Curriculum Vitae

Martin U. Doerr

I General Information

I.1 Affiliation:

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I.3 Citizenship:

German

I.4 Languages:

German (mother language), English, Greek, French, Latin. Initial knowledge in Spanish and Japanese.

I.5 Memberships:

He is member of the editorial team of the Journal for Applied Ontology, founded **2005**.

He is member of the editorial board of the ACM Journal for Computing and Cultural Heritage, founded in **2007**.

He is a Voting Member of the International Council of Museums.

II Education

June 1970 he graduated at the classical high school in Heilbronn/N, Germany, and obtained the "Robert Mayer Preis" award of the city of Heilbronn for best performance in science at all high schools of the city in this year.

1.7.70-30.6.72 Military service.

1.10.72-30.10.77 Basic studies in Mathematics and Physics at the "Fridericiana", Technical University of Karlsruhe. In his optional courses, he put a focus on computer supported problem solving in science, by concentrating on Analysis, Functional Analysis, approximation methods and Numerical Mathematics, together with a broad education in Experimental Physics, accompanied by computer courses.

1977 Diploma ("Wissenschaftliche Pruefung") in Mathematics and Physics, University of Karlsruhe, Germany. Diploma thesis (in Mathematics): "Theoretical and Numerical Treatment of Certain Singular Integral Equations from the Theory of Airfoils."

1.12.77-1982 postgraduate studies in Nuclear Physics, University of Karlsruhe,
1982 Doctoral Dissertation: "Pion Absorption on ^{6}Li", Institute of Experimental Physics, University of Karlsruhe.

III Employment History and Experience

1.1.1978 – 31.3.81

Research Assistant at the Institute of Experimental Physics of the Center for Nuclear Research Karlsruhe (KfK), and the University of Karlsruhe in the framework of his postgraduate studies.

He participated in an international nuclear experiment, a cooperation of the KfK, University of Karlsruhe and University of Basel, which was carried out at the Swiss Institute for Nuclear Research (SIN), one of the three meson production facilities in the world. The extensive numerical evaluations took place at the Computer Center (HDI) of the KfK. His practical work comprised experiment setup, construction and maintenance of multi-wire ionization chambers (a kind of complex particle detectors), interfaces to the data acquisition computer of type PDP 11, development of evaluation software on IBM mainframes and data evaluation.

1.4.1981 – 31.8.1984

In the course of the final data evaluation for his PhD thesis, he changed to the mathematical support group at the Computer Center (HDI) of the Center for Nuclear Research (KfK), Karlsruhe, Germany.

His work comprised the development of mathematical software in cooperation with physicists and chemists. Major developments were:

- A system to calculate electrical fields in cavities with complex geometry by the use of boundary-adapted coordinates. The data entry of the geometry was achieved by interactive graphics.

- Solution of a partial differential equation for a diffusion problem by calculating the eigenfunction series which was hard for conventional numerical discretization methods.
- A performance-optimized package for precision-controlled Interval Arithmetic on IBM mainframe in assembly code.

Besides that, he dealt with vector (parallel) processor programming and parallel processing algorithms and with mathematical software repositories.

1.9.1984 – 30.3.1990

For industrial experience, he changed to Bruker, Analytische Messtechnik GmbH, Karlsruhe, world market leader in high resolution nuclear magnetic resonance equipment (NMR).

He worked on system software for the acquisition and evaluation computers of NMR spectrometers and tomographs and became leader of the operating systems group. In particular, he designed and implemented a dedicated multiprocessor operating system derived from UNIX for Bruker's new Aspect X32 computer series. It is characterized by local peripheral services, remote system calls and optimization for high data exchange rates using shared memories on special dual-ported RAMs. He was responsible for design and implementation and took also part in hardware design decisions of Bruker's Aspect X32 computer series. He further designed and implemented a windows-based graphical display package for the on-line presentation of measured spectra and evaluation results on these machines.

At this time, comparable products did not exist on the market. The work on the Aspect X32 system software was funded partially by the German Ministry for Research and Technology (BMFT) and resulted in a successful market product, that outperformed market competitors. Publications are not available due to confidentiality reasons.

1.4.1990 - present

Since 1990 he is with the Institute of Computer Science, Foundation of Research and Technology - Hellas. He has engaged in two complementary lines of activities, one relates to research in the area of formal ontologies and knowledge representation and the other to leading the development of related advanced information systems.

In the line of system development, he puts a focus on real applicability and industrial quality. He follows thereby the recent requirements on research organisations to bring their developments closer to industry, to engage in know-how transfer, and to raise funding more and more from private sources. For this purpose, he has made numerous presentations at large international industry, SMEs, and end-user organizations and has been invited several times for consulting. He engages in publicly funded projects with the strategy

1. to build up direct cooperation with industry and end-user organizations;
2. to develop base technology for knowledge management;
3. to develop customizable platforms for applied information systems;
4. to develop new methods and know-how in information integration and ontology engineering, with a focus on the memory institutions sector.

He maintains tight contacts with users and engages in cooperation with, in particular from the memory institutions sector, undertakes careful analysis of their requirements and directs the implementation of respective features.

This effort has resulted in a series of unique information systems of industrial quality, which are either marketed through cooperation with industry, or customized to the needs of specific

end-users, in the case of applications of theoretical interest. The advanced design and high flexibility of these systems allowed the group to engage in a series of important international projects, multi-partner co-operations as well as direct orders from end-users. Finally it is a continuous source of challenges for research, and a series of masters and doctoral thesis have emerged from it.

He advanced to the position of a Principle Researcher in **2000**.

Since **2004** he is leading the Centre for Cultural Informatics, an activity of the Information Systems Lab. His long-standing interdisciplinary work and collaboration with the International Council of Museums on modelling cultural-historical information for the purpose of schema integration across institutions has resulted in a respective ISO Standard, ISO21127:**2006**.

IV Leadership Activities

IV.1 The CIDOC CRM ontology

In **1994**, the view-neutral form, genericity and extensibility of the CLIO model he previously has developed for the museum Benaki, Athens, found the interest of the Documentation Standards Group (CIDOC) of the International Council of Museums (ICOM). In the sequence, this group followed his invitation to a workshop on object-oriented methodology for cultural contents in Heraklion 1996. The group decided there to abandon its efforts on a Relational schema as CIDOC standard and to employ a formal object-oriented semantic model to develop a domain ontology similar to the CLIO model. The data model he has convinced CIDOC to use, a subset of the knowledge representation language TELOS, turned out to be nearly identical and compatible with the later developed RDF Schema promoted by the W3C Consortium.

