of such tools, testing the research of information on the web and promoting the development of databases on textual traditions. A census of existing web sites will be made, with a view to identifying models that can be proposed as standard for enlargement of these complex, integrated databases.

- Testing research of information on manuscripts that have been or will be digitalised. In this field, dialogue will be required with large library depositaries containing manuscripts and with national cataloguing enterprises that exist in Europe.

- Testing interaction modes necessary for data circularity. Research will focus on experimenting a light model for circularity and dissemination of data. This does not necessarily require data to be uniform; in fact it builds on the numerous historical differences between each web-based project, through integrated access to a large amount of information that has been scientifically validated by partners.

Human resources included in this WG include: expert and early-stage researchers in medieval studies and other disciplines where relevant; technological experts, with capacities in on-line systems, databases, programming languages.

Area 3 - Textual Corpora and Reading Tools

On the basis of existing on-line textual corpora and reading tools, research focuses on the analysis of corpora and linguistic interactions. Work concerns means of linking dictionaries to web-based reference databases and to other bibliographical items which record texts, images and transcriptions. The research considers the use of portals that can link to any bibliographical item that records the text from an edition, and the images and the transcriptions of the manuscripts that witness it. One can also link linguistic databases and dictionaries to data included in such bibliographical databases. Having a portal that lists all resources relevant to a given subject and allows for direct and comprehensive searches is more effective than browsing the Internet.

The exponential development of digital textual corpus has opened up research perspectives that would have been unimaginable a decade ago. However, due to the quantity of information, researchers find themselves dealing with specific problems, as yet unresolved: how to process and sort occurrences of certain vocabulary, which appears extremely frequently in one text or another? The question becomes even more critical when dealing with some of the most frequently used, meaningful and complex words. Therefore, it is increasingly important to embrace the elaboration of key software for the analysis of digitalised Medieval Latin texts, in a lexicographical and historical semantic perspective.

In this group, existing projects on specialised tools for production, electronic publishing and reading of digital documents on the web, developed by some participating entities, will form the basis of research. The research tasks that will be undertaken by participants, and coordinated within the COST Action include:

- Analysis of existing on-line medieval dictionaries that could be of use (such as the TLIO, AND, DEAF, DMF, DERom, the electronic edition of the Du Cange, NGML etc.), and their various characteristics (content, classification, uses, time frame, accessibility, search functions, mediadata and standards)

  - Analysis of existing relationships between corpora and on-line dictionaries.

  - Analysis of possibilities for interaction among parallel linguistic traditions (Arabic/Latin; Greek/Latin: Romance/Latin; Germanic/Latin; Celtic/Latin; Celtic/Germanic; Slavonic/Greek)

  - Verification of feasibility of linguistic analysis including variants, including electronic texts;

  - Development of common standards to conceive and interrogate groups of corpora, in particular relations with lexical tools;

  - Development and adaptation of some semantic data methods to the analysis of corpora.

Human resources included in this WG include: expert and early-stage researchers in medieval studies, and other disciplines where relevant; technological experts, with capacities in on-line systems, databases, programming languages.

Area 4 – VCMS Design

The aim of Medioevo Europeo is to promote collaboration between databases, including European and international libraries containing an immense quantity of medieval manuscripts, and between researchers.

Software experts participating in all WGs in order to gather understanding on the other scientific areas, are responsible for grouping the information, standards and content made available into the VCMS. They will design and develop the VCMS on this base.

The VCMS will be an on-line collaborator tool permitting an international team of researchers to dialogue, to unload and integrate information and to create on-line critical editions and work on transcriptions in an on-line environment.

Research tasks in this area will include:

- Integration of the findings and standards defined in other WGs;

- Graphical and structural design on the basic VCMS system;

- Elaboration of search engines capable of harvesting different databases;

- Testing of VCMS on researchers and other interested entities.

Human resources included in this WG include: technological experts, with capacities in on-line systems, databases, programming languages.

D.2 Scientific work plan methods and means

The Scientific Programme includes joint activities with all Action members and 4 scientific Working Groups (WG1: Authors and texts: repertoires, authority lists, bibliographies; WG2: Manuscripts and textual tradition; WG3: Textual corpora and reading tools; WG4: VCMS design). The work plan is flexible enough to permit the inclusion of disciplinary perspectives and activities not foreseen during proposal preparation.

Joint Medioevo Europeo activities include: yearly research conferences, seminars workshops, publications and dissemination and overall discussions on content, form and utilisation of the Virtual VCMS, development of an Action Plan for continued research and pilot projects in this field.

