DIGICLIC.

DIGIBIS

DIGIBIB®

V. 9.1

DIGIBÍS customers already have the opportunity to participate fully in the reality of *Linked Open Data* and consume and produce, themselves, **bibliographic information** adjusted to the *reality of international library science.*

SUMARY

DIGIBIB 9.1: the Linked Open Data application for virtual libraries

DIGIBIB version 9.1 is not only an update the of the DIGIBÍS library management software, which, in any case, is described in pages 6 and 7 of this newsletter, but also the consolidation of a data model that results in an implementation of the principles of the Semantic Web, as established by Tim Berners-Lee in 2005, in the five points of Linked Open Data.

DIGIBÍS is fully committed to Linked Open Data technology, so that both users accessing information coded within DIGIBIB and librarians coding this information can clearly benefit from a wide set of information sources, databases and value vocabularies in constant growth, in terms of both number and quality. In September 2014, the OCLC published a study that categorised the implementation of Linked Open Data in archives, libraries and museums.

> It represents the consolidation of a data model that embodies the principles of the Semantic Web in a single application

This report, which mentioned the Ignacio Larramendi Foundation and its DIGIBIB software as the only Spanish example and the only example in Spanish, clarified how much LOD-LAM represent a perfectly operational reality for leading institutions in the field of production and use of archival, bibliographic and museological records.

With the emergence of DIGIBIB version 9.1, DIGIBÍS clients already have the opportunity to participate fully in the reality of Linked Open Data and to consume and produce, themselves, bibliographic information appropriate to the status of this matter in the international reality of library science.

Double issue of DIGICLIC

Given the extent of changes in DIGIBIB version 9.1, it seemed appropriate to give special importance to this new double issue of DIGICLIC, which features the international progress of Linked Open Data technology on all fronts, how it is included in new versions of DIGIBÍS software and, in particular, in the digital management of libraries that, from where it is slowly seeping to archives and museums. ■

INTERNATIONAL

Changes in the Europeana

I n this double issue of DIGICLIC, we highlight the most important changes that have taken place in the definition of the Europeana Data Model throughout 2014, which saw the publication of version 5.2.5 on 22 May and 5.2.6 on 17 December.

Although the documentation of the changes introduced in each new version in somewhat confusing, we will point out the most significant changes in the two versions for 2014, meaning changes that Europeana must introduce for better interrelationship and navigation of data, for better data management and for distinguishing the processing it gives to data supplied by providers.

Version 5.2.5 includes new properties:
- edm:europeanaProxy
- edm:begin
- edm:end, edm:preview
- edm:datasetName.

The edm:europeanaProxy property consists in an internal use marking for Europeana to distinguish proxies of suppliers from the proxies that make up Europeana. It should be noted that proxies are one of the methods offered by the EDM to create aggregations of cultural heritage objects and their digital representations, and that this method can be used both by content suppliers and Europeana.

One of the differences between the Europeana Data Model and the data model of the Digital Public Library of America, which published its Metadata Application Profile v.3.1 on 3 July 2014, is that the latter saw the importance of creating classes and properties to differentiate collections of digital objects from the start, not only by the supplier of the data but also due to an object belonging to a certain collection, as well as the characteristics of this collection.

In fact, the relationships of inclusion of a certain object in a specific set, in particular hierar-
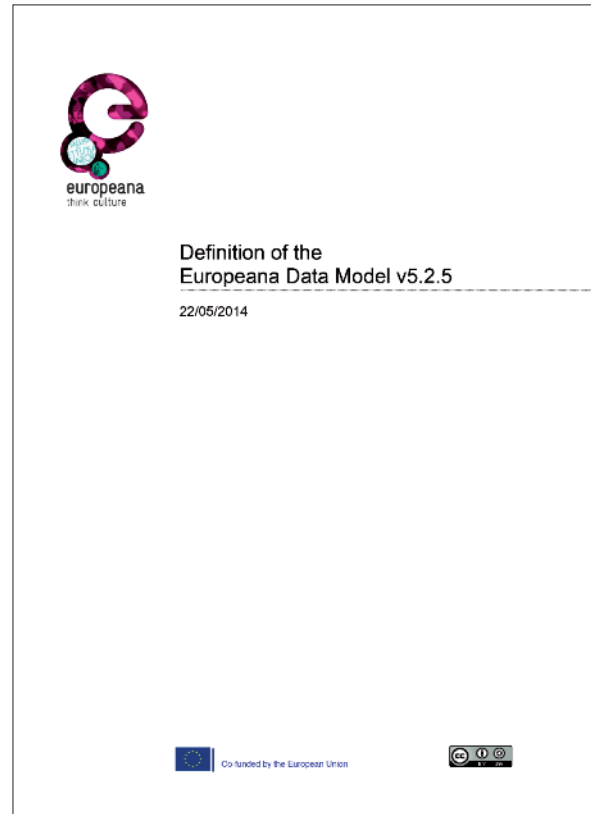
Definition of the Europeana Data Model v5.2.5.