Since **1996** he guides the development of an "object-oriented CIDOC Conceptual Reference Model" (CRM) from the side of KR techniques and as ontology engineering expert, building on principles of the CLIO model. Since then, he has organized over 40 working group sessions, workshops and tutorials in Greece, Europe, USA, Canada, Australia, New Zealand, Taiwan and Japan on this topic.

In **1998** CIDOC decided to submit the CRM to ISO, and in August **2000** he has been nominated by CIDOC to lead the CIDOC CRM Special Interest Group to foster a broad consensus of the community, to produce *community drafts* for ISO and to act as community expert for the ISO working group ISO/TC46/SC4/WG9 in the standardization work on the CIDOC CRM. Due to the quality and completeness of these *community drafts,* the ISO working group has restricted its activities to editorial comments. From **2000** to **2003**, he has leaded the European Project CHIOS, providing a significant further development of the CRM in size, scope, scientific rigour and comprehensible description.

The CRM was accepted by ISO as international standard ISO21127:2006 in September **2006,** based on the community draft version 3.4.9 from 2003. In the meanwhile, the emerging standard is already frequently used, for the design of museum information systems but particularly for large-scale information integration projects in the US (at RLG), in Europe (Project IMMAS, SCULPTEUR, at English Heritage, the Norwegian Museum Project and others), in National Digital Library projects in Japan and Taiwan. Some of his publications about the CRM and the Definition of the CRM have been published as book in Japanese translation. Further, the CRM has been translated to French, Japanese, German, Greek and Russian. In May 2008, the CIDOC CRM Special Interest Group finalized the *community draft* of the CIODOC CRM version 4.2.5, to be submitted as proposal for amendment to ISO21127.

His strategy is to systematically extend the scope of this model by collaboration with key-stakeholders of other communities with an interested in global information integration. Since 2003, he is leading a joined interdisciplinary working group of the International Council of Museums (ICOM) and the International federation of Library Associations (IFLA) to integrate the most advanced formulation of library conceptualization (FRBR – "Functional Requirements for Bibliographic Records) into ISO 21127. A final model, "FRBRoo", and report has been approved spring **2009** by IFLA as official IFLA documents. It is the first model combining museum and library conceptualization officially being accepted by both communities, and the first document commonly approved by IFLA and ICOM. It opens up an immense potential to create effective integrated systems. Both models, the CRM and FRBRoo, enjoy rapid take up in R&D projects and research.

Further, collaboration with the Text Encoding Initiative, the archival community and e-Science communities are under negotiation.

IV.2 Center for Cultural Informatics

His initiatives in systematically collaborating with stakeholders and users in the memory institutions sector – museums, archives and libraries – and his contributions to a series of national and international projects on cultural information systems substantially contributed to build up a unique applied know-how in the Information Systems Laboratory, which leaded to the formation of the Center for Cultural Informatics in 1996 as activity of the Lab, the first unit of such kind in Greece.

The center is formed by a dynamic group of engineers, currently including two archaeologists. He has been leading the majority of the projects of the Center and most of the international contacts.

Since **2004**, he is leading the Center. It pursues a comprehensive, cross-disciplinary approach to supporting the entire life-cycle of cultural information and documentation procedures for the benefit of the preservation, study and promotion of cultural heritage. It provides a special focus to the relevant activities of ISL and the context for standing co-operations with cultural institutions and scientists from the humanities that range from pure research to real application development. Its activities bring together skills in knowledge representation, ontology engineering, knowledge organisation systems, database technology and Web technology with expertise in archaeology, museum documentation and management, sites and monuments management, art conservation, archives and libraries, thesaurus and dictionary management and other cultural disciplines.

The strategy he pursues with the Center is to acquire deep applied know-how of the particular practices of information management and reasoning forms in the sector in order to recognize and understand particular pure and applied research challenges, which may lead to novel methods of integrated information management in the sector and beyond.

Its activities can be divided into three directions:

1. Targeted research with a focus on the formal understanding of information structure and scientific discourse in humanities, machine supported communication and semantic interoperability.
2. Community building for the promotion of standards, complementary skills and know how for supporting the creation, processing, integration and projection of cultural information to the benefit of the quality, accessibility and exploitation of cultural contents.
3. Targeted development of advanced information systems that provide a scientific challenge or a proof of concept in real life.

Recent results comprise

- The use of generic, Native XML based technology for customizable, “light-weighted” collection management systems;
- The deployment of highly effective, homogeneous documentation formats in national and international projects on cultural information management, in a sector so far characterized by an immense variety of idiosyncratic formats.
- Methodology of ontology based schema integration. Applications in other sectors, such as life-science could be demonstrated.
- Pure research on *co-reference management*, a promising new generic form of connecting distributed knowledge.
- The *first international collaboration* on data standards between libraries and museums.

V Research

V.1 Research Interests:

- Ontology Engineering, Conceptual Modelling,
- Information Integration and Knowledge Representation
- Knowledge Organization Systems
- Information Systems Engineering.

V.2 Research and Development Activities:

V.2.1 The Software Information Base

From **1990** to **1994** he is Technical Manager of the development of the "Software Information Base (SIB)" in the framework of the European ITHACA project. The SIB was the key component of an integrated software production environment, which was designed to provide the semantic integration of requirement capturing, design and implementation tools for software reuse. In response to the complex data representation needs of this project, i.e. the support of multiple methodologies, programming languages and tools, he designs and leads the development of an object-oriented semantic network database, later called "Semantic Index System (SIS)".

It was based on the data model of the KR language TELOS, developed from scratch by applying unconventional implementation techniques. For the conceptual analysis of the SIB he adopted the novel approach of directly correlating implementation data from static analysis of object-oriented code with faceted functional classification and incorporated thesauri. This lead to a considerable reduction of the maintenance effort, better information access and increased consistency and precision with respect to competitive systems. Other unrivalled features were: The SIB was successfully tested with static analysis data from more than two million lines of object- oriented code. The use of suitable metamodels allowed to deal with static analysis data from any procedural or o-o programming language, actually tested for CooL, COBOL, C++.

The excellent performance of this system had several results:

During the project, the group experienced a continuous increase of its development budget wrt to other partners. In **1992**, the SIB was successfully presented to the management of Siemens-Nixdorf independent from the ITHACA project. It was accepted in **1994** by Siemens-Nixdorf against an in-house competitive system and another research system (from the REBOOT project) and it was offered by them as market product. After a successful presentation to managers of Bull, France, Olivetti, Italy and Sietec, Berlin it became in **1995** background of the Phase I project ASSET as part of a European distributed software production environment.

