

ADVANCES ON
INFORMATION
PROCESSING AND
MANAGEMENT

CONFERENCE ORGANIZERS INSTITUTES

The International Conference on Integrated Information is supported by the following Institutes:

Emerald Group Publishing Limited
Technological educational Institute of Athens, Greece
University of Peloponnese, Greece
National And Kapodistrian University of Athens, Greece
Mednet Hellas, The Greek Medical Network
2nd AMICUS Workshop

To learn more about I-DAS, including the Book Series, please visit the webpage
<http://www.i-das.org/>

INTEGRATED INFORMATION

International Conference on Integrated Information

Kos, Greece September, 29 – October, 3 2011

EDITORS

Georgios A. Giannakopoulos
Technological Educational Institute of Athens, Greece

Damianos P. Sakas
University of Peloponnese, Greece

All papers have been peer-reviewed



Piraeus, Greece, 2011

Editors

Georgios A. Giannakopoulos

Technological Educational Institute of Athens
Faculty of Management and Economics
Department of Library Science and Information Systems
Address: Aghiou Spyridonos Street, 12210, Egaleo
E-mail: gian@teiath.gr

Damianos P. Sakas

University of Peloponnese
Faculty of Science and Technology
Department of Computer Science and Technology
Address: End of Karaiskaki St., 22100, Tripolis, Greece
E-mail: D.Sakas@uop.gr

The copyrights will be owned by the authors under the Creative Commons Attribution-Non Commercial license (<http://creativecommons.org/licenses/by-nc/3.0/>), which permits unrestricted use, distribution, and reproduction in any non commercial medium, provided the original work is properly cited.

ISSN:

Printed in the Greece, EU

CONTENTS

PREFACE: Proceedings of the International Conference on Integrated Information (IC-INFO 2011)	1
Georgios A. Giannakopoulos, Damianos P. Sakas	
Conference Details	3
Keynote Speaker	5
SYMPOSIUM ON INFORMATION AND KNOWLEDGE MANAGEMENT	6
Prof. Christos Skourlas	
Towards the Preservation and Availability of Historical Books and Manuscripts: A Case Study	8
Eleni Galiotou	
An Extensive Experimental Study on the Cluster-based Reference set Reduction for Speeding-up the k-nn Classifier	12
Stefanos Ougiaroglou, Georgios Evangelidis and Dimitris A. Dervos	
Exploiting the Search Culture Modulated by the Documentation Retrieval Applications	16
Nikitas N. Karanikolas and Christos Skourlas	
Information and Knowledge Organization: The Case of the TEI of Athens	22
Anastasios Tsolakidis, Manolis Chalaris and Ioannis Chalaris	
Providing Access to Students with Disabilities and Learning Difficulties in Higher Education through a Secure Wireless framework	26
Catherine Marinagi and Christos Skourlas	
Improving Query Efficiency in High Dimensional Point Indexes	30
Evangelos Outsios and Georgios Evangelidis	
Text Segmentation Using Named Entity Recognition and co-Reference Resolution in Greek Texts	34
Pavlina Fragkou	
KINISIS, a Graphical XQuery Language	42
Euclid Keramopoulos, Achilleas Pliakas, Konstantinos Tsekos and Ignatios Deligiannis	
Dimensionality Curse, Concentration Phenomenon and the KDB-tree	46
Nikolaos Kouiroukidis and Georgios Evangelidi	

Applying Balanced Scorecard Strategic Management in Higher Education	50
Manolis Chalaris, Anastasios Tsolakidis and Ioannis Chalaris	
A Web Portal Model for NGOs' Knowledge Management	54
Zuhal Tanrikulu	
The Digital Archives System and Application Optimized for the Tradition Knowledge Archives	58
Jeon Hong. Chan, In Deok. Hwang, Jae Hak. Park, Hyeok. Sim, U won. Gwon and Soon Cheol. Park	
A Semi-automatic Emerging Technology Trend Classifier Using SCOPUS and PATSTAT	62
Seonho Kim, Woondong Yeo, Byong-Youl Coh, Waqas Rasheed, Jaewoo Kang	
Presenting a Framework for Knowledge Management within a Web Enabled Living Lab	66
Lizette de Jager and Albertus AK Buitendag and Potjie (JS) van der Walt	
4TH SYMPOSIUM ON BUSINESS AND MANAGEMENT AND DYNAMIC SIMULATION MODELS SUPPORTING MANAGEMENT STRATEGIES	71
Dr. Damianos Sakas	
New Political Communication Practices: No Budget Events Management. The New Challenge	73
Evangelia N. Markaki, Damianios P. Sakas and Theodore Chadjipantelis	
Free Software – Open Source Software. A Powerful Tool for Developing Creativity in the Hands of the Student	78
Nasiopoulos K. Dimitrios, Damianos P. Sakas, Konstantinos Masselos	
Open Source Web Applications. How it Spread Through the Internet and their Contribution to Education.	82
Nasiopoulos K. Dimitrios, Damianos P. Sakas, Konstantinos Masselos	
Culture in Modern Times in the Frame of Luhmann's System Theory	85
Anastasia J. Chournazidis	
Managing Scientific Journals: A Cultural Viewpoint	87
Marina C. Terzi, Damianos P. Sakas, and Ioannis Seimenis	
A Conceptual Framework for Analyzing Knowledge-based Entrepreneurship	92
Nikos S. Kanellos	