chical ones, in a collection or a theme or processing subset are the reasons behind the most significant changes in the latest versions of the Europeana Data Model.

For its part, the Europeana Data Model has included the dcat:Dataset class in version 5.2.5, which it defines as "a collection of data, published or processed by a single agent and available for access or download in one or more formats. Despite being similar to the dcmitype:Collection definition of the DPLA, it introduces a distinguishing nuance.

The dcmitype:Collection class (data set) is both an information package and a collection of data. A data set can be a theme grouping, it may have been generated by a certain source or process or it may come from a specific provider.

You can see the reasons why it is necessary to identify a specific data set: to create data group-

Data Model 5.2.5 and

ings for the purpose of facilitating access and consultation, to process and handle certain data sets differently and to maintain an auditing control (such as cleansing, enrichment, etc.) or to publish them in Linked Open Data as subsets of Europeana. In fact, the edm:datasetName property, which is also new for version 5.2.5, allows for assigning identifiers to any data set in Europeana.

This change is consolidated in version 5.2.6, of 17 December, which introduces a new namespace within the Europeana Data Model. Even though, as we have said, the dcat:Dataset and dcat:datasetName classes were created in the previous version, current version 5.2.6 adds W3C Data Catalog Vocabulary (DCAT) while also highlighting the dcat:Dataset class reference document, including it in the section of "Relevant Classes from other namespaces". Without a doubt, this shows the importance given to this class by the development team of the standard.

Definition of the Europeana Data Model v5.2.6.

The strategic lines of Europeana are reflected in the updates of the EDM

Thus, we see that the Europeana Data Model (EDM) is evolving on new properties within its namespace, with the addition of new classes and properties imported from other, more generic data models with as DCAT. A more in-depth analysis would allow us to see how the equivalences with other specific data models, such as the Conceptual Reference Model of CIDOC, are referenced.

Version 5.2.6 includes changes to the comments of the dc:creator property so that its use
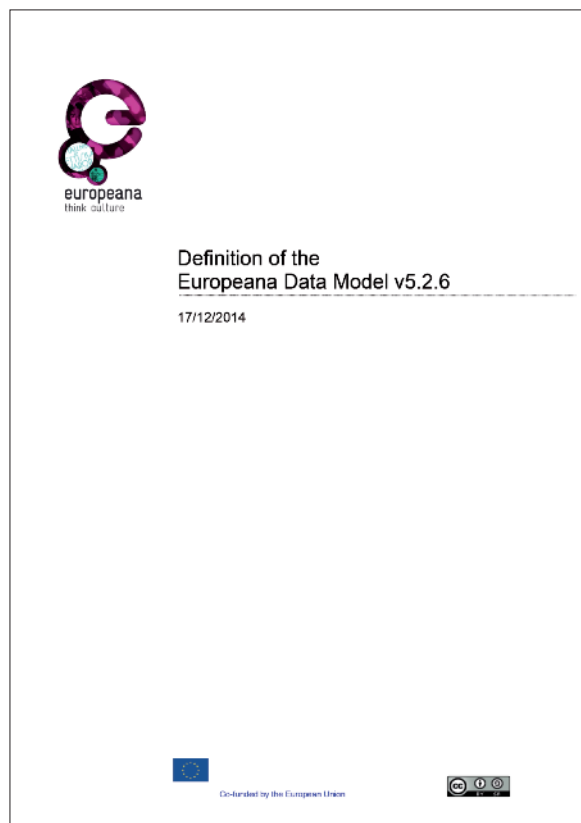
would be compatible with the edm:WebResource class. This small change is very revealing of the process that must be followed by a common data model so it can be understood accurately by any user and not lead to misuse due to vagueness or inaccuracy.