V.2.2 The Semantic Index System

He has made the SIS an independent product of ICS-FORTH from **1992** on. Its functionality has been enhanced through a series of projects, which used the SIS as background, into a full-fledged structured knowledge base management system. The configurable and self-adaptiv user-interface proved to be particularly useful for rapid application development and successfully enabled the creation of more than a dozen research prototype applications in-house, at the GMD, Germany, and at universities in the UK.

Following the market needs, it has been ported to platform independent code and a client-server architecture was implemented until **1997**. Thereby it can be maintained on the major platforms of the market, SUNOS, IBM AIX, HP-UX, Windows 95/NT with minimal overhead. More than 25 evaluation and commercial licenses have been granted so far internationally. The system represents a strategic base technology of the group for past and future projects and is also subject of cooperation with two groups within FORTH. He is continuously engaged in the supervision of the maintenance of this system and of all related contacts with collaborating teams and clients. In **2008**, the system is still competitive, offering functionality comparable to the most recent RDF triple store systems and as ontology development tool.

The applications of rich structured knowledge representation in contrast to rule-based systems on large bodies of data gave raise to interesting theoretic questions. He has dealt in this context with theory of knowledge representation structures and application of conceptual modelling.

V.2.2.1 Semantic information systems

From **1992 on** he designed the functionality and schema of the "**CLIO**" cultural information system, and lead the adaptation of the SIS to these requirements in the framework of the project MUSIC. This application demonstrated the wide applicability of the SIS system. **CLIO** is a unique tool to describe historical and scientific knowledge about museum artefacts, which allows creating dynamic views from any relevant aspect. In order to cater for the high variety of structure of cultural knowledge, the user can extend the schema under the discipline of a metaschema. This unusual feature is successful in practice and solves the typical disorientation problem of large semantic networks. Museum curators are able after a simple training to customize consistently the schema for numerous special cases. **CLIO** found international attention at the Documentation Standards Group (CIDOC) of the International Council of Museums (ICOM) in 1994, which gave rise to a long-term, on-going collaboration between ICS-FORTH and CIDOC.

In **1995** he designed a multimedia repository, the "Asset Handling Facility" **AHF**, for tourism multimedia titles in the framework of the HYPERTOUR project. This unique information system connects in a semantic network the procedural aspects of multimedia asset handling, the provenance and maintenance of primary material, the derived electronic assets and their use in actual products, and the subjects illustrated by them. The subjects are organized by a light-weighted model of service providers and attractions, combined with thesauri on subjects of the domain. By virtue of this organisation, primary and secondary material can be retrieved by any relevant aspect. The complex problem to keep tens of thousands of information assets from a large number of providers up-to-date can efficiently be solved.

In **1996-1999** he took part in the development of the indexing system for the historical archives of the City of Heraklion, Crete, in the framework of the EPET II project ARCHON. It is based on the classification of events in individual documents by a faceted scheme and use of a structured thesaurus.

Since **2000**, he is responsible for the implementation of a novel integrated documentation system for the Germanische Nationalmuseum Nuremberg, based on heterogeneous XML documents. It is one of the largest museums in Germany and a scholarly research center, and the application poses a complex, enterprise-internal information integration problem. The Project became part of a bilateral framework agreement for long-term cooperation between the two organisations, in order to proceed with the implementation of an overall solution for the administrational, scholarly and scientific documentation at the Museum and interdisciplinary collaboration on research issues of cultural informatics. In this framework, integrated software comprising collection management, scientific documentation of museum

objects and image management were developed and deployed at the museum until 2008. The collaboration is continuing.

Further, he was leading the development of an electronic learning system for art conservators in the framework of the IST project CRISATEL, implementing a novel approach to the formal integration of categorical and factual knowledge for effective navigation in a large subject space.

Besides that, he was leading a series of implementations of customized museum information systems in the framework of the Greek Operational Programme "Information Society" from **2004** to **2007**, and continues to lead FORTH's contributions to Greek national information integration projects.

V.2.3 Thesaurus Management Systems

Based on his experience from classification methods in the SIB, and after a successful presentation of the CLIO system in New York **1995**, he led the development of a proof-of-concept prototype for a new vocabulary management system for the Getty Information Institute (former AHIP) in Los Angeles. This system demonstrated the capability of the SIS to manage effectively amounts of hundreds of thousands of terminological records in various schemata. With the AQUARELLE project as test bed, he developed this prototype into a competitive thesaurus management system for multilingual thesauri, the "SIS-TMS". Its novel features is a partitioning and versioning mechanism, which allows for consistent cooperative development by semi-autonomous groups and integration of distributed "terminology servers" into heterogeneous information environments. It is on product level since summer **1998**, and has been installed at several sites in Greece and other European countries.

He has achieved to attract industrial partners in France and Greece for marketing the SIS-TMS. He has initiated and participated in the Term-IT project in the Language Engineering Sector of TELEMATICS, which aims at combining language engineering and human processes for the more efficient production of terminological resources in the cultural domain. The system is continuously upgraded to follow client needs.

He recently exploits the technical know-how in an industrial collaboration for a system to support the process of generating large dictionaries, regarding ergonomics, workflow and semantic consistency.

His interest in thesauri is complementary to his work on ontologies with respect to the general problem of information integration in heterogeneous distributed environments. He does research and publishes on questions of knowledge representation, ontology development, multilingual and networked Knowledge Organisation Systems, and effective information access.

V.2.4 Research in Ontology Engineering

In contrast to former attempts, the CRM is a core ontology for the semantic integration of heterogeneous data structures, rather than a format prescription or a terminology. He has invested considerable efforts in the research and definition of the ontological constructs that can be identified as the common abstractions behind a large set of different data structures in the most relevant applications of the domain, and in the consensus building on those. In contrast to many ontologies currently produced and proclaimed, it is strictly based on empirical evidence from relevant data structures and formats. Christopher Welty writes in his editorial to AI Magazine, Vol. 24(3): "Doerr and his colleagues have come across some of the most interesting and challenging ontology problems I have ever seen...".

It is commonly accepted, that the employment of formal ontologies and the respective enabling technology for their use in information systems is currently the only way to reach

the precision of human-mediated knowledge. It is equally widely assumed, that ontologies are highly application and domain specific, and necessarily huge, so that a *generalization* from an information technology point of view is *not possible*. He has good indications that this is not true in that absolute form. It appears that a rigorous definition and restriction of the *intended functionality* of an ontology and an extensive empirical base are the enabling factors of such a generalization.