SESSION ON INFORMATION HISTORY: PERSPECTIVES, METHODS AND CURRENT TOPICS	96
Prof. Laszlo Karvalics	
Emerging Research Fields in Information History	98
Laszlo Z. Karvalics	
Information Management through Elementary Data Clusters: New Observations on Pridianum-Type Roman Statistical Documents	102
Gergő Gellérfi	
Information and Secrecy on the Silk Road. Methods of Encryption of Legal Documents in Inner Asia (3th-4th century)	106
Szabolcs Felföldi	
The Role of Information and Disinformation in the Establishment of the Mongolian Empire: A Re-examination of the 13th century Mongolian History from the Viewpoint of Information History	110
Márton Gergő Vér	
Early Warning Systems and the Hospitallers in the Eastern Mediterranean	114
Zsolt Hunyadi	
Information Management as Establishment Dutch Navigational Knowledge on Japan, 1608-1641	118
Gabor Szommer	
Files Everywhere - Register and Training of Men for Military and Civil Purpose in Prussia in the early 18th century	123
Marton Holczer	
SYMPOSIUM ON INTEGRATED INFORMATION: THEORY, POLICIES, TOOLS	126
Prof. Georgios Giannakopoulos	
Approaching Information as an Integrated Field: Educating Information Professionals	128
Georgios Giannakopoulos, Daphne Kyriaki Manesi and Stryidon Zervos	
Special Libraries as Knowledge Management Centers	132
Eva Semertzaki	
Digital Libraries' Developers and their Suitability: A Case Study	136
Maria Monopoli	

A Preliminary Study for the Creation of a Greek Citation index in the Humanities and the Social Sciences (GCI – H&SS)	140
Daphne Kyriaki-Manessi and Evi Sachini	
Archiving as an Information Science. Evidence from a Survey Carried out on a Sample of Greek Students	144
Georgios Giannakopoulos and Ioannis Koumantakis	
Transition Process of E-records Management and Archiving System in Universities: Ankara University	147
S. Özlem Bayram and Fahrettin Ozdemirci	
Government Information: Access and Greece's Efforts for Access	150
Aikaterini Yiannoukakou	
School Archives and their Potentials in Teaching: Aspects of Greek Reality	156
Sonia Geladaki and Panagiota Papadimitriou	
Research on School Libraries in Greece and Suggestions on its Further Development	160
Georgios D. Bikos	
Building Digital Collections for Archeological Sites: Metadata Requirements and CIDOC CRM Extension	164
Georgios S. Gkrous and Mara Nikolaidou	
Museological Claims to Autonomous Knowledge: Rethinking the Conceptual Mode of Display and its Claims to Knowledge	169
Assimina Kaniari and Georgios Giannakopoulos	
Use of Library Loan Records for Book Recommendation	172
Keita Tsuji, Erika Kuroo, Sho Sato, Ui Ikeuchi, Atsushi Ikeuchi, Fuyuki Yoshikane and Hiroshi Itsumura	
Developing a National Database on Librarianship and Information Science. The Case of E-VIVA, the Hellenic Fulltext Database	176
Filippos Ch. Tsimpoglou, Vasiliki V. Koukounidou and Eleni K. Sakka	
Integrated Access to Cultural Heritage Information Pieces in Iran Astan-Quds Razavi's Organization of Libraries, Museums and Documents Center: A Theory of Unionization Disparate Information Assets over Imam Reza's Zarih	181
Ms. Mitra Zarei and Ms. Maliheh Farrokhnia	
Attitudes of University Librarians and Information Scientists towards the Draft Code of	185