It also reflects that the progress and consolidation of the processes for digitisation and creation of digital libraries, archives and museums on the Internet increasingly requires the identification of the author of a web resource.

Lastly, we should mention the introduction of the cc:License class, from the namespace of the Creative Commons Rights Expression Language, and the change to the label of the edm:rights label, which is defined in this version as a "Standardized Rights Statement", while the previous version only referenced Europeana Rights. ■

INTERNATIONAL

Europeana Annual General

On 30 and 31 October, the Prado Museum in Madrid held the fourth General Meeting of the Europeana Network. The meeting focused on the presentation and approval of the 2015-2020 Strategic Plan and on the new structure and governance of the Network. Likewise, Recommendations were made for the 2015 Business Plan.

The hosts of the Meeting were Nick Poole, chairman of the Europeana Network, and Miguel Ángel Recio Crespo, general director of Fine Arts and Cultural Assets, Archives and Libraries, as the Spanish representative. For his part, Bruno Racine, chairman of the Europeana Foundation and of the National Library of France, spoke of the strategy and governance of Europeana, a structure that was expanded by the presentation *Introduction to Europeana new Governance structure* by Jull Cousins, executive director of Europeana.

DIGIBÍS was present through its director, Tachi Hernando de Larramendi, the director of Software Development Projects, Jesús Domínguez Muriel, consultant Francisca Hernández, César Juanes and Susana Hernández, from the Innovation Department, Javier Mas and Jorge Ramírez of the Sales Department, and Xavier Agenjo Bullón, Project Manager.

During the Meeting, DIGIBÍS maintained bilateral relationships with representatives from libraries from the entire network and they spoke about potential cooperation in the field of the semantic web, especially with Víctor-Jan Vos, supervisor of Programmes, Policies and Research at Europeana Pro.

From now on, Europeana will be governed by the Members Council.

Due to the exponential growth of Europeana, which has over 3,000 members, and with the goal of improving and reaching its goals, the Council

was created, with 25 members chosen from the 47 candidates in the election. Among its 25 current members, we can mention Aránzazu Lafuente Urién, head of the State Archives Department of the Ministry of Culture. The number of Council members will be expanded to 50 after the initial transition phase.

Among other things, the Members Council will take care of prioritising the work of Europeana and formalising the agenda of the annual conference. To do this, it has a Management Board made up of six members.

Meeting 2014

The General Meeting of Europeana 2014 was held in the Prado Museum of Madrid. Top left, at the centre: Jesús Domínguez Muriel, director of Software Development Projects, and Jorge Ramírez, International Relationships manager, both from DIGIBÍS, and several aspects of the Meeting.

The new Europeana governance structure will be revised in April 2015 and it is expected to become fully established by late 2017.

The meeting was also useful to share different experiences and projects related to the contents of Europeana and to the creation of new services for users among associate members.

As part of the section on best practices, the involvement of Wikipedia in the project to achieve a massive introduction of Europeana data into Wikipedia was presented, among other things.

Finally, different working panels were also carried out to collect proposals and improvements related to different topics (data quality, understanding of the role of users as generators of contents in Europeana, development of content, etc.), with the extensive participation of members. ■

EUROPEANA

2015-2020 Europeana

Following the 2011-2015 strategic plan, the General Annual Meeting of Europeana, which was held in Madrid on 30 and 31 October 2014, approved the new Europeana strategic document, called *Europeana Strategy 2015-2020.*

This document achieves a combination of strategies, data models and even the working method of the different professionals at libraries, archives and museums, especially taking into account the final product accessed by users, who rarely distinguish the differences between these professions.

"Europeana Strategy" sets the objectives to achieve during 2015-2020

The nearly essential objective of this Strategy is the management of the digital heritage collection, taking two premises into account: respect of copyright and easy access to heritage for users.

The heritage collection sometimes encounters the issue of intellectual property, which not only limits digitisation and publication on the web, in the case of monographs, published according the different laws over the last 70 or 80 years, but also the intellectual property arising from possession of a work.

Thus, a museum may be reluctant and limit or refuse to publish the digital copy of a work, and the same thing may happen with an archive and even libraries.

From Portal to Platform

The new Europeana platform will contain three levels: a central one that will contain the data, contents and technology; an access level where these data, contents and technologies will be standardised, the implication levels will be defined and the access interfaces will be provided; and a service level where three types of users will work: professionals, end users and copywriters. According to the Europeana Strategy, the professionals category will be composed of all those people directly related to Europeana, the Europeana network and content providers.