With the CRM he was able to show that a highly heterogeneous domain, such as museum documentation, can be integrated by a carefully crafted, stable and extraordinarily small ontology, virtually without loss of meaning. He also demonstrated that it could be reapplied to completely different domains with minor extensions (e.g. medical patient records, clinical observation and microbiological observations, processes in biodiversity studies). There are good indications that the determinants of such a core ontology are the kind of discourse, which appears generically across domains, and generic functions, i.e., integration of factual knowledge about the past, rather than any domain-specific concepts (see also "foundational ontologies", Nicola Guarino et.al.). Furthermore he maintains that a core set of relationships is more relevant to knowledge integration than the mapping of detailed terminology, an observation recently shared by Amit Sheth et.al. This opens a way to highly effective and yet economical methods of information integration.

His strategy is to systematically extend the scope of this model by collaboration with key-stakeholders of other communities with an interested in global information integration. Recently, he has been leading coherent extensions of this "global" ontology to the *libraries sector, performing arts, digital provenance, authenticity* and *digital rights management* in collaboration with IFLA and the European FP6 Project CASPAR.

This research is on one side based on empirical evidence and on the other on theoretical work, and he intends to address it in four directions:

- Argumentation, scientific discourse and information structures
- Methodology of ontology engineering
- Schema mapping and data transformation technology
- Proof-of-concept applications

V.3 Participation in major R&D Projects:

From 1990 to 2009 he is scientific responsible for projects with a total budget for FORTH of over 5 million Euros/ECU.

V.3.1 Project Leadership:

He was leader of the following projects:

DMS-OMS, industrial, (**2000-2008**), implementation of collection management software for the Germanisches Nationalmuseum, Nuremberg, Germany.
FORTH's budget: **230.500** Euros

SIS-TMS, various industrial projects, (**2000-2005**), customized terminology management systems for clients in Greece and Germany. FORTH's budget: **87.220** Euros

CHIOS, European Project, IST-2000-29216 (**2001-2003),** a Thematic Network**,** aimed at supporting the standardization process of the CIDOC CRM.
Total Budget 200.000, FORTH's budget: **87.223** Euros

Patakis Dictionary System, industrial, (**2005-2007**) Implementation of a management system for dictionary edition coordinating a hundred experts.
FORTH's budget: **94.962** Euros

IMKE, Greek industrial, Greek Operational Progamme "Information Society" (**2005-2006**), collection management system for Museum of Cretan Ethnology Foundation, Greece.
FORTH's budget: **99.365** Euros

Vikelaia Library, Greek industrial, Greek Operational Progamme "Information Society" (**2005-2007**), archival collection system Vikelaia Library of Heraklion, Greece.
FORTH's budget: **98.175** Euros

Anna-Komnini, Greek industrial, Greek Operational Progamme "Information Society" (**2006-2007**), Multilingual Web Information system for byzantine monuments, Greece.
FORTH's budget: **75.862** Euros

DIATHESIS, industrial, provision of customized archival collection system for two clients in Greece, (2006-2008) FORTH's budget: 5**3.550** Euros

V.3.2 Local project leadership

He has been FORTH's scientific responsible for the following projects:

The ESPRIT projects **ITHACA, ITHACA II, ITHACA IT**, 1989-1994, were one of the largest CEC funded projects to develop a European object-oriented integrated software production environment (SPE), with more than twenty partners, among them key industries of the field, as Bull and Siemens-Nixdorf. From **1990-1994** he was responsible as Technical Manager for the development of the SIB and participated in the Technical Management Board. FORTH's budget: **2.942.166** ECU

The ESPRIT project "**ASSET - Advance System and Software engineering Enabling Technologies**" was a Phase I project in **1994-1995**, where Bull, Olivetti and Siemens tried to agree on a strategic European distributed SPE platform. He was responsible for FORTH's contribution, the design of distributed SIB services.

The ESPRIT project **HYPERTOUR**, **1995-1997,** aimed at providing a platform to reduce the costs of multimedia title production for the promotion of tourism and local tourism service providers. He was responsible for FORTH's contribution, the development of a multimedia repository for tourism promotion. FORTH's budget: **160.000** ECU

The TELEMATICS Information Engineering project **AQUARELLE**, **1996-1998,** is one of the largest CEC funded projects to provide intellectual access to heterogeneous data sources in the cultural domain. He is member of the PCC and work package leader of FORTH's contribution, the Folder management service and the multilingual terminology service.
FORTH's budget: **383.408,29** ECU

The **"TURKISH ARCHIVE of CHANIA - Classification, documentation and microphotography of Turkish Archive of Chania)"** project (1995-1998) aimed at the implementation and installation of an archiving and cataloguing system for use with the Turkish archive of Chania. FORTH's budget: **33.116** Euros

The European TELEMATICS Language Engineering Phase I Project "**Term-IT: Multilingual Support for Multimedia Services"**, **1998-1999** aimed at assessing the feasibility of a multilingual thesaurus production platform, which combines human cooperative editing processes with language engineering methods. He was responsible for FORTH's contribution and member of the Management Board.
FORTH's budget: **54.575** ECU

CRISTAL, European, No R99/II.2.a.54 (**1999-2000**) Terminology Services for Art Conservation & Restoration FORTH's budget: **20.000** Euros

LIMBER, European, (**2001-2002**), creation of a multilingual terminology service.
FORTH's budget: **19.809** Euros

SCHOLNET, European (**2000-2003),** aimed at enhancing digital libraries with multimedia capability, multilingual search and annotation mechanisms. He was responsible for FORTH's contribution and member of the Management Board.

CRISATEL, European, IST-1999-20163, (**2001-2005),** and aims at improving multispectral image evaluation and exploitation of works of art. He is responsible for FORTH's contribution and member of the Management Board. FORTH's budget: **230.000** Euros

ubi-erat-lupa, European Culture 2000 Project No 2002 - 0462/001-001 CLT-CA22, (**2002-2005**) aimed at integrating the major European resources about Roman inscription. FORTH created an integrated research index for a cluster of highly heterogeneous, semiautonomous databases and dictionaries, based on the CIDOC CRM and RDF technology.
FORTH's budget: **187.500** Euros

Gallery Averof, Greek industrial, Greek Operational Progamme "Information Society" (2005-2006), collection management system for the Gallery Aberof, Metsovo, Greece.
FORTH's budget: **18.000** Euros

Mount Sinai, Greek industrial, Greek Operational Progamme "Information Society" (2005-2006), collection management system for the Mount Sinai monasteries, Greece.
FORTH's budget: **23.800** Euros

Greek National Gallery, Greek industrial, Greek Operational Progamme "Information Society" (2006-2007), collection management system for the National Gallery Athens, Greece. FORTH's budget: **55.555** Euros

Greek Archive of Monuments, Greek industrial, (2008-2011) Digitization of archival material at the Greek Archive of Monuments. FORTH's budget: **368.080** Euros

3D-COFORM – Tools and Expertise for 3D Collection Formation, European ICT-CP, Grant Agreement No 231809 (2008-2012) FORTH's budget: **525.918** Euros

V.3.3 Project contributions

He has been contributing to the following projects:

The EPET II project "**POLEMON - Co-ordinated Informatics Services for the Documentation, Management and Promotion of Cultural Heritage"** aimed at the creation of a distributed heterogeneous database application for the administration of cultural heritage in Greece. He participated as researcher in 4 work packages, primarily in the requirements analysis and design.