Library Ethics to Present a Model for Final Library Ethical Codes	
Mahsoomeh Latifi, Fatemeh Zandian and Hasan Siamian	
SESSION ON OPEN ACCESS REPOSITORIES: SELF-ARCHIVING, METADATA, CONTENT POLICIES, USAGE	188
Dr. Alexandros Koulouris	
Geographical Collections in Greek Academic Libraries: Current Situation and Perspectives	189
Ifigenia Vardakosta and Sarantos Kapidakis	
Information Seeking Behavior: Factors that Affect the Behavior of Greek Astronomers	194
Hara Brindesi and Sarantos Kapidakis	
Aggregating Metadata for Europeana: The Greek Paradigm	198
Alexandros Koulouris, Vangelis Banos and Emmanouel Garoufallou	
Integrating a Repository with Research Output and Publications: The Case of the National Technical University of Athens	202
Dionysis Kokkinos	
Implementation of Workflows as Finite State Machines in a National Doctoral Dissertations Archive	205
Nikos Houssos, Dimitris Zavaliadis, Kostas Stamatis and Panagiotis Stathopoulos	
Practices of “Local” Repositories of Legally Protected Immovable Monuments. A Global Scheme for ‘Designation – Significance’ Information	209
Michail Agathos and Sarantos Kapidakis	
Integration of Metadata in BWMETA-2.0.0 Format	213
Katarzyna Zamlynska, Jakub Jurkiewicz and Lukasz Bolikowski	
SESSION ON EVIDENCE-BASED INFORMATION IN CLINICAL PRACTICE	216
Dr. Evangelia Lappa	
Applicability of Data Mining Algorithms on Clinical Datasets	218
Wilfred, Bonney	
Changing Roles of Health Librarians with Open Access Repositories	221
Christine Urquhar and Assimina Vlachaki	
From Medical Records to Health Knowledge Management Systems: The Coding to Health Sector	225
Evangelia C. Lappa and Georgios A. Giannakopoulos	

The Survey of Skill, Attitude and Use of Computer and Internet among Faculty Members	229
Hasan Siamian, Azita Bala Ghafari, Kobra Aligolbandi, Mohammad Vahedi and Gholam Ali Golafshani Jooybari	
Trends in Scholarly Communication among Biomedical Scientists in Greece	232
Assimina Vlachaki and Christine Urquhart	
SESSION ON ELECTRONIC PUBLISHING: A DEVELOPING LANDSCAPE	236
Dr. Dimitris Kouis	
E-Journal and Open Access Journal Publishing in the Humanities: Preliminary Results from a Survey among Byzantine Studies Scholars	238
Victoria Tsoukala and Evi Sachini	
Preliminary Results on a Printed VS Electronic Text Books Assessment Through Questionnaire	242
Dimitrios A. Kouis and Kanella Pouli	
An Interpretation of Aristotelian Logic According to George Boole	246
Markos N. Dendrinis	
SESSION ON INFORMATION CONTENT PRESERVATION AS OUTCOME OF CONSERVATION OF CULTURAL HERITAGE: ETHICS, METHODOLOGY AND TOOLS	251
Prof. George Panagiaris and Dr. Spiros Zervos	
Intrinsic Data Obfuscation as the Result of Book and Paper Conservation Interventions	254
Spiros Zervos, Alexandros Koulouris and Georgios Giannakopoulos	
Mass Deacidification: Preserving More than Written Information	258
Michael Ramin, Evelyn Eisenhauer and Markus Reist	
Information Literacy of Library Users: A Case Study of Mazandaran Public Library Users, Iran	260
Hussein Mahdizadeh and Hasan Siamian	
The Narratives of Paper in The Archives of the New Independent Greek State (Mid 19th c.)	264
Ourania Kanakari and Maria Giannikou	
From Macro to Micro and from Micro to Nano: The Evolution of the Information Content Preservation of Biological Wet Specimen Collections	268
Nikolaos Maniatis and Georgios Panagiaris	

Digital images: A valuable scholar's tool or misleading material?	272
Patricia Engel	
Attitudes of University Librarians and Information Scientists Towards the Draft Code of Library Ethics to Present a Model for Final Library Ethical Codes	277
Mahsoomeh Latifi, Fatemeh Zandianand and Hasan Siamian	
Investigation of the Degradation Mechanisms of Organic Materials: From Accelerated Ageing to Chemometric Studies	280
Ekaterini Malea, Effie Papageorgiou and Georgios Panagiaris	
SESSION ON DIVERGENCE AND CONVERGENCE: INFORMATION WORK IN DIGITAL CULTURAL MEMORY INSTITUTIONS	285
Dr. Susan Myburgh	
Extending Convergence and Divergence in Cultural Memory Institutions: The Old Slave Lodge in the New South Africa	287
Archie L Dick	
The Transfer of Knowledge from Large Organizations to Small: Experiences from a Research Project on Digitization in Wales	289
Clare Wood-Fisher, Richard Gough, Sarah Higgins, Menna Morgan, Amy Staniforth and Lucy Tedd	
The Usage of Reference Management Software (Rms) in an Academic Environment : A Survey at Tallinn University	293
Enrico Francese	
Varialog : How to Locate Words in a French Renaissance Virtual Library	297
Marie-Hélène Lay	
The Urge to Merge: A Theoretical Approach	301
Susan Myburgh	
SYMPOSIUM ON ADVANCES INFORMATION FOR STRATEGIC MANAGEMENT	304
Professor Nikolaos Konstantopoulos	
Empowerment in the Tax Office of Greece	306
Antonios E. Giokas and Nikolaos P. Antonakas	
Building Absorptive Capacity Through Internal Corporate Venturing	310
Ioannis M. Sotiriou and Alexandros I. Alexandrakis	