Its goal: to turn Europeana into the largest reliable repository of cultural heritage

2015-2020 Three priorities

With the goal of becoming the largest repository of cultural heritage, the following priorities were set for this strategic plan.

To improve the quality of data. This is what should set Europeana apart from a search engine like Google, Flickr or Pinterest. Within the improvement of the data, we should note the use of Linked Open Data, maintaining OAI-PMH and the use of APIs, and adding geolocation and multilingual features.

A new repository architecture will be searched for accessing digital objects that is more attractive to new institutions and that will allow for tripling the material available from Europeana.

Greater data accessibility To do this, strong relationships have been established with the set of recommendations of the Europeana Public Domain Charter, which establish precisely the degree of accessibility of the data and, especially, attempt to define specific and well established principles so that accessibility of Europeana con-

Strategic Plan

'We transform the world with culture'

Europeana Strategy 2015-2020

tents is always relatively clear. Access to these data should also provide information for professionals, so that, for instance, statistical information is always available regarding the actual use, or consumption, of the information that archivers, librarians and museologists publish on the web.

For end users, microsites will be created to complement searches on the site, distributing the entire set of information into a series of subsets with their own sites, so to speak. Copywriters can also reuse, through the Europeana portal, all types of informational resources, such as for tourism, as it considers that creative industries constitute 3.3% of the gross industrial product of Europe and Europeana hopes to become part of the fuel boosting the industry.

More relevance for partners, through the visibility of memory institutions and the reduction or refunding of costs, allowing copywriters to stimulate the economy with innovative ideas and new businesses.

However, it must not lose sight of the fact that success also comes from the contribution to sociocultural knowledge and the strengthening of the network in the face of new challenges.

Funding of Europeana

The document approaches how this entire project will be financed and establishes a clear budget.

The provider of funds is the Connecting Europe Facility (CEP). Despite the fact that the enormous cut in the CEP, from 9,000 million to 1,000 million, has forced Europeana to reduce its expenses by exactly the same proportion, everything is expected to operate with 10 million euros. ■

INTERNATIONAL

Consolidation of the Digital Public Library of America

The Digital Public Library of America (DPLA) will celebrate its second anniversary in Indianapolis on 17 and 18 April 2015.

Renowned as an exemplary source of resources by different organisations and publications, it holds over 9 million records from libraries, archives and museums, as well as an increasing number of partners and participants constituting the DPLA, which already has a strategic plan for the next three years *(DPLA Strategic Plan 2015 through 2017)*.

Priorities: completing the network of participants and increasing the diversity of records

Through its participants or hubs, the Digital Public Library of America seeks to represent the diversity of institutions, materials, regions and types of records belonging to and developed in the United States of America.

Its data structure is based on a reuse of EDM

Among its data providers, the DPLA has institutions of great importance, such as the Library of Congress, the National Archives and Records Administration, the Smithsonian Institution, and the Hathi Trust. For instance, the New York Public Library has over 1 million records and the Internet Archives has over 255,000.

MAP and EDM

The Digital Public Library of America uses the DPLA Metadata Application Profile (MAP) as a data structure, which is already in version 4.0 and based on a reuse of the Europeana Data Model (EDM).

It should be noted that the DPLA has been having important repercussions in all Latin American countries, which have set a similar objective (aimed more at politics than library science).

Significantly, the DPLA has had, from its launch on 18 April 2013, an application developed by DIGIBÍS and recognised by Marca España, which allows for searching the DPLA and Europeana simultaneously, providing access to approximately 50 million digital objects, a figure that increases almost daily. ■

Main page of the Digital Public Library of America and part of the applications it offers, including "Search DPLA and Europeana", developed by DIGIBÍS.

Implementers of Linked Data in the OCLC report

On 19 September 2014, the OCLC published an international study carried out between 7 July and 15 August this year, on the implementation of Linked Data.

The study is based on a survey completed by 122 institutions in 15 countries. It describes 76 Linked Data projects or services, 25 of which use Linked Data, 4 of which publish in Linked Data and 47 of which publish and use Linked Data.