The STRIDE-HELLAS project **MUSIC**, **1992-1994**, aimed at the creation of multimedia systems. He had the technical supervision of the CLIO system development.

ARCHON project (**1996-1999**) of the Regional Programs of Crete aimed at the implementation and installation of an administration system for the hand-written archives of the Vikelaia Library of Heraklion, Crete, including massive scanning. He participated as supervising researcher in the requirements analysis and design.

ONTOWEB, European Network, IST-2000-25056, (**2001-2004**) Ontology-based information exchange for knowledge management and electronic commerce.

The Operational Programme Competitiveness "DIAVATIS – Interactive System for Improving the Promotion of Touristic & Historical Aspects" (2003-2005)

DELOS NoE, European FP6 Project (**2004-2007)** "DELOS Network of Excellence on Digital Libraries" aimed at advancing the state-of-the-art of Digital Library technology. He was leader of the Joint Research Activity "Ontology-driven Interoperability", investigating how core ontologies can practically be employed to integrate heterogeneous data in Digital Libraries. It included strategies to harmonize different core ontologies, as demonstrated on the example of CIDOC CRM and FRBR.

Information Society, national, (**2004-2005**) He contributes to the definition of standards for interoperability for the projects of the Greek Operational Progamme "Information Society".

CASPAR European FP6 IST Integrated Project " Cultural, Artistic and Scientific knowledge for Preservation, Access and Retrieval**" (2006-2009).** It aims at providing a comprehensive set of methods and tools for Digital Preservation. He contributes as conceptual modelling expert to a generic metadata model for digital preservation, including treatment of authenticity, digital provenance and digital rights management.

ACGT - Advancing Clinico-Genomic Clinical Trials on Cancer: Open Grid Services for Improving Medical Knowledge Discovery", European FP6 IST Integrated Project " (**2006-2010**). It aims at providing an integrated platform to combine data from clinical trials and genomic tests for research. He contributes to the design of schema mapping tools to the Master ontology and the creation of the Master Ontology to drive the mediator system which is the core element of the project.

KPLab – "Developing Knowledge-Practices Laboratory", European IST Integrated Project (**2006 – 2011**). It aims at providing an integrated platform for collaborative educational work. He contributes as ontology engineering expert to the creation of the KP-Lab system model to drive educational collaborative tools.

V.4 Publications:

V.4.1 Journal articles and book chapters:

D.Gotta, M.Doerr, W.Fetscher, G.Schmidt, H.Ullrich, G.Backenstoss, W.Kowald, I.Schwanner, H.J.Weyer, "Kinematically Complete Measurement of the Absorption of Stopped Pions in 3He", Physics Letters 112B (1982) p129 and SIN Newsletter(1982), Number 14, p46

G.Backenstoss, W.Kowald, I.Schwanner, H.J.Weyer, M.Doerr, D.Gotta, G.Schmidt, L.M.Simons, H.Ullrich, "Measurement of the Total and Partial K-X-ray yields for the pnn- and dn-reaction channels of the Pion- Absorption in 3He", Physics Letters 115B (1982) p445

M.Doerr et al., *Composite Particle Emission Following Pi- Absorption in ^{6}Li*, in : "Coincident Particle Emission from Continuum States in Nuclei", by H.Machner, P.Jahn, World Scientific Publishers Co, Singapore 1984 p555, ISBN9971-966-980-0

M.Doerr, W.Fetscher, D.Gotta, J.Reich, H.Ullrich, G.Backenstoss, W.Kowald, H.J.Weyer, "Composite Particle Emission Following Pi- Absorption in 6Li: Test of Reaction Mechanisms", Nuclear Physics A445 (1985) p557-571

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Doerr M., Hunter J., Lagoze C., "Towards a Core Ontology for Information Integration", *Journal of Digital Information, Vol* 4, No 1 (2003)

The papers:

- M.Doerr, Nicolas Crofts, *Electronic Communication on Diverse Data - The Role of an oo CIDOC Reference Model*, 18th General Conference of the International Council of Museums and CIDOC'98, Melbourne, Oct 1998,
- and Nick Crofts, Martin Doerr, Tony Gill, Stephen Stead Matthew Stiff, *Definition of the CIDOC object-oriented Conceptual Reference Model*, Version 3.4, ISO Working Document ISO/TC46/SC4/WG9/4, November 2002

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Grigoris Antoniou, Martin Doerr, *Challenges and Principles in Teaching Semantic Web Technologies*, 2008, International Journal of Teaching and Case Studies, Vol. 1, No.4, (2008) pp. 275-282

Martin Doerr, Dolores Iorizzo, *The Dream of a Global Knowledge Network – A New Approach,* ACM Journal for Computing and Cultural Heritage, Vol. 1, No. 1, Article 5, Publication date: June 2008

Karl-Heinz Lampe, Klaus Riede, Martin Doerr, *Research between Natural and Cultural History Information: Benefits and IT-Requirements for Transdisciplinarity,* ACM Journal on Computing and Cultural Heritage (JOCCH), Vol. 1, Issue 1, June 2008

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Ch. Bekiari, Martin Doerr "Documentation and Reasoning on Parts and Potential Wholes", Computer Applications in Archaeology, Conference 1999 (CAA '99), Dublin Ireland, 14-18 April 1999

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Martin Doerr, Demetrios Kalomoirakis, "*A Metastructure for Thesauri in Archeology*", Proc. of the CAA 2000 (28th annual conference), Ljubljana, Slovenia, April 18 - 21, 2000

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Martin Doerr, Athina Kritsotaki, *Documenting Events in Metadata*, In Proceedings of the 7th International Symposium on Virtual Reality, Archaeology and Cultural Heritage VAST Cyprus, 30 Oct.- 04 Nov., 2006