The Monitoring Information System (M.I.S.) - An information and Management System for Projects Co-financed Under the National Strategic Reference Framework (NSRF) and the Community support framework (CSF)	314
Catherina G. Siampou, Eleni G. Fassou and Athanassios P. Panagiotopoulos	
Corruption in Tax Administration: The Entrepreneurs View Point	318
Nikolaos P. Antonakas, Antonios E. Giokas and Nikolaos Konstantopoulos	
Conflicts between the IT Manager and the Software House after the Strategic Choice of Outsourcing of the Information Processes in Maritime Companies.	322
Anthi Z. Vaxevanou, Nikolaos Konstantopoulos, Damianos P. Sakas	
Contemporary Forms of Ordering Between the Supply Department and Ship Chandler Companies in the Shipping Industry	325
Anthi Z. Vaxevanou, Nikolaos Konstantopoulos, Damianos P. Sakas	
Strategies Implemented and Sources Used for the Acquisition of Information on Foreign Markets	329
Myropi Garri, Nikolaos Konstantopoulos and Michail G. Bekiaris	
The Effect of High Performance Working Systems on Informative Technology in Enterprises after Organisation Changes such as Mergers & Acquisitions	333
Nikolaos Konstantopoulos and Yiannis Triantafyllopoulos	
Personnel's Absorptive Capacity as a Guiding Concept for Effective Performance in Informative Technology	337
Nikolaos Konstantopoulos and Yiannis Triantafyllopoulos	
SESSION ON CONTEMPORARY ISSUES IN MANAGEMENT: ORGANISATIONAL BEHAVIOUR, INFORMATION TECHNOLOG, EDUCATION & HOSPITAL LEADERSHIP	341
Dr. Panagiotis Trivellas	
Investigating the Importance of Sustainable Development for Hotel SMES	343
Panagiotis Reklitis and Anestis Fotiadis	
Strategic Alignment of ERP, CRM and E-business: A Value Creation	347
Catherine C. Marinagi and Christos K. Akrivos	
The Impact of Occupational Stress on Performance in Health Care	351
Panagiotis Trivellas Panagiotis Reklitis and Charalambos Platis	

The Impact of Emotional Intelligence on Job Outcomes and Turnover Intention in Health Care	356
Panagiotis Trivellas Vassilis Gerogiannis and Sofia Svarna	
SYMPOSIUM ON BUSINESS MANAGEMENT AND COMMUNICATION STRATEGIES SUPPORTING DECISION MAKING PROCESS IN TOURISM SECTOR	360
Dr. Panagiota Dionysopoulou	
The Human Factor as a Mediator to the Total Quality in the Tourism Companies. The impact of Employees' Motivation to Quality Improvements	362
Christos K. Akrivos and Panagiotis Reklitis	
Tourist Destination Marketing and Management Using Advanced ICTS Technologies	365
Anastasia Argyropoulou, Panagiota Dionyssopoulou, Georgios Miaoulis	
G.N.T.O. (Greek National Tourism Organization) Communication Strategy in Advertising Campaigns 1991-2006	370
George Stafylakis and Panagiota Dionyssopoulou	
GENERAL PAPERS	375
The role of Environmental Education within the Framework of the Environmental Policy of a Regional Municipality	376
Vassiliki Delitheou and Dimitra Thanasia	
Issues of Social Cohesion: A case study from the Greek Urban Scenery	380
Evgenia Tousi	
Merging Activity and Employee Performance: The Greek Banking System	384
Panagiotis Liargovas and Spyridon Repousis	
Sustainable Development and Corporate Social Responsibility in Higher Education: Some Evidence from Greece	387
Anastasios Sepetis and Fotios Rizos	
Exploring the Effects of Organizational Culture on Collaborative vs. Competitive Knowledge Sharing Behaviors	395
Hanan Abdulla Mohammed Al Mehairi and Norhayati Zakaria	

Preface: Proceedings of the International Conference on Integrated Information (IC-ININFO 2011)

GEORGIOS A. GIANNAKOPOULOS

Department of Library Science and Information Systems, Technological Educational Institute of Athens, Aghiou Spyridonos, Egaleo, 12210, Greece

DAMIANOS P. SAKAS

Department of Computer and Technology Science, University of Peloponnese, Praxitelous 89-91, Piraeus, 18532, Greece

Aims and Scope of the Conference

The International Conference on Integrated Information 2011 took place in Kos Island, Greece, between September, 29 and October, 3, 2011. IC-ININFO is an international interdisciplinary conference covering research and development in the field of information management and integration.

The conference aims at creating a forum for further discussion for an Integrated Information Field incorporating a series of issues and/or related organizations that manage information in their everyday operations. Therefore, the call for papers is addressed to scholars and/ or professionals of the fields of Library and Archives Science (including digital libraries and electronic archives), Museum and Gallery Studies, Information Science, Documentation, Information Management, Records Management, Knowledge Management, Data management and Copyright experts the latter with an emphasis on Electronic Publications. Furthermore, papers focusing on issues of Cultural Heritage Management and Conservation Management are also be welcomed along with papers regarding the Management of Nonprofit Organizations such as libraries, archives and museums.