The Ignacio Larramendi Foundation: the only Spanish institution in the study

The 122 institutions covered by the study include, Cornell University, the Digital Public Library of America, Europeana Foundation, the Library of Congress, the National Library of Medicine, the OCLC itself, the Smithsonian Institution, and Oxford University; while the only Spanish institution in these 122 is the Ignacio Larramendi Foundation, which uses DIGIBIB software, developed by DIGIBÍS. This shows the extent to which DIGIBÍS and the Ignacio Larramendi Foundation are committed to ITC to achieve their strategic objectives.

The Ignacio Larramendi Foundation (FIL) uses DIGIBIB software developed by DIGIBÍS

The OCLC highlights 5 points in the Study:

• Two are the main reasons for which the surveyed institutions implement Linked Data projects and services:
  • to improve their own data, through the use of data from other services,
  • to provide better results to users.ç

• The four most widely used Linked Data resources are id.loc.gov, DBpedia, Geonames and VIAF.

• The two main reasons for which linked data projects publish linked open data are:
  • to publish data to a wider audience on the Internet
  • to experiment and raise awareness about what can be done with structured data sets such as Linked Open Data.

• The four largest data sets of Linked Open Data (LOD), with over 1 billion triplets, are WorldCat.org, WorlCatWorks.org, Europeana, and the Europeana Library.

• A large part of the experience obtained from these projects is related to the preparation and management of the project itself.

This fact should be connected with the choice of the Virtual Polymath Library, of the Ignacio Larramendi, as a case study for both the W3C Library Linked Data Incubator Group and Europeana.. ∎

Internationalisation of DIGIBÍS

INTERNATIONAL

Following the development of DIGIBÍS in Europe as a consequence of the Europeana project, the company has started a series of steps to expand in the Latin American market, beginning in Mexico.

Two visits to the country have been made so far. In June 2014, Tachi Hernando de Larramendi, general director of DIGIBÍS, and Felisa Matarranz, coordinator of the IT department, contacted both cultural institutions in the field of libraries and potential distributors.

During a second visit, which took place in November, Francisca Hernández, technical coordinator, and Jorge Ramírez, of the Commercial Department, held meetings with the chairman of Conaculta (the National Centre for Culture and the Arts) and the National Institute of Anthropology and History.

Between these visits, meetings have been held with the following Institutions: General Directorate for Libraries, CENART (General Directorate of the National Centre for Arts), INAH (National
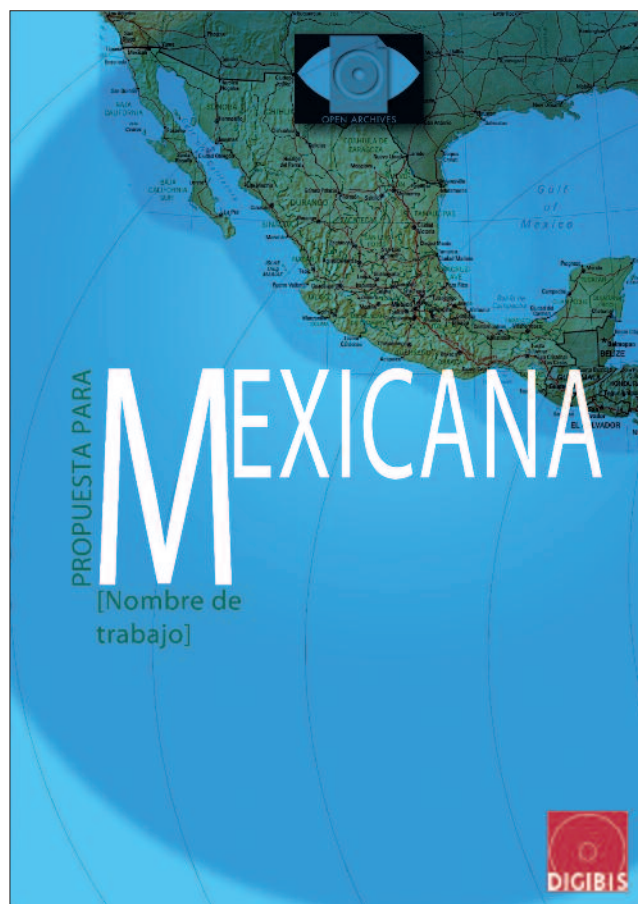
Cover of a document studying a proposal for a large national repository in Mexico. Prepared by DIGIBÍS with the working title of Mexicana.

DIGIBÍS has made important relationships in Mexico with Conaculta

Institute of Anthropology and History), INFOCON-SULTORES, the Vasconcelos Library, Grupo de Difusión Científica S.A. de C. V., and the National Autonomous University of Mexico, the General Directorate for Libraries and the Conaculta Digital Agenda.