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K.Candrinos, J. Immerkaer, Martin Doerr, P. Trahanias, "A Visual Tagging Technique for Annotating Large-Volume Multimedia Databases- A tool for adding semantic value to improve information rating", pp. 125-129, in: Fifth Delos Workshop, Filtering and

Collaborative Filtering, Budapest, 10-12 November 1997, ERCIM-98-W001, ISBN 2-912335-04-3

Martin Doerr, Irini Fundulaki "The Aquarelle Terminology Service", ERCIM News Number 33, April1998, pp. 14-15

Vassilis Christophides, Martin Doerr, Irini Fundulaki "The Aquarelle Folder Server", ERCIM News Number 33, April 1998, p13-14

Martin Doerr, "Multilingual Terminology Management for Distributed Digital Collections", in: ΛΟΓΟΠΛΟΗΓΗΣΗ, Ενημερωτικό Δελτίο Ανθρώπινου Δικτύου Γλωσσικής Τεχνολογίας, ILSP Athens, Vol.4, June 1998

Martin Doerr, "Effective Terminology Support for Distributed Digital Collections", in: SIXTH DELOS WORKSHOP, Preservation of Digital Information, Tomar, Portugal 17-19 June 1998, ISBN 2-912335-06

Maria Theodoridou, Martin Doerr, "Classifying Historical Documents", presentation at the OSI-HESP Summer School 25 July- 7 August 1998 in Sofia, Bulgaria

M. Doerr , Nicolas Crofts, "Electronic Communication on Diverse Data - The Role of an oo CIDOC Reference Model", 18th General Conference of the International Council of Museums and CIDOC'98, Melbourne, Oct 1998, http://www.cidoc.icom.org/conf98.htm.

Nick Crofts, Martin Doerr, Tony Gill "The CIDOC Conceptual Reference Model A Standard for Communicating Cultural Contents", in "Cultivate Interactive", Issue 9, February 2003

Martin Doerr, Apostolos Sarris (eds.), "CAA2002, The Digital Heritage of Archaeology, Proceedings of the 30th Conference, Heraklion, Crete, April 2002", Hellenic Ministry of Culture, Athens, 2003, ISBN960-214-086-0

Martin Doerr, Manos Papagelis, *A Method for Estimating the Precision of Place Name Matching*, 2004, 3rd European NKOS Workshop: User-centred approaches to Networked Knowledge Organization Systems/Services at ECDL 2004, September 16, Bath, UK

Martin Doerr, Athina Kritsotaki, Stephen Stead, *Thesauri of historical periods - A proposal for standardization*, CIDOC'05 Conference, Zagreb, Croatia, 24-27 May, 2005

Martin Doerr, "The CIDOC CRM, an Ontological Approach to Schema Heterogeneity", Dagstuhl Seminar Proceedings 04391, Semantic Interoperability and Integration, 2005

Jen-Shin Hong, Martin Doerr, Jieh Hsiang, *Editorial*, 2005, International Journal on Digital Libraries 5(3): 151-152 / Digital Object Identifier (DOI) 10.1007/s00799-005-0115-2

Chrysoula Bekiari, Panos Constantopoulos, Martin Doerr, *Information Patterns for Digital Cultural Repositories*, ERCIM News No 66, July 2006

Martin Doerr, *Increasing the Power of Semantic Interoperability for the European Library*, 2006, ERCIM News No 66, July 2006

Martin Doerr, Patrick LeBoeuf, *Modelling Intellectual Processes: The FRBR – CRM Harmonization*, 2006, Patrick LeBoeuf. In Conference proceedings "Wider perspective broader base" ICOM-CIDOC annual meeting, Museum of World Culture Gothenburg, Sweden 10-14 September 2006. ISBN 91-855222-12-7

Martin Doerr, D. Iorizzo, *Epistemic Networks in Grid + Web 2.0 Digital Libraries*, 2007, First International Workshop on Digital Libraries Foundations In conjunction with ACM IEEE Joint Conference on Digital Libraries (JCDL 2007). Vancouver, British Columbia, Canada, June 23, 2007

Martin Doerr, Carlo Meghini, Nicolas Spyratos, *Leveraging on Associations - a New Challenge for Digital Libraries*, 2007, First International Workshop on Digital Libraries

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Patrick LeBoeuf, Martin Doerr, *Linking CIDOC CRM and FRBR*, 2007, Paper delivered at the Conference: Intelligent Access to Digital Heritage October 18-19, 2007, Tallinn, Estonia

Carlo Meghini, Martin Doerr, Nicolas Spyratos, *Sharing co-reference knowledge for data integration*, Second DELOS Conference on Digital Libraries, 5-7 December 2007, Grand Hotel Continental - Tirrenia, Pisa (Italy)

Martin Doerr, Chryssoula Bekiari, Patrick LeBoeuf, *FRBRoo, a Conceptual Model for Performing Arts*, 2008, In Conference proceedings "The Digital Curation of Cultural Heritage" ICOM-CIDOC Annual Meeting, Museum Benaki Athens, Greece 14-18 September 2008

Pat Riva, Martin Doerr, Maja Zumer, *FRBRoo: Enabling a Common View of Information from Memory Institutions,* IFLA - International Cataloguing and Bibliographic Control (ICBC), Vol 38, No 2, April/June 2009

V.4.4 Recent Technical reports:

Constantopoulos P., Doerr M. (1993). *The semantic index system: A brief presentation*. Heraklion - Crete, Greece: FORTH, Institute of Computer Science, Information Systems and Software Technology Group - Working Paper #6

Doerr M., Christoforaki M. (1996). *The Getty AHIP VCS Schema*. Heraklion - Crete, Greece: FORTH, Institute of Computer Science -Technical Report VCS.FORTH.96.1

A. Analyti, N. Spyratos, P. Constantopoulos, M. Doerr: *Inheritance under Participation Constraints and Disjointness*. Technical Report FORTH-ICS/TR-198, 28 pages, June 1997

M. Doerr, I. Fundulaki. "*A proposal on extended interthesaurus links*" Technical Report ICS-FORT/TR-215, March 1998

M.Doerr, A.Yiortsou: *Implementing a Temporal Data Type*. Technical Report FORTH-ICS/TR-236, November 1998

Ch. Bekiari, M. Doerr: *Documentation and Reasoning on Parts and Potential Wholes*. Technical Report FORTH-ICS/TR-260, October 1999

Martin Doerr, *Mapping of the Dublin Core Metadata Element Set to the CIDOC CRM*, Technical Report FORTH-ICS/TR-274, July 2000

Martin Doerr, Maria Theodoridou, *Mapping of the Encoded Archival Description DTD Element Set to the CIDOC CRM*, Technical Report FORTH-ICS/TR-289, June 2001.