Each of the 4 WGs take charge of one of the above described research areas. The research programmes will be completed within 4 years. In between events, WGs will work remotely, via the Website and other communication tools.

Each WG will involve technological and academic experts and have the overall objective of:

- Leading programmes and projects so that concrete outcomes can be discussed at the WG meetings and formally presented during joint Conferences and Seminars;
- Ensuring that new researchers and/or countries can join activities. This is made possible by contacts made prior to the project and by the continuous outreach activities carried out during the Action;
- Encouraging the active participation of early-stage researchers and of international experts;
- Facilitating the mobility of researchers;

- Disseminating research findings both within the Action and at the very highest scientific level;
- Drafting recommendations based on the findings.

E. ORGANISATION

E.1 Coordination and organisation

The Action is organised in order to gain the widest possible benefits from the COST cooperation and networking opportunities.

The Management Committee and its Chair will be in charge of the overall management. The Action management will be supported by a Steering Group to optimise follow-up and coordination. The **Management Committee (MC)** will coordinate the Action in accordance with COST Guidelines (doc. 4159/10). In addition to normal prerogatives, it will produce a roadmap defining Steering Group role and mission.

The **Steering Group (SG)** will comprise the Management Committee Chair and Vice-Chair, together with Working Group (WG) Leaders and Deputies as well as managers responsible for Short-Term Scientific Missions (STSMs) and Communication. They will regularly submit activity reports to the MC.

The SG's missions will include: implementing MC's policy decisions; organising and coordinating Action events (STSMs, meetings, workshops, conferences) on behalf of the MC; disseminating research findings and managing the Website. The SG members will regularly liaise with the MC and the WGs.

WGs will oversee activities in the 4 scientific areas. WG Leaders and Deputies will be nominated at the first meeting of the COST Action. They will organise scientific WG meetings, moderate and animate the WG, document activities and ensure that deliverables are produced / milestones reached.

Research coordination will be guaranteed as follows:

- **Working Groups**: WGs will allow for planning and discussion of research. Researchers from different countries will derive practical benefits from sharing experimental results and data, such as the identification of new research topics and the launching of inter-country partnerships.

- **Yearly events** (Workshops and Training Schools): Work produced by WGs will be used in Workshops. WG researchers will support Training Schools, passing on specialist knowledge and techniques to junior colleagues. Ongoing seminars and meetings will be held and international experts will be invited to participate as chairpersons, speakers and reviewers, to assess the standard of the Action's work and anchor it in the scientific community. Events will be staged in different countries.

- **STSMs:** STSMs will enable researchers (especially early-stage) to undertake advanced training and exchange and strengthen partnerships. STSMs' scientific resources will be pooled during regular meetings.

- **Communication tools**: the Website will be the main communication tool. It will hold project publications and findings. Password protection, server-side data validation, and cross-platform compatible encrypted connections will allow Action members to share confidential data, while there will be public access to more general information.

In the protected section, there will be a collaboration platform (mailing network, chat rooms and blogs), giving WG members an interactive space to: create an on-line multilingual database; keep track of Action's progress; publish information, reports, minutes guidelines, proceedings, etc. The Communication Manager will update the Website and coordinate content, with input from WGs.

The main milestones are the following:

- Milestone 1 – founding research conference, including set up of WGs, MC and SG
- Milestone 2 – holding of 2 Seminars on specific themes: authority lists of medieval authors and identifying problems presented by language barriers / elaboration of standards capable of operating integrated Virtual portal
- Milestone 3 – holding of 1 Seminar on specific themes relating to development of electronic tools.
- Milestone 4 –1st European Summer School (training young researchers in traditions of authors, medieval texts, incunables and lexis).
- Milestone 5 – elaboration of standards capable of operating integrated search through manuscripts.
- Milestone 6 – holding of 1 Workshop presenting results of year 2.
- Milestone 7 – holding of 1 Seminar verifying development of the Virtual Centre for Medieval Studies.
- Milestone 8 – 2nd European Summer School (training young researchers in the use of new technologies in medieval studies).
- Milestone 9 – holding of 1 Workshop presenting results of year 3.
- Milestone 10 – Final Research Conference and definition of future activities.

STSMs will be organised throughout the duration of the Action.

E.2 Working Groups

The Action's scientific work will be organised into 4 Working Groups (WGs), each focusing on one key area of Medieval research.

- WG1: Authors and texts: repertoires, authority lists, bibliographies;

- WG2: Manuscripts and textual tradition

- WG3: Textual corpora and reading tools

- WG4: VCMS design

Each WG will be managed by a Leader and Deputy Leader (both SG members). They will include medieval experts and experts in ICT.

