

III World Congress of CDS/ISIS Users (ISIS3WC)

Informative Report

ISIS3WC Scientific Committee

- Meeting Coordination
Abel L. Packer (Director, BIREME/OPAS/OMS)
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International Committee

- Chair: Adalberto Tardelli (BIREME, Brazil)
 - Vice-Chair: Jean-Claude Dauphin (UNESCO, Information Society Division - ICT in Education, Science and Culture Section (CI/INF/ICT))
 - Africa: Eustache Megnigbeto (Documentation and Archives Officer, Delegation of the European Commission to the Republic of Benin)
 - Asia/Pacific: Sainul Abideen P (Librarian, Indian Institute of Information Technology and Management-Kerala, Thiruvananthapuram -India)
 - Arab States: Sherif Hassen Fouad (League of Arab States)
 - Europe/North America: Egbert de Smet (University of Antwerp, Belgium)
 - Latin America and the Caribbean: Ernesto Spinak (BIREME, Uruguay)
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Executive Secretariat

- ISIS3WC: Ernesto Spinak (BIREME, Uruguay)

Inauguration of authorities: presidency, session chairs, rapporteur

Headed by Adalberto Tardelli representing BIREME/PHO/WHO (Brazil) the board of the 3rd World Congress of CDS/ISIS users was constituted by Adalberto Tardelli; Jean-Claude Dauphin, Egbert de Smet, Ernesto Spinak, and Adolfo Hernández (Spain) as rapporteur.

Adalberto Tardelli opened the meeting by thanking UNESCO in the name of librarians and other users of the family of CDS/ISIS programs for their effort in maintaining the document management software. He particularly acknowledged Jean-Claude Dauphin's efforts as the person responsible for the programs at UNESCO, Egbert de Smet for his dedication to the development of J-ISIS, and Ernesto Spinak for his very necessary assistance in MARC 21 standardization. He then gave a brief introduction to the main innovations to be presented during the Congress and gave the floor to Egbert de Smet, who was in charge of leading the successive sessions. Egbert de Smet thanked Adalberto and began the scheduled programme, which began with Egbert's own presentation.

THE PRESENTATIONS ACCORDING TO THE PROGRAMME

1. **History and future of the ISIS family technologies (Egbert de Smet, Information and Library Science, University of Antwerp –Belgium)**

Egbert de Smet gave a brief review of the ISIS development history, from the first CDS/ISIS mainframe versions and the DOS versions considered as first generation ISIS products. The second generation came with the introduction of Isis Pascal and the various applications built on it (Heurisko, ADAM, IRIS, LAMP, etc.) and the CISIS tools developed by BIREME. The third generation started with Winisis, ISISDLL and the first versions of Java-ISIS; while the fourth generation was marked by the different versions adapted to the Web (WWWISIS, Genisis, OpenIsis and wxis). During this Congress we would witness the birth of the fifth generation ISIS ware.

This new generation is characterized by the use of new technologies in data storage (Berkeley DB in JISIS, ZO DB in ISIS-NDP), as well as by the full incorporation of Web technologies (such as PHP and JavaScript in ABCD, and Plone CMS in ISIS-NBP), while everything is conceived in the spirit of FOSS development. As a consequence of all this, the MST and XRF file architecture of previous generations will tend to disappear, while the formatting language will still be available for data management.

De Smet considered that the future developments of ISIS will no longer be classified simply as Database Management Systems, but will become the de facto standards for the management of textual, semi-structured databases. He announced that the new platforms will maintain ISO 2709 as a common data exchange format, but will be enriched with XML as a storage and exchange format. They will all use Lucene indexing and inverted files with entries up to 60 characters long, and will all support UNICODE.