One of the primary objectives of the IC-ININFO will be the investigation of information-based managerial change in organizations. Driven by the fast-paced advances in the Information field, this change is characterized in terms of its impact on organizations that manage information in their everyday operations.

Grouping emerging technologies in the Information field together in a close examination of practices, problems and trends, IC-ININFO and its emphases on integration and management will present the state of the art in the field. Addressed jointly to the academic and practitioner, it will provide a forum for a number of perspectives based on either theoretical analyses or empirical case studies that will foster dialogue and exchange of ideas.

Topics of general Interest

Library Science, Archives Science, Museum and Gallery Studies, Information Science, Documentation, Digital Libraries, Electronic Archives, Information Management, Records / Document Management, Knowledge Management, Data Management, Copyright, Electronic Publications, Cultural Heritage Management, Conservation Management, Management of Nonprofit Organizations, History of Information, History of Collections, Health Information

Symposia

The Conference offered a number of sessions under its patronage, providing a concise overview of the most current issues and hands-on experience in information-related fields.

- Symposium on Integrated information: Theory, Policies, Tools
- 4th Symposium on Business and Management and Dynamic Simulation Models supporting management strategies

- Session on Open Access Repositories: Self-archiving, Metadata, Content policies, Usage
- Session on Evidence-Based Information in Clinical Practice
- Session on Business Management and Communication Strategies supporting Decision Making Process in Tourism Sector
- Session on Electronic Publishing: A Developing Landscape
- Session on Information and Knowledge Management
- Session on Information Content Preservation as Outcome of Conservation of Cultural Heritage: Ethics, Methodology and Tools
- Session on Advances Information for Strategic Management
- Session on Information History: Perspectives, Methods and Current Topics
- Session on Divergence and Convergence: Information Work in Digital Cultural Memory Institutions
- Session on Contemporary issues in Management: Organisational Behaviour, Information Technology, Education & Hospital leadership.

The wide range of aspects that the sessions covered, highlighted future trends in the Information Science.

Paper Peer Review

More than 300 papers had been submitted for consideration in IC-ININFO 2011. From them, 91 were selected for presentation, after peer review in a double blind review process. The accepted papers were presented at IC-ININFO 2011.

Thanks

We would like to thank all members that participated in any way in the IC-ININFO 2011 Conference and especially:

- The famous publishing house Emerald for its communication sponsorship.
- The co-organizing Universities and Institutes for their support and development of a high-quality Conference scientific level and profile.
- The members of the Scientific Committee that honored the Conference with their presence and provided a significant contribution to the review of papers as well as for their indications for the improvement of the Conference.
- All members of the Organizing Committee for their help, support and spirit participation before, during and after the Conference.
- The Session Organizers for their willing to organize sessions of high importance and for their editorial work, contributing in the development of valued services to the Conference.
- PhDC Marina Terzi for her excellent editorial work, contributing in the production of the Conference proceedings.

CONFERENCE DETAILS

Chairs

Georgios A. Giannakopoulos, Technological Educational Institute of Athens, Greece
Damianos P. Sakas, University of Peloponnese, Greece

Co-Chairs

Daphne Kyriaki – Manesi, Technological Educational Institute of Athens, Greece
Dimitrios Vlachos, University of Peloponnese, Greece

Scientific Committee

Amanda Spink, Queensland University of Technology
Andreas Bagias, European Court
Andreas Rauber, Vienna University of Technology
Astrid van Wesenbeeck, SPARC Europe
Christine Urquhart, Aberystwyth University
Christos Schizas, University of Cyprus
Christos Skourlas, Technological Educational Institute of Athens
Claire Farago, University of Colorado at Boulder
Claus-Peter Klas, FernUniversität in Hagen
Costas Vassilakis, University of Peloponnese,
Dimitris Dervos, Technological Educational Institute of Thessaloniki
Eelco Ferwerda, OAPEN
Elena Garcia Barriocanal, University of Alcalá
Emmanuel Garoufallou, Technological Educational Institute of Thessaloniki
Filippos Tsimpoglou, University of Cyprus
Fillia Makedon, University of Texas at Arlington
George Korres, University of Newcastle
Georgios Evangelidis, University of Macedonia
Georgios Panagiaris, Technological Educational Institute of Athens
Johan Oomen, Netherlands Institute for Sound and Vision
José Aldana, University of Malaga
Konstantinos Masselos, University of Peloponnese
Luciana Duranti, The University of British Columbia
Markos N. Dendrinis, Technological Institute of Athens
Milena Dobрева, University of Strathclyde
Prodromos Tsiavos, London School of Economics and Political Science
Sándor Darányi, University of Borås
Sarantos Kapidakis, Ionian University
Sirje Virkus, Tallinn University
Spiros Zervos, Technological Educational Institute of Athens
Susan Myburgh, University of South Australia
Theodoros Pitsios, University of Athens, Faculty of Medicine