The WGs will be launched during the Research Conference in Year 1, where they will define organisational structures and plans of action. They will work together remotely throughout the year (Website / other communication tools). They will hold WG meetings to discuss research findings and plans for the future.

They will present their work outside of the group both on the website and at yearly Workshops. Their scientific advances will be utilised by the 2 Summer Schools and the STSMs. After each event, the Website's open-access section will be updated, publishing the WGs' scientific findings and practical recommendations.

The structures of the WG will be fully flexible, in order to enable other entities to join the Action. Entities need only make a request, detailing their experience, which will be approved by the SG.

E.3 Liaison and interaction with other research programmes

Contact will be made with the *European Digital Library* (Europeana) and with the Coordinator of the *Living web archives project* (FP7), in order to evaluate possible coordination and integration of activities.

Representatives of both initiatives will be invited to the initial research conference, where time will be dedicated to discussions on possible collaboration and a draft plan of activities, including:

- Participation in specific Working Group activities and Medioevo Europeo events;

- Exchange of information on activities (through forum, document exchange and specific meetings);

- Inclusion in testing phase of the VCMS, to gain feedback on potential application in other fields.

In order to limit travel, attempts will be made to integrate interactions within existing Medioevo Europeo events or events organised by Europeana and Living web archives.

E.4 Gender balance and involvement of early-stage researchers

This COST Action will respect an appropriate gender balance in all its activities and the Management Committee will place this as a standard item on all its MC agendas. The Action will also be committed to considerably involve early-stage researchers. This item will also be placed as a standard item on all MC agendas.

At the highest level of Medieval Studies, as in so many other academic disciplines, gender distribution is far from equal. Among the organisations involved in the Action during proposal stage, only 11 official representatives are women. This Action will take steps towards changing this. Gender balance in early-stage (undergraduate/graduate) researchers does lean towards higher female participation. The Action hopes to build on this potential.

The link between gender balance and inclusion of early-stage researchers is fundamental. Through focus on involvement of young scientists (undergraduates, PhD and postdoctoral students), this project lays the foundations for a new generation of expert female academics.

Places for early-stage researchers will be reserved in workshops and in conferences. 2 summer schools will actively focus on enhancing training among early-stage researchers. Their presence will be ensured during STSMs, actively involving them in organisation and decision processes. These researchers will be given multi-dimensional trainings, ranging from intellectual content of humanities to advanced information technology, shaping a polyhedral figure able to easily adapt to ever changing labour market needs.

The Action will ensure that in all these cases at least 50% of the early-stage researchers are women. This will be monitored throughout the project.

F. TIMETABLE

The Action will last for 4 years. Activities are regular and well distributed, in order to ensure better management of the overall Action and to avoid either overloads or dead time periods.
The founding and closing conference will respectively open and close the project. At the beginning of each Year MC, SG and WG meetings will be held. The latter are held twice per year, thus ensuring constant monitoring of activities.

Annual Monitoring Progress Reports and 1 Final Report will be issued, in line with the guidelines of the MC and as detailed in document COST 4159/10, thus providing appraisal of activities performed in the prior quarters.

Four Scientific Seminars will be organised: 1 at the beginning, in parallel with MC, SG and WG meetings, in order to raise awareness and knowledge among the scientific community and promote active involvement throughout later events. A further 3 seminars will follow every third quarter of Year 1, 2 and 3.

STSMs and the Summer Schools share a training dimension. The Training Schools will take place over a two-year cycle (Years 2 and 3) in order to ensure, on the one hand, time to plan them carefully and to follow up, and on the other, a continuity of activities.

Activities and results will be disseminated on a continuous basis. The Website will be launched at the outset of the Action and will be regularly updated.

Activities will be evaluated and improved through continuous monitoring and evaluation activities, from month 4 until the end of the project.

G. ECONOMIC DIMENSION

The following COST countries have actively participated in the preparation of the Action or otherwise indicated their interest: AT, BG, CH, DE, DK, ES, FR, IL, IT, NL, PL, PT, UK. On the basis of national estimates, the economic dimension of the activities to be carried out under the Action has been estimated at 52 Million €for the total duration of the Action. This estimate is valid under the assumption that all the countries mentioned above but no other countries will participate in the Action. Any departure from this will change the total cost accordingly.

H. DISSEMINATION PLAN
H.1 Who?

Four major target audiences will be kept informed of the Action's progress:
1) *Scientific communities – Universities and Research Entities:*
This group includes entities (socio-economic and humanities researchers) working on Medieval Research or from other scientific disciplines.