2. **J-ISIS (Jean-Claude Dauphin, Computer Systems Analyst, Information Society Division - ICT in Education, Science and Culture Section (CI/INF/ICT) UNESCO – France)**

The UNESCO representative presented JISIS as the natural successor to WINISIS. He stressed that it is being developed thanks to collaboration with the University of Antwerp, and that UNESCO maintains its position with the worldwide user community and the continuity of support to libraries in developing countries. Dauphin stated that JISIS was developed from the beginning with UNICODE in mind and under the Open Source philosophy. JISIS has adopted technologies based on Berkeley DB for the management of records of variable length, as well as Lucene for indexing and data retrieval, while maintaining the typical ISIS-family formatting language. He also commented that UNESCO is working on an agreement with SUN Microsystems for further development and financing for the project. UNESCO is aiming at having a first beta-test ready by the end of 2008, and believes that a first full version of JISIS will be available in spring 2009.

3. **ISIS-NBP (Rodrigo Senra, Consultant – Brazil)**

Conceived in 2007 and presently under intensive development, ISIS-NBP represents a gigantic step to reinvigorate the foundations of the ISIS family of software.

The main challenge for ISIS-NBP has been to reconcile new technology and modernization with compatibility with previous programs. From the beginning of the design phase, it was considered that in order to be successful, the project should be an evolving platform with a simple migration path.

But on top of that, ISIS-NBP has attained other important goals. Just to mention some of them, it has overcome CDS/ISIS limitations in storage capacity and user friendliness, it has added full UNICODE support, it simplifies software maintenance, it is scalable in order to cater both for small users and large data distributors and it is easy to link to virtual libraries and external software systems.

More importantly, ISIS-NBP is a "platform" for application development, not an application by itself. So it should be regarded as a infrastructure or working environment for ISIS developers, who will be able to design better applications to meet the highest demands from end users.

During his presentation, Senra gave a short introduction to the ISIS-NBP project, commenting on its history, short and long term goals, the architecture of the program and its conceptual structure, the methodology and infrastructure of its development, the current state of the project and future steps to be taken. He finished his presentation with a brief hands-on demonstration of the working of the ISIS-NBP module.

After Senra followed **Adalberto Tardelli**, again stressing that ISIS-NBP, while still under development, represents a revolution in the ISIS environment. He stressed particularly that the new open source policy will call for a coordination of common efforts by the user community. To all the features mentioned by Senra, he added metadata compatibility, facilitating full-text storage, adapting the technology to new media and including tools for the Semantic Web technology. And all this under the FOSS methodology, transparent and sustainable, based on the reutilization of code. With full support for XML, the ISIS-NBP Platform concept provides scalability, and will also admit multiple protocols, Gateways, HTTP, RSS, XML-RPC, OAI, etc.

At this point, the ISIS3W Congress Secretary, Ernesto Spinak, announced that the source code of the programs developed by BIREME (CISIS, IsisDLL, ISIS-NBP and ABCD) from now on will be distributed under an L-PGL license and have been released on the BIREME website. His words were followed by long applause from the audience.

4. ABCD: 1st part (Guilda Ascencio, Venezuela; Egbert de Smet, Information and Library Science, University of Antwerp – Belgium; Ernesto Spinak, BIREME/OPAS/OMS - Uruguay)

Guilda Ascencio, as the main developer of the ABCD package, made the first presentation with a general introduction to the project, explaining its background and a brief description of the used technologies, the installation procedure and the modules available.

She explained that the acronym ABCD comes from the old Spanish expression for Automation of Libraries and Documentation Centers ("Automatización de Bibliotecas y Centros de Documentación"). Ascencio regarded the application as something like 'WINISIS + KOHA', in the sense that it unites all the functions of an integrated library management package: cataloguing, lending, statistics, periodicals control, Web portal with OPAC and acquisitions, while maintaining the full ISIS flexibility in terms of database structures.

Guilda Ascencio finished her first presentation with a practical demonstration of the Database Definition module, explaining the compatibility with display formats and data entry worksheets, and the general workings of the Administration module.

5. ABCD: 2nd part (Guilda Ascencio, Venezuela; Egbert de Smet, Information and Library Science, University of Antwerp – Belgium; Ernesto Spinak BIREME/OPAS/OMS - Uruguay)

The second session set forth the provisional plans for ABCD, indicating that during the conference the first demonstration version including the database management, standardized cataloguing formats (MARC21 and CEPAL), periodicals management and Web portal modules would be distributed.

Towards the end of the year the first complete version (ABCD 1.0) will be available which will include the circulation and statistical modules.