Organizing Committee

Alexandros Koulouris (Chair), Technological Educational Institute of Athens
Christos Christopoulos, SCEV Scientific Events Ltd
Marina Terzi, University of the Aegean, Greece
Evangelia Markaki, Aristotle University of Thessaloniki

Assimina Kaniari, Athens School of Fine Arts
Evangelia Lappa, General Hospital Attikis K.A.T.
Dimitris Kouis, Greek Ministry of Education, Lifelong Learning and Religious Affairs
Dionysis Kokkinos, National Technical University of Athens

KEYNOTE SPEAKER



Professor Amanda Spink

Professor Amanda Spink has published over 340 scholarly journal articles, refereed conference papers and book chapters, and 6 books. Many of her journal articles are published in the Journal of the American Society for Information Science and Technology, Information Processing and Management, and the Journal of Documentation. She is Editor of the Emerald journal Aslib Proceedings. Amanda's research has been published at many conferences including ASIST, IEEE ITCC, CAIS, Internet Computing, ACM SIGIR, and ISIC Conferences. Her recent books include Information Behavior: An Evolutionary Instinct and Web Search: Multidisciplinary Perspectives, both published by Springer. Amanda's research focuses on theoretical and empirical studies of information behavior, including the evolutionary and developmental foundations. The National Science Foundation, the American Library Association, Andrew R. Mellon Foundation, Amazon.com, Vivisimo. Com, Infospace.com, NEC, IBM, Excite.com, AlltheWeb.com, AltaVista.com, FAST, and Lockheed Martin have sponsored her research. In 2008 Professor Spink had the second highest H-index citation score in her field from 1998 to 2008 [Norris, M. (2008)]. Ranking Fellow Scholars and their H-Index: Preliminary Survey Results. Loughborough University, Dept of Information Science Report].

The Digital Archives System and Application Optimized for the Tradition Knowledge Archives

Jeon Hong. Chan[†], In Deok. Hwang[†], Jae Hak. Park[†], Hyeok. Sim[‡], U won. Gwon[‡]
and Soon Cheol. Park[†]

[†] Division of Computer Science and Engineering, Jeonbuk National Univ., Jeonju, Jeonbuk, Republic of Korea.
ei200611816 (at) chonbuk.ac.kr, scpark (at) chonbuk.ac.kr

[‡] Division of Computer Science and Engineering, Kyunghee Univ., Seoul, Republic of Korea.
kutajamay (at)naver.com

Abstract: In this paper, we propose solution for the storing and conjugating of the ever-growing traditional knowledge archives system. Dublin Core is used in order to manage data and the Web 2.0 platform was used to utilize data more easily. The various utilization methods for the archives data are shown.

Keywords: Digital Archives, Web 2.0, Tradition Knowledge, Dublin Core

I. INTRODUCTION

Paper documents were the main source used for researching and learning traditional knowledge. However, in 21 century, maintenance of the data is felt needed. People who are not expert and their concerns for the traditional knowledge were increased. As such, the means and methods more easy to contact these materials are felt needed. Internet is now used by most of people in Korea. Therefore, the development of the web application concerning the tradition knowledge digital ar-chives was essentially required.

The tradition knowledge digital archives system is needed to utilize and conserve data. It is to digitalize and utilize disappearing traditional knowledge. The tradition knowledge digital archives system developed with the web 2.0 (Hahm *et al.*, 2006). The participation by not only expert but also non ex-perts can easily access through using the web.

In this paper, presently developed Group for the People without History archives system is utilized. It aims to seek for the conservation and utilization of tradition knowledge archives through the tradition knowledge digital archives web application.

II. TRADITION KNOWLEDGE DIGITAL ARCHIVES SYSTEM

The digital archives is defined as the compression with the size, which is smaller it binds data one or several files the long time keeps data in the secondary storage like the disk or tape production with the digital asset, and system which it manages in order to store and systematically classify this and do the search and display effectually stored.

The ultimate goals for the digital archives are permanent conservation of data, efficient management of data and utilization of data. The digitalization is the essential for the permanent conservation of the archives data. The construction of the database is essential for the efficient management of digitalized data. It should be easy to approach by everyone as we live in era of the Web 2.0. In order to make archive access more easily, web page need to be easy to use, meaning application modules of the archives should not be raveled.

Fig. 1 is the overall system architecture figure of the Group for the People without History digital archives integrated system. There are pre-conditions to the construction of the digital archives system. First, Meta Data item needs to be standardized. Second, collection of the decent qualified Meta Data, and last researchers who collects these decent qualified Meta Data.