Martin Doerr, Mapping of the AMICO data dictionary to the CIDOC CRM, Technical Report FORTH-ICS/TR-288, June 2001

Nick Crofts, Ifigenia Dionissiadou, Martin Doerr, Matthew Stiff, *Definition of the CIDOC object-oriented Conceptual Reference Model, Version 3.2*, ISO Working Document ISO/TC46/SC4/WG9/2, July 2001

Nick Crofts, Martin Doerr, Tony Gill, Stephen Stead, Matthew Stiff (editors), *Definition of the CIDOC Conceptual Reference Model, November 2003* (Version 3.4.9, equivalent to ISO 21127:2006)

Nick Crofts, Martin Doerr, Tony Gill, Stephen Stead, Matthew Stiff (editors), *Definition of the CIDOC Conceptual Reference Model, Version 4.0 March 2004* (version 4.0)

Martin Doerr, *Semantic Interoperability: Theoretical Considerations*, Technical Report 345, ICS-FORTH, October 2004

Nick Crofts, Martin Doerr, Tony Gill, Stephen Stead, Matthew Stiff (editors), *Definition of the CIDOC Conceptual Reference Model, Version 4.2.4, January 2008* (Community draft to be submitted to ISO)

Manjula Patel, Traugott Koch, Martin Doerr, Chrisa Tsinaraki, "*Semantic Interoperability in Digital Library Systems*", DELOS2 Network of Excellence in Digital Libraries, Deliverable D5.3.1, June 2005

Haridimos Kondylakis, Martin Doerr, Dimitris Plexousakis, *Mapping Language for Information Integration*, 2006, Technical Report 385, ICS-FORTH, December 2006

Chrysoula Bekiari, Martin Doerr, Patrick LeBoeuf, (editors), FRBR - *object-oriented definition and mapping to* $FRBR_{ER}$ *(version 0.9)*, January 2008

VI Community Services

VI.1 Invited Talks:

In January 1994 invited talk about the Semantic Index System at GMD, Institute for Applied Information Systems, Bonn - St.Augustin.

In September 1996 invited talk about Terminology Management at the MDA Workshop on Terminology in Oxford.

In October 1996 invited talk about terminology management and semantic systems at the Getty Workshop on Semantic Systems, Los Angeles, CA.

Martin Doerr, "Mapping between thesauri", MODELS 11: UKOLN/mda Terminology Workshop, Bath , England, 11-12 January 2000, http://www.ukoln.ac.uk/dlis/models/models11/presentations.html

In November 2001 invited talk about the CIDOC CRM at the National Museum of Tokyo, Japan.

In July 2003 invited talk about the CIDOC CRM at a workshop at the Bibliotheca Hertziana (Max Planck Institut fuer Kunstgeschichte) in Rome, Italy.

In February 2004, invitation to the Dagstuhl Workshop on Intuitive Human Interface for Organizing and Accessing Intellectual Assets.

In September 2004, invitation to the Dagstuhl Seminar Nº 04391 on Semantic Interoperability and Integration.

December 3, 2007, presentation with title: "Semantic Interoperability, Epistemic Networks and the CIDOC CRM", University Hamburg.

January 28, 2008, tutorial "The CIDOC CRM, a Standard for the Integration of Cultural Information", Digital Curation Center DCC-HATI, University Glasgow, UK

January 2008, presentations with title: "Leveraging on Associations – a New Challenge for Digital Libraries" and "Epistemic Networks In Grid + Web 2.0 for Digital Libraries", Conference "Epistemic Networks and GRID + Web 2.0 for Arts and Humantities", E-science Center , Imperial College, London, UK, 30/1/08-31/1/08.

January 30, 2008, presentation with title: "Leveraging on Associations – a New Challenge for Digital Libraries" , Conference "Epistemic Networks and GRID + Web 2.0 for Arts and Humantities", E-science Center , Imperial College, London, UK, 30/1/08-31/1/08.

February 1, 2008, tutorial “The CIDOC CRM, a Standard for the Integration of Cultural Information”, E-science Center , Imperial College, London, UK

November 2, 2008, presentation with title: “The CIDOC Conceptual Reference Model - A New Standard for Interoperability”, International Conference “Digital Heritage in the New Knowledge Environment: shared spaces & open paths to cultural content”,Athens, Greece.

March 30, 2009, presentation with title: “Information Integration in Cultural Heritage - The CIDOC CRM and Language Technology” on *Language Technology and Resources for Cultural Heritage, Social Sciences, Humanities, and Education*, LaTeCH-SHELT&R workshop, EACL2009, Athens, Greece

VI.2 Other Presentations, Research Invitations and Consulting:

In February 1993 invited talk about the Semantic Index System at the sales department of Sietec GmbH, Berlin.

In November 1993 invitation for 5 days consulting for a database design and usage of the Semantic Index System at Sietec GmbH, Berlin.

In October 1997 invitation for two days consulting on cultural information systems at the Canadian Heritage Information Network, Ottawa, Kanada.

In December 2001 research invitation and invited talk about his current research at the Meme Laboratory, University Hokkaido, Sapporo, Japan

In February 2002 research invitation an invited talk about his current research at the Meme Laboratory, University Hokkaido, Sapporo, Japan

In March 2002 invitation for consulting on the CIDOC CRM at the Smithsonian Institutions, Washington DC, USA.

May 16, 2003, presentation with title: “A Dinosaur is not a Monet – Diversity and Integration of Cultural Documentation” on the International Conference “Cultural Convergence & Digital Technology”, Athens, Greece, also presented on the CIDOC Conference 2003 in St. Petersburg, Russia, Sept. 3.

In December 2003 invitation for consulting on the CIDOC CRM at the Institut fuer Museumskunde, Berlin, Germany.

In May 2004, research invitation by the ChiNan University in PuLi, Taiwan, and invited talk at the National University of Taiwan, Taipei, Taiwan.

September 2006, presentation with title: “Waking from a Dogmatic Slumber - A Different View on Knowledge Management for Digital Libraries", 5th European Networked Knowledge Organization Systems (NKOS) Workshop at the 10th ECDL Conference, Alicante, Spain.

In June 2007, invitation for consulting on CIDOC CRM application to Media Vault Program of the Office of the Chief Information Officer and Data Services (OCIO/IST-DS), University of California at Berkeley.