At the end of the first quarter of 2009 they hope to have ready the first training materials in English, French and Spanish.

ABCD will be compatible with the classical ISIS technology, incorporating CISIS extensions, which will permit the creation of MST files with records of up to 1 Mb and data bases up to 4 Gb, handling inverted files of up to 60 characters key length. ABCD will use IsisScripts for retrieval with PHP 5.2. Client-Server behavior will include options: either through CGI or through direct calls to executables. ABCD is parameterisable, multilingual, doesn't have a fixed format for data entry forms, incorporates standard predefined formats (MARC, CEPAL, etc....). It allows the possibility of fixed fields (leader). It will allow inline handling of FST's, incorporating a powerful record validation tool, it will permit listing and accessing all available databases, it incorporates help files with an HTML editor through FCK. It possesses an iAH interface and will be multilingual both in presentation and in the distinct application screens.

The chairman interrupted the presentation on request of the Congress coordinator, Abel Packer, Director of BIREME, who asked to make a brief comment.

INTERVENTION OF ABEL PACKER, CONGRESS COORDINATOR (Director of BIREME)

The director of BIREME emphasized how they have succeeded in overcoming specific problems of distinct types - economic, psychological and philosophical positions, "fear of the unknown" - but in the end they succeeded. BIREME doesn't regret the effort dedicated to overcoming the difficulties. It concurs with UNESCO in the significance of the classical model of ISIS, its historical and referential value. But we have to accept that there is no longer a Giampaolo Del Bigio.

The new stage that we face sets us new challenges:

- Autonomy, identity, vocation of development tool, software system automation
- Networking
- Change in the conception of content management
- Self-criticism on a professional and political plane
- A 2 to 3 year transition period
- Active participation in the user community
- Integration of new technological solutions
- Reaffirmation of our commitment to the ISIS platform
- New ideological conception adopting the storage format (XML)
- Transition to the conception of our work as SERVICE
- Future developments based on cooperation over the Net
- Acceptance of the Open Source philosophy

From now on the user community has to assume its role as author of the future of the platform. We should not wait for UNESCO and/or BIREME to come and solve our problems. The step forward in adopting the FOSS philosophy in the new applications implies that the community must provide itself with a committee that supervises and defines the evolution of the program within a democratic and self-critical debate.

5. ABCD: 2nd part (Guilda Ascencio, Venezuela; Egbert de Smet, Information and Library Science, University of Antwerp - Belgium; Ernesto Spinak BIREME/OPAS/OMS - Uruguay)

After the intervention of Abel Packer, Guilda Ascencio gave a demonstration of the behavior and capacities of ABCD's statistical module, which besides its integration with the records retrieved in a standard search, will permit representation of the results in classical systems with statistical representation, easily tabulated, with powerful graphic options, and also export facilities to various spreadsheets. She commented that it is currently under development, and is hoping that its distribution will be possible from the first beta version in January 2009.

In continuation she gave a presentation of the current state of the loans module which emphasized its configurability: it permits defining the database to which it will be applied, the field in the database which will identify the loaned article, the extraction format for the information about the same, the loans policy adopted by the service, the account control policy, and the definition of the fields and types of users of the service. Finally she commented that both the statistical and the loans module will not be available in demonstration version until January 2009.

Ernesto Spinak explained that in the immediate future they hoped to be able to distribute a system which allowed the control of loans in a group of users, allowing even the possibility of parametrising a totally automated system of self-issue.

6. New interface for ISIS databases: iAHx and indexing by Google (Vinicius de Andrade, BIREME/OPS/OMS - Brazil)

Vinicius de Andrade showed how the interface integrated in the new application (iAHx), will permit the user to parameterise his databases on the Web, furnishing systems of metasearch open to the new Google indexing tools. The user will be able to access tools that define what database and what fields will be open to indexing by Google via the Google Webmaster methodology.