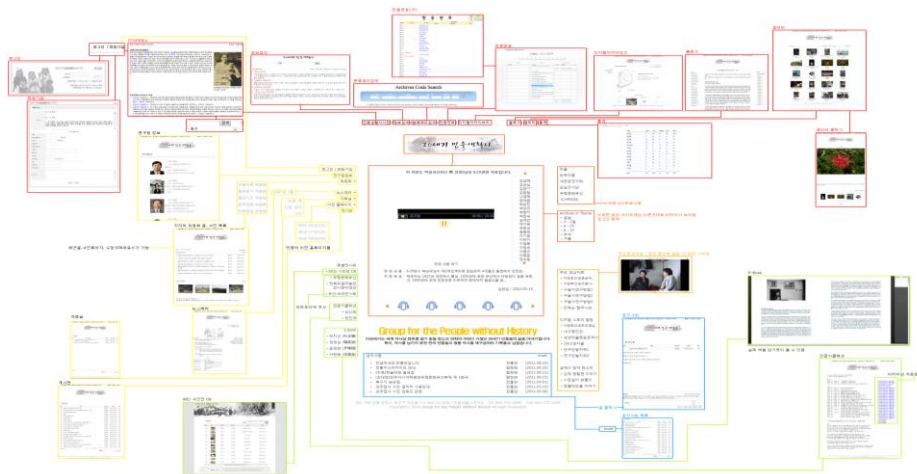


Figure 1. The archives system architecture

III. DATABASE

The Dublin Core (www.dublincore.org) is Agreed-upon standards for Meta Data, standards set by OCLC (Online Computer Library Center) and NCSA (National Center for Supercomputer Applications) during workshop held in Dublin 1995, and it is most widely used description method of Meta Data.

Variety of data becomes too diverse and there were limit to old way of document-centric description of Meta Data. So, in Dublin, the world information management experts are gathered and adopted this new formed standard. The Dublin Core is made of 16 elementary items and it is designed to support and share data's resource in various fields (Kim, 1997).

Group for the People without History follows the standardized Dublin Core form and the particular item was added to create better quality Meta Data. The particular item is context file, RFID tag number and GPS in-formation (Kim et al., 2008). Context file is the information of the there is digital data of raw data designated location or location to upload data. The data administrator can grasp the appearance of digital data and location by the addition of the context file at any time. The GPS information can divide into 2. One is the collection place of data. And the other one is the place where it keeps data. The GPS information is utilized and the location in which Meta Data are collected can be known. The place where Meta Data are collected is utilized and the development of many applications is possible.

The tradition knowledge digital archives divided with the Meta-Table and Type-Table in order to relate several multimedia to one Meta Data. The Type-Table is the table having the information about the multimedia material. The Meta-Table is the table putting the explanation about the multimedia. 2 tables shared through the am id value. Fig. 2 is the Meta-Table and figure which divides and utilizes the Type-Table.

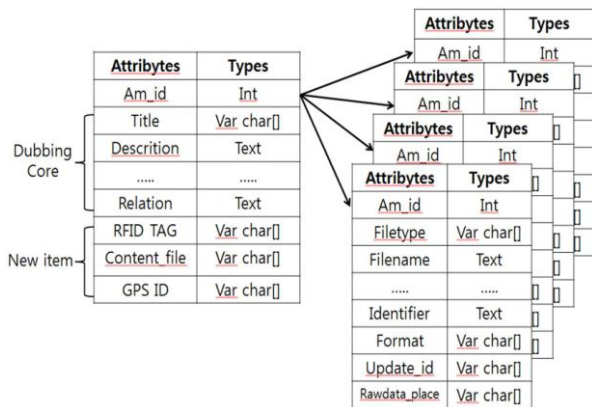


Figure 2. Database correlation diagram.

IV. DIGITAL ARCHIVES APPLICATION

The supply of the Web 2.0 shocked many people around the world. As long as internet is supplied, it is possible to connect to Web 2.0. Using this as advantage, our major activity utilizes web application.

Anyone can connect easily to the digital archives system through the web. However, to prevent the indiscreet emission of data, data and user limitations are set. The digital archives system should be easy to use by everyone. Therefore, the user interface needs to be easy to explore. Also the processing of the digital archives data is important.

After digital archives system is constructed, potential of its usage can be variously expanded. The Group for the People without History tradition knowledge digital archives application plan can approach the database, elementarily it includes the color program and application, and etc. (Park, 2008).

The overall system architecture of the digital archives includes the next ingredients.

A. Digital Archives Integrated System

The basis of the tradition knowledge digital archives system of the people life cycle is raw data archives. By using these raw data archives, the integrated system module (the people chronology, people previous, E-Book, and ontology system etc.) operates. The archives data are collected through the digital archives system.

In the collecting process of the archives data, the most important part is the construction of the quality Meta Data. Several special items were added to the standardized Dublin Core to build Meta Data. By doing so numerous data were collected and we have built several modules with it.

The integrated system of the tradition knowledge digital archives was constructed to provide too many people. The main of the integrated system is easily accessible in many modules of the archives. Recommended archives data created by experts can also be accessed through main page link. Data can be searched using simple terminology search, information retrieval through indexation of the documentation, item numbers created and used by experts, and etc.