As a result of these trips, DIGIBÍS received a visit from Jorge von Ziegler, Coordinator of the Conaculta Digital Agenda of Mexico and promoter of an initiative for the creation of the Mexican Digital Public Library, after the foundation of the DPLA in 2013 and in its image, who showed inter-

est in the project presented to him and complete agreement with the regulations and standards included in it (Linked Open Data, OAI).

Conaculta Digital Agenda

We are awaiting the publication of the Conaculta Digital Agenda of Mexico, which will serve as a roadmap for the different digitisation projects for the Centre.

Expectations are very good because the meetings held, in particular with the Chair of Conaculta, show hope that the project presented to them, Mexicana, can reach fruition. Likewise, later contact has been maintained with the INAH, even though not much progress has been made. ■

Semantic Enrichment of the Digital Library of the Real Academia Nacional de Medicina

The Digital Library of the Royal National Academy of Medicine was one of the first to carry out the semantic enrichment of authorities, in view of article 9 of the resolution of 9 May 2014, of the Secretariat of State for Culture, establishing the call for submissions for subsidies to the bibliographical patrimony for the creation and transformation of digital resources and their dissemination and preservation through repositories.

This enrichment affects authority records for subjects, persons, entities and geographical locations. The step taken by the Royal National Academy of Medicine not only facilitates the search of information for users of its Digital Library but also represents a homogenisation of authorities, something very important when you take into account that its records are harvested by the Spanish aggregator of the Ministry of Education, Culture and Sport, Hispana, and by the aggregator of the European Union, Europeana, due to conforming with the Europeana Data Model. The repository will also be harvested by OAIster and WorldCat.

Authority records for subjects, persons and geographical locations have been enriched with Linked Open Data resources from the SKOS Subject Header List published by the General Sub-Directorate of Library Coordination, the Virtual International Authority File (better known as VIAF), DBpedia, GeoNames and the Library of Congress Linked Data Services.

The Subject Header List, thanks to the downloadable files in RDF/XML and MARC 21 made available to libraries by the Ministry of Education, Culture and Sport has been imported into the database, automatically enriching the authorities of the Virtual Library of the Royal National Academy of Medicine. Other Linked Open Data links have been manually enriched.


Top: person record; bottom: geographical record.

At the level of cataloguing, this task has been done adding a 024 field of the MARC-21 format for each. In the Record view, the user is given a dual link: a drop-down summary with the links, provided by the corresponding Linked Open Data institution, and a link to the full record at the source website. ■

New interface for the Digital Library of the Community of

Above these lines: home page of the Digital Library of the Community of Madrid. Top right: page for accessing featured collections. Bottom: periodicals library.
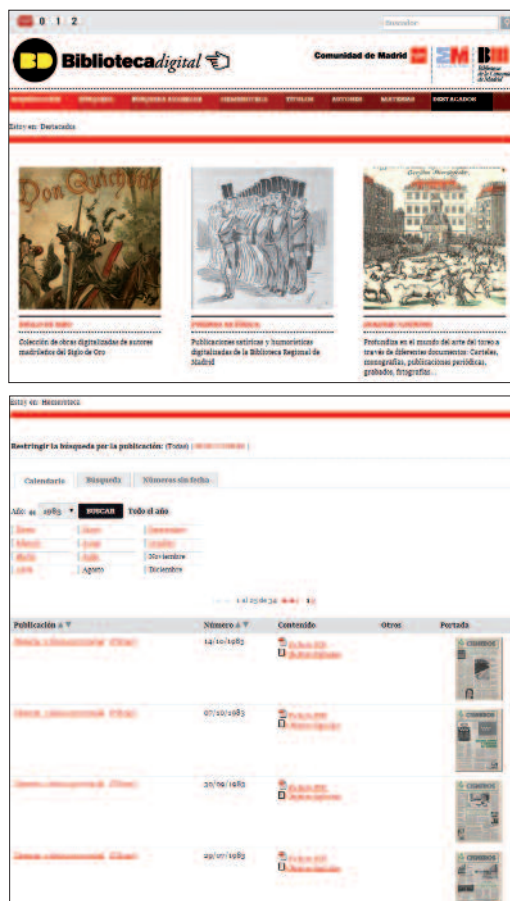
The Digital Library of Madrid, which can be accessed through the URL http://www.bibliotecavirtualmadrid.org, now has a new custom search interface, the design of which has been developed by the IT and Art Departments at DIGIBÍS, which highlights both the consultation and the display of results.