7. SciELO articles available to the agricultural community through OAI-PMH in AGRIS AP XML format (Stefka Kaloyanova, FAO – Italia; Gustavo Fonseca, Brazil; Fabio Batalha, BIREME/OPS/OMS – Brazil; Solange Santos, BIREME/OPS/OMS - Brazil; Abel Packer Director, BIREME/OPS/OMS – Brazil; Steve Katz; FAO – Italy)

Stefka Kaloyanova presented an example of cooperation between BIREME and FAO. An important collection of records in SciELO published in journals of interest relevant to agricultural sciences will give access to the full text articles using the AGRIS AP XML format, by collecting the SciELO metadata and including them in the AGRIS repository. She explained the methodology employed and the problems encountered in the integration of different systems and protocols like those of SciELO and OAI PMH

This work represents an example of how repository systems with different storage format conceptions can exploit the exchange possibilities of the XML format for the integration of common services.

8. KIT, the Royal Tropical Institute of the Netherlands (Peter Hessels; KIT – Holland)

Peter Hessels presented a tool for the preservation of cultural heritage conceived within the philosophy of the UNESCO "World Memory" project.

KIT is working in this field with various institutions in which CDS/ISIS is installed. Peter presented the cases of the National Museum of Surinam in Paramaribo and the Sintang project, Regional Information Centre of Borneo and Indonesia, as examples of the application of the project of adaptation of the software OBJECT ID in which are integrated museological and bibliographic descriptions.

9. IsisHome - The first Web Hosting Service totally dedicated to CDS/ISIS (Paulo Cattelan, Control Informação e Documentação Ltda – Brazil)

Paulo Cattelan presented a report on the difficulties, problems and possible solutions that are faced by small libraries, archives and centers of documentation, users of CDS/ISIS, when they face the necessity of putting their resources on the Web, in particular with the difficulties that are encountered with current commercial providers of Internet with executables and/or CGI applications on their servers that make it impossible to accommodate the traditional instruments of BIREME such as WWWIsis.

As a means of overcoming these difficulties, Control decided in 2007 to construct its own structure for ISIS Web hosting.

Their clients receive a preinstalled copy of WWWIsis, have access to technical support specialized in CDS/ISIS, and receive an e-mail containing the information necessary to develop their scripts. They have also created a help line in order to help resolve the most frequently met installation problems. The new generation of CDS/ISIS applications designed for the Internet, such as ABCD and ISIS-NBP show an important immediate demand for their services, and Control is prepared to provide them.

10. IsisMarc: an experience of collaborative work (Emiliano Marmonti, SIU/MEC – Argentina)

Emiliano presented the result of a collaboration between the consortium SIU and the National University of Tucumán in the utilization of software development tools based on a reengineering of the product IsisMarc to operate under a client-server architecture, and also the creation of an internationalized server interface using the language PHP and various modules of BIREME's WXIS, in order to be able to interact with ISIS databases, integrating the development with the BIREME ABCD package, procuring a convergence in the storage methodologies and making the architecture of the programs compatible, with a view to facilitating the progressive migration of the current users of IsisMarc.

IsisMarc client/server is a version of IsisMarc that represents a radical change in architecture virtually transparent to the final user. It consists of two principal components: IsisMarc client and IsisMarc server. The first is furnished with a "controller" according to the Model View Controller (MVC) model. The communication protocol between the two uses XML coded under UTF-8.3, and both are furnished with a set of functions dedicated to publishing databases in MARC21.

11. ABCD: part 3 (Guilda Ascencio, Venezuela; Egbert de Smet, Information and Library Science, University of Antwerp – Belgium; Ernesto Spinak BIREME/OPAS/OMS - Uruguay)

In her third presentation, Guilda Ascencio showed the behavior of the last two modules of ABCD, Periodicals Management and Kardex, which she hopes will be integrated in the first beta release in January 2009.

12. Platform SIDALC / Agris2000 based on ISIS tools (Manuel Hidalgo O., SIDALC - Costa Rica)

Manuel Hidalgo showed the participants the results of 9 years of experience of the Servicio de información y Documentación Agropecuaria de las Américas (SIDALC - Service of Agricultural and Livestock Information and Documentation), developed by IICA. In this service, of which 143 institutions are members, he explained, there are 223 integrated data bases, conceived with different methodologies and using several kinds of management software. They have a total of 1,9 million records, all of them indexed by Google and Google Scholar, with an average growth rate of 27,000 records per annum. The service improves information interchange between information specialists over no less than 23 countries in Latin America and the Caribbean.