By using the Archives In Theme, the large-scale cases of the archives can be looked over in the main screen.

B. Minjung Chronology

From Fig. 3, minjung chronology is the traditional knowledge chronology which organized based on the research group's raw data archive about the peoples living culture content of past 100 years. It is chronologies and compared with world, Korean history.

The people chronology constructed by raw data archives is constructed by the input of the administrator or researchers. In this way, constructed data are easy to use. With one simple click, people can access data they need, and the event of the pertinent year can be checked. If you search for the related year world history, and

Korean / local history can be checked immediately. By looking world history and Korean / local history people can check relation of the important event with The Group for the People without History.



Figure 3. The minjung chronology system.

C. Tradition Knowledge Previous

Dictionary of the tradition knowledge is constructed using oral statement from the raw and digital archives system. It is dictionary made from people's memory, story, witnessing of event, evidence, and photo. As to the term of the tradition knowledge previous, there is a little the distance with the standard language previous because of making on the basis of data of oral statement. In addition, it is multimedia dictionary containing ex-ample, sound of life cycle, related sound, movie, picture, document and etc.

People who doesn't have researcher ID can input and define terms to dictionary though web. And as long as there are internet connection people can upload and revise data. If person defines the term and upload it dictionary module searches related archives and connect him to it. Most of important terms are added by researchers. However, even non expert can access to web and add the terms that only they know to make dictionary which is made by everyone.

Here, it is the spoken population intellectual strength. Terms used in dictionary is directly connected to data from digital archives so person who uses corresponding term can be easily checked using voice and video record. In this way, it can be said to be the idea made to many people the population intellectual strength.

D. E-Book

E-Book system is one of application plan made to enrich tradition knowledge digital archives. The E-Book system is the eBook containing data from digital archives as shown Fig. 4. E-Book is collection of data from archives which is an introduction of person who

researchers want introduce to public. Researchers collect data and input them to system. This way, by using completed archives E-Book system, people can check specific traditional knowledge related person or event easily. The frame of the E-Book is made to be similar to actual paper book so people can feel more comfortable using it.

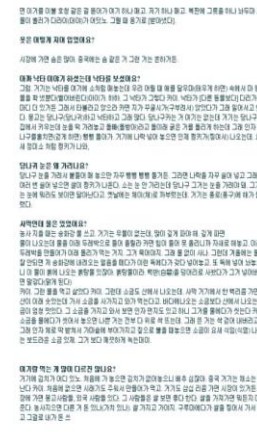


Figure 4. E-Book system.

E. Ontology System

The ontology is the sort of term dictionary consisting of the term and relationships. Ontology is the most central concepts for the semantic web applications. We ordered the ontology system in being the term network. And for the relationship between terms, is expressed to 1 step. As to the current term network system, many functions were not added still. However, the term network system developed newly adds the various functions.

The development reason of the term network is in the huge network with the addition of the term. The researchers add the terms related to the digital archives. According to the terms relation, the added terms develop the network. According to the relationship, the terms formed in this way shows till 3 steps. The relationship between terms has the close relation between the archives data. The term network formed in this way is helpful to the digital archives application.

First, the user searches for the term. Then, the term network shows the term and term having relation till 3 steps. In this way, by showing the terms related to the term till 3 steps the semantic search function is possible. The user is offered the digital archives data relating with the search of terms of the box. The peoples can become close to the archives with the easy use easily.

V. CONCLUSIONS

Simple list of features of the digital archives system are follow.

- (1) Relational database system which is to store archives data more efficiently
- (2) Archives semantic search through the ontology system

(3) Easy to use, even for the non-expert through the Web 2.0 and application

(4) Various application relate to the digital archives

In this paper, the digital archives system with 20 century people life cycle research institute manages is introduced. We introduced tradition knowledge digital archives and its various use. We believe that conjugating of the digital archive is as much important assignment as the conservation. We want more public to be interested in this matter and hoping more knowledge for the digital archives is created.

REFERENCES

[Hahm, H.H., Park, S.C., "Digital Archives of Cultural Archetype Contents:Its Problems and Direction," *Journal of the Korean BIBLIA Society for library and Information Science*, \(2006\).](#)

Kim, S.M., "Study on the Expansion of the Dublin Core Matadata Format," *Ewha Womans University press. Korea*, (1997).

[Kim, Y.H., Choi, L.C., Chon, S.I., Lee, J.S., Na, J.H., Park, S.C., "Ubiquitous Application if Exhibition and field site System for Digital Archives," *In Proceedings of the 3rd International Conference on Ubiquitous In-formation Technologies & Applications\(ICUT 2008\)*. Hochimin, Vietnam, \(2008\).](#)

Park, S.C., "A Study of The Digital Archives of 20th Century People's Life Research Center," *Youngnam Culture Institute*, **14**, 45-50, (2008).