Other non-university research centres of interest, ranging from Medieval Studies to Socio-economic and humanities research in general include physical Institutions.

2) *Schools*:

Each COST Action participant will involve teachers and students from secondary schools (where the schools' curricula includes studies of direct relevance to themes addressed), who can utilise the VCMS. These include secondary school teachers, History Teachers' associations and Partner Teacher Associations. They will be involved in the later phases to test the utility of the VCMS.

3) *Institutions and Society*:

Each participant will make contact with policy and decision makers at regional and national level (Ministries of Education, of cultural heritage etc.) to ensure that the methodology and tools can be used widely and provide input to policy decisions. European policy makers and institutions responsible for education and training will be involved in events and provided with material.

4) *European citizens:*

Through contact with organisations representing and involving European citizens, a wide range of people will have the possibility to make use of the VCMS and to implement similar initiatives on this basis, e.g: libraries; history museums; archives; Religious representations; Journalists and Media.

H.2 What?

Dissemination of information, findings and recommendations will be tailored to each of the above mentioned audience categories.
For scientific communities, communication will be ensured by:

- Periodic information bulletins and detailed newsletters sent to mailing list;
- Password-protected section of website (reports, case studies, proceedings, guidelines and technical information) and access to VCMS;

- Action workshops, seminars and conferences and participation in other national and international events;
- Publication of scientific works summarising Action's findings.

For schools and institutions communication will be ensured by:

- Flyers and brochures explaining the Action, its potential applications and the results;
- Distribution of documents and other resources (videos, texts, demo versions of VCMS);
- Invitations to summer schools, workshops and conferences;
- Access on Website to non-technical publications and recommendations;
- Circulation of targeted User Kits and Guidelines that explain practical uses of virtual database tools.

For European citizens communication will be ensured by:

- Posters in public places (e.g. universities, town halls, libraries, museums, cultural centres and offices);
- Press releases and news items on popular Websites, and use of on-line communication technology such as social networking;
- Articles in European publications and other media, such as CORDIS Wire, AthenaWeb and Research TV;
- Discussion forums and FAQs in the public-access section of the Action's Website;
- Locally organised and web-based consultancy and training.

A specific Medioevo Europeo web page will be created. The domain
http://www.medioevoeuropeo.eu/ has already been purchased and the Action website will be hosted
on this site. This will provide up to date information on events and initiatives. Participants will
provide links on their web pages. When the VCMS is running, it will be integrated into this website.
The popularity of the web page with researchers and general public will be measured in terms of hit
rates for each page and of feedback through the forum. If necessary, the website's structure will be
modified to enhance usability.

The Website will be structured in the following manner:

- Home page: description of the Action; latest news and opportunities. Updated every 2
  months or when necessary;

- Interactive components, such as discussion forums, blogs and an "Ask-A-Medievalist
  section" for questions from the public;

- Partner section: contact information, description and news on Action participants and
  affiliates and links to relevant portals;

- Document Section: reports, minutes, guidelines, proceedings, manuals, etc.;

- Events section: information on Action events, with all necessary material.

The final conference will provide an opportunity to communicate research findings to the scientific community and to professionals and citizens. The attendance of at least 200 participants is foreseen, with speeches and contributions from 20/30 speakers and moderators from the international scientific community. They will be chosen in relation to contacts and networks established during the 4 years, ensuring continuity to overall Action activities.

The participation of representatives of Medioevo Europeo will be guaranteed at a number of key international conferences such as, the International Medieval Congress (IMC).

H.3 How?

A specific Medioevo Europeo Dissemination Plan will be defined at Action outset. This will involve detailed descriptions of the activities foreseen. It will be revised on an annual basis and specifically in the penultimate Action year (as stated in doc. 4159/10).

The Plan will be in line with the two axes of the Action's research structure: the wealth of cultural knowledge provided by medieval studies, and the fast and efficient means of communication provided by new technology. To this end, new communication technology will be used throughout the project to distribute high quality, captivating information on the Action and related themes. The nature of this information will change as the research projects near completion and will keep up with the calendar of events. Reports on different activities will be systematically posted on the Medioevo Europeo website, linked to other participants' websites, thereby ensuring a high level of visibility.

The advances reported at the scientific meetings, conferences and summer schools will give rise to joint publications. The dissemination activity entails distribution of project material during the meetings, and also promotion through websites and local press.
Workshop results will primarily give rise to articles in peer-reviewed journals. However, information will be provided regularly to the general public, thereby helping to raise awareness of the importance of medieval studies and the research currently being undertaken in this field.

_____