ISIS has been the main base for its development, since most of the network's members use this tool for collection management. This has led them to adopt WXIS, with assistance from BIREME, thus creating an Agricultural and Livestock information Mega-Database. Among the working methodologies can be found digital libraries, using tools developed by FAO like WebAGRIS, for data entry and recovery, and others like LISAGR which include modules for acquisitions, loans and statistics.

13. Virtual Library of Rio Grande do Sul: Making Available ISIS Databases on the Web (Israel J. Cefrin da Silva, Tânia L. Angst, Luciano Zanuz, Helena Leiko Endo, Fundação de Economia e Estatística Siegfried Emanuel Heuser – Brazil)

Israel Cefrin showed the Biblioteca Virtual de Rio Grande do Sul (Virtual Library of Rio Grande do Sul) built on CDS/ISIS standards as a cooperative working tool among information units of several public institutions for keeping an online catalogue for the interchange of bibliographic records in MARC, ISO and XML formats.

This system, currently with more than 100,000 records, allows searching in several fields (author, title and subject) using any browsing device (he showed a demo using a mobile phone terminal), thanks to the adoption of the W3C HTML protocol.

Israel also referred the difficulties encountered during its development, specially due to the OpenIsis development break, the release of PHP version 5, and a server platform migration from Windows to Linux, which made them to go back to WXIS as a search engine (thanks to a new release from BIREME in February 2007). The code migration process is now in its last step.

14. Two cases for the use of WXIS: news files and library system (Jorge Luis Valverde Oliveros – Peru)

Jorge Luís Valverde showed two development experiences using *Wxis* and WWWISIS tools as information management solutions.

One of these experiences was with Editorial Santillana of Peru. They needed a complete web based library system allowing predefined searches, and modules for the control of catalogued materials.

The other experience was for the project "Niños del Milenio" (Children of the Millenium) managed by Save the Children - Peru first, and later by GRADE. They needed to store and manage relevant information found in the media for their work and research.

In both projects he showed how they can perform searches within several databases at the same time, do different searches in the same database, set up access rights, store user data (also for statistics), generate listings according to the content of certain fields, predefine searches, capture one or several records, store or search results, and produce reports without any design limitation, combining WWWISIS, *Wxis* and typical web resources such as Javascript.

With these two examples, he wanted to show the audience the world of possibilities available when using WWWISIS and *Wxis* for developing applications, satisfying both the needs related to organizing information and the users' needs.

15. Digital Video service using the search engine IAH improved with the output format (pft) by streaming (Diana Huamán, José Villanueva, PAHO – Peru)

Diana Huamán presented a solution applied to a digital video library through digital streaming using an ISIS data base, WWWISIS, and the IAH search interface. She explained how the streaming technology allows the simultaneous transfer of digital media (in this case, video) allowing easy display without having to wait for the transfer of big files through the internet, using the resources offered by the IAH search interface.

The digital video streaming service is part of the plan of the Peruvian national office of the Pan-American Health Organization.

16. ROUND TABLE - ISIS and Open Source (moderator: Adolfo Hernández Arcediano, IEDECYT – Spain, Members: Rodrigo Senra Consultant – Brazil, Adolfo Hernández Fábregues, Consultant GNU - Spain, Emiliano Marmonti, EUI-MEC – Argentina)

Panel for analysis and open discussion with the audience about cooperation modes in the development of ABCD, ISIS-NBP, JISIS and other programs under FREE/OPEN-SOURCE SOFTWARE.

The secretary of the Meeting, Ernesto Spinak, introduced the moderator and the experts summoned. He invited them to make a brief statement of their experiences in the realm of Open Source, and to concentrate on how BIREME's decision to apply L-GPL licensing to the new products of the ISIS family, and UNESCO's commitment to apply the same license to the soon to be released JISIS, will affect the evolution of habits and roles of actors in the ISIS environment (UNESCO, BIREME, National Distributors, application developers and final users). After this brief introduction he gave the floor to the moderator, who after introducing the panel members to the audience, asked them to point out what guidelines must be followed in a cooperative development process under the new mode of developing software in the Free/Open Source Software philosophy. After that he let the experts to give their opinions, asking them to be as concise as possible. After a short explanation of the current state of some Free/Open Source projects in which they participate, basically they all agreed on the following:

Any Open Source project, in order to succeed, will need a reference organization or institution with prestige and strong roots in the target community.