VI.3 Workshop Organization:

March 6-9, 1996 1st CIDOC Data Model Workshop on object-oriented Conceptual Modelling. Heraklion, Crete, Greece, with participants from the US, Canada and several European countries.

September 12, 1997, post-conference workshop on object-oriented modelling at CIDOC'97, Nuremberg, Germany.

May 18-22, 1998 4th Workshop of the CIDOC Data Model Group on object-oriented Conceptual Modelling and the CIDOC Conceptual Reference Model, Fodele, Crete, Greece.

September 22, 1999 "Introduction to the CIDOC Conceptual Reference Model", Nicholas Crofts, City of Geneva, Switzerland, Martin Doerr, FORTH, Crete, Greece Workshop held on ICHIM'99, Washington

September 20, 2000, "NKOS Workshop " on ECDL2000, Lisbon, Portugal.

April 24, 2001, "CIDOC CRM Workshop " on CAA2001, Visby, Sweden.

April 2, 2002, tutorial "The CIDOC CRM, a Standard for the Integration of Cultural Information" on CAA2002, Heraklion, Crete, Greece.

April 2-6, 2002, co-organizer of the International Conference "Computer Applications and Quantitative Methods in Archaeology" CAA2002, Heraklion, Crete, Greece.

November 20, 2002, tutorial "The CIDOC CRM, a Standard for the Integration of Cultural Information" on "Workshop 7, Archaeologie und Computer", Vienna, Austria.

March 19, 2003, tutorial "The CIDOC CRM, a Standard for the Integration of Cultural Information", on Museums & The Web 2003, Charlotte, USA

March 26,27, 2003, 2-days International Symposium "Sharing the Knowledge", Smithsonian Institutions, Washington DC, USA.

August 17, 2003, Tutorial "The CIDOC Conceptual Reference Model - New Standard for Knowledge Sharing" on ECDL2003, Trondheim, Norway.

August 20, 2003, "NKOS Workshop " on ECDL2003, Trondheim, Norway.

November 12-14, 2003, invitational workshop on the "Harmonization of FRBR and CIDOC CRM", Paris, France.

March 22-25, 2004, invitational workshop on the "Harmonization of FRBR and CIDOC CRM", Heraklion, Crete, Greece.

April 13, 2004, tutorial "The CIDOC CRM, a Tool for Integrating of Cultural Information" on CAA2004, Prato, Italy.

April 20-22, 2004, international workshop "Practice of Knowledge Sharing", Heraklion, Crete, Greece.

December 7-8, 2004, international workshop , "Practice of Knowledge Sharing", Nuremberg, Germany.

May 24, 2005, tutorial: "The CIDOC Conceptual Reference Model as a Tool for Integrating Cultural Information" Zagreb CIDOC'05 Conference, Zagreb, Croatia.

November 14-15, 2005, International workshop, "Practice of Knowledge Sharing", Nuremberg, Germany.

March 30, 2006, International Workshop "Semantic Interoperability for e-Research in the Sciences, Arts and Humanities", Imperial College London, UK.

October 23-24, 2006, organization of the international "Workshop on Exploring the limits of global models for integration and use of historical and scientific information" Heraklion, Crete, Greece.

November 5, 2007, tutorial " The CIDOC Conceptual Reference Model - New Standard for Knowledge Sharing", ER2007 Conference, Auckland, New Zealand.

November 5-9, 2007, organization of the "International Workshop on Ontologies and Information Systems for the Semantic Web (ONISW)" as part of the ER2007 Conference, Auckland, New Zealand.

October 27-30, 2008, organization of the 2nd "International Workshop on Ontologies and Information Systems for the Semantic Web (ONISW)" as part of the CIKM Conference, Napa Valley, California, US.

Besides these, he has organized 18 international working group meetings of the CIDOC CRM Special Interest Group and 11 international meetings of the CRM and FRBR Harmonization Group in order to develop and maintain the CIDOC CRM and FRBRoo.

VI.4 Teaching:

Special Instructor, Department of Computer Science, University of Crete:

In **1991-1992** he was teaching undergraduate and graduate courses on Operating Systems.

In **1998-1999** and **2002-2003** he was teaching graduate courses on methods and systems for cultural documentation and on terminology systems and vocabulary control.

The International Committee for Documentation (ICOM-CIDOC)
Le Comité international pour la documentation (ICOM-CIDOC)

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The acceptance of the CIDOC CRM as ISO21127

In September last year CIDOC's Conceptual Reference Model (CIDOC-CRM) was finally accepted as an international standard (ISO21127) by the International Standards Organization, ISO. The acceptance marks a very important mile stone in the development work of a standard data interchange between museums and between cultural and natural history institutions in general. The CRM has been developed by the CRM-special interests group, one of seven working groups under CIDOC. The CRM-SIG is chaired by Dr. Martin Doerr from ICS-FORTH.

Martin Doerr and Ifgenia Dionysiadou from the Benaki Museum were the central persons behind the original initiative in 1996. At that time CIDOC's Documentation Standards Working Group (DSWG) was in the process of finalising the development of the CIDOC entity-relationship (ER) data model for museums. They suggested to transform the ER-model into an ontology and was welcomed by CIDOC. In 1996-2000 Nick Croft, the chair of DSWG and Martin Doerr led the development of CRM from the museum and IT perspective respectively. In 2000 the CRM-SIG was founded and the work was funded by the EU CHIOS-project with ICS-FORTH as prime contractor. I have personally followed the work since 2002 and it has been an outstanding example of multidisciplinary work between domain experts in the museum sector and computer scientists. CIDOC is very proud of the result and we frequently meet people to whom CIDOC means the model (i.e. the CRM) and not the ICOM committee.

The CRM has an increasing impact on the IT application in the cultural and natural history sector. It is as the standard for data interchange in many EU projects, e.g. the DELOS and the EPOCH networks of excellence. In my part of the world the Swedish biodiversity initiative (Artdatabanken) 20-year species project (total 400M SEK) recently announced a bid for the best information system for natural history. A condition is that the resulting system is CIDOC-CRM compliant.

The CRM-SIG is continuing the work on the CRM and has finished the first harmonisation of CRM and the library information model FRBR. CIDOC has as a strategic goal to enable seamless data integration between the museum, library and archive sectors. We thank ICS FORTH for its support of this mission. The continuing development of the CRM is a prerequisite to reach this goal. In this work we hope for a continued participation and support from the Centre for Cultural Informatics and Martin Doerr at ICS-FORTH.

Kind regards,

Dr. Christian-Emil Ore
Chair CIDOC