It is essential, for preserving unity during the project's evolution, to provide a decision control system which is independent and composed of experts chosen by the community of users.

It is necessary to have active participation from the users, collaborating with developers in the definition of utilities and testing innovations and advances included in successive releases.

It is also necessary to get the collaboration of all community members in the elaboration and updates of educative resources and also on the elaboration of manuals and documentation, for several knowledge levels.

A release and distribution system must be created, open to the whole community, where developers' contributions as well as users' difficulties are made public.

After the audience had its turn in making enquiries, expressing doubts and questions, the Secretary handed over to the President of the Meeting, who presented to the audience the draft of the final declaration, prepared by the Scientific Committee members. The draft was commented on paragraph by paragraph, and at the end of the discussion the participants agreed on the following text:

Final Declaration (Adalberto Tardelli, BIREME/OPS/OMS – Brazil; Egbert de Smet, Information and Library Science, University of Antwerp - Belgium)

Rio Declaration on the Future of the ISIS Software

The third World Meeting of ISIS took place in Rio de Janeiro from 14 to 16 September 2008, organized by BIREME/PAHO/WHO, with more than 150 participants, from 31 countries and 4 continents, representing tens of thousands of ISIS-users worldwide, around a programme that addressed the current state of the ISIS Software Family as well as new important developments towards the updating of the ISIS platform.

The participants in the third World Meeting of ISIS who met on 14 to 16 of September 2008 in Rio de Janeiro, at the invitation of BIREME/PAHO/WHO:

Recognizing that:

- The ISIS Software Family has a unique technological concept and developmental mission to cope with Information Storage and Retrieval Systems (ISRS), particularly for developing countries where the technology is widely known and used;
- The new developments led by UNESCO (especially the J-ISIS project showing renewed commitment) and BIREME (especially the Network Based Platform and the integrated library management software ABCD) represent important advancements toward the updating of the ISIS platform according to the state of the art in software development as applied to information storage and retrieval systems;
- The ISIS Software Family has now fully embraced the Free and Open Source Software approach and the support of UNICODE structures to be fully open and multilingual, which best suits its special mandate to promote self-reliance, sustainability and knowledge-creation-by-sharing with the librarians and information workers;
- The enormous merits and commitment of both UNESCO and BIREME in developing and supporting ISIS, which has brought an extraordinary contribution to the automation of bibliographic databases, information systems and libraries mainly in developing countries, and has created, strengthened and developed capacities on ISRS, and therefore increased the organization and visibility of scientific, technical and cultural information from the developing world.

Affirming the continued value of the facilities offered by the ISIS Software Family;

Have decided to:

1. Establish an international steering committee (provisionally consisting of the ISIS3 Organization and Scientific Committee) and accredited by UNESCO, to assist and collaborate with UNESCO, BIREME, and the ISIS Software Family Developers Community in fundraising, quality control and promotion;
2. Support and contribute to the development of the ISIS NBP coordinated by BIREME under a FOSS approach and envisage its wide adoption and dissemination to update ISIS applications; to this end, a wide capacity building programme on the new software should be prepared;
3. Address national commissions to UNESCO in order to inform them about the impact of the ISIS Software family so that they can request UNESCO to pursue its commitment and support;
4. Redefine the status of the ISIS national distributors that will assume a new role in supporting training and promotion activities in their local environments;

Recommend:

1. That UNESCO and BIREME pursue their commitment in leading the maintenance, support and updating of the ISIS Software Family;
 2. Preparation of a Memorandum of Understanding between UNESCO and BIREME to ensure sustainability, especially for:
 - a. the preservation of the technological identity and specific developmental mission of ISIS;
 - b. the facilitation of the use of BIREME's ISIS-technologies in all UNESCO's member states.
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