The Digital Library of Madrid holds bibliographic documents and periodicals, posters, maps, graphic works, etc. which have already been digitised and for which the originals are kept at the Regional Library of Madrid and other Institutions, such as the Spanish University Foundation, the Lázaro Galdiano University and the Cardenal Cisneros Institute.

The new interface of the Digital Library of the Community of Madrid features a page dedicated to its featured collections. It currently features three collections: one dedicated to the work of authors from Madrid in the Golden Age; another one to periodical publications of a satirical or humoristic nature of the Regional Library of Madrid; and one with documents about bullfighting Madrid, which contains posters, monographs, press, engravings and photographs.

The eighteen advanced search fields allow for refining results efficiently. Furthermore, they can be filtered by source library.

Through the Periodicals tab, users can access digitised periodicals, currently covering from 1707 to 1983. Search in this section is chronological (by year, month and day). ∎
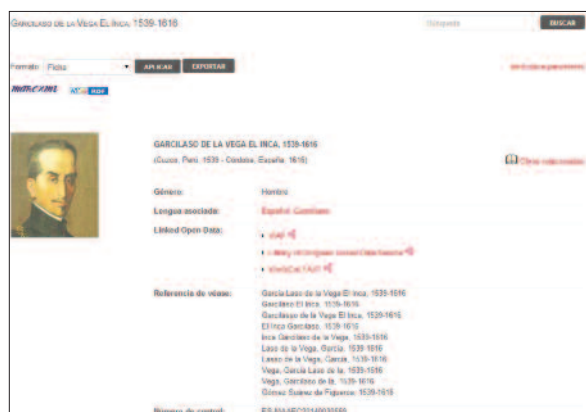
AECID Digital Library

The AECID Digital Library (BIDA) [http://bibliotecadigital.aecid.es/], which aims to preserve and disseminate the rich bibliographic heritage that the Library of the Spanish Agency for International Development Cooperation keeps in paper and other media is already operational.

The digital collection, with almost two thousand works (1,978) and over one million (1,036,595) digital objects, including manuscripts, books, periodicals, articles, illustrations and

It holds three collections: The Hispanic Library, the Islamic Library and AECID Publications.

Digital Library of the Spanish Agency for International Development Cooperation (AECID).

sound materials it holds, and which has been growing yearly since 2007 according to the digitisation plan, was spread through the virtual libraries of the Complutense University, the Miguel de Cervantes Virtual Library and the Virtual Library of Bibliographic Heritage. This was the main reason behind the creation of a digital library for the AECID.

To provide the maximum possible dissemination and visibility on the Internet, the AECID Digital Li-

Sample authority record with LOD links.

brary applies the MARC, RDA, LOD/EDM, ISO 2709 standards, the Dublin Core RDF , BibTeX, SWAP-JISC, MODS and MARC-XML metadata schemas and the OAI-PMH protocol. This way, the AECID Digital Library participates in national projects such as Hispana and international projects like Europeana and OAIster. To this, we can add the semantic enrichment of authority records with Linked Open Data sources of the Virtual International Authority File (also known as VIAF), DBpedia, Library of Congress, WorldCat, data from the National Library of Spain and the National Library of France.

The AECID Digital Library has three collections: The Hispanic Library, the Islamic Library and AECID Publications. Consultation of the catalogue offers many search fields (title, author, subject, publication date, signature, ISBN/ISSN, type of document or digital object, and others) and allows for restricting searches by collection or collections. The periodicals library, with an independent consultation section, allows for searching by date (year, month and day). ∎

LAB APPLICATIONS

HISPANA now holds over

HISPANA, the national directory and aggregator of digital objects, reached the 5 million record mark on 1 September 2014[1]. This figure has not been given the importance it deserves, considering that we are living in times where the budgets of public administrations have only fallen. This figure is also very telling of the good intellectual and practical work of those at Hispana.

As usual, to appreciate the magnitude of something, it is necessary to relate it to others. Thus, it can be observed that, on that date, the 207 repositories harvested by Hispana were well above the 122 repositories of the Deutsche Digital Biblio-

In terms of number of records, they represent 67% of those of the DPLA

thek and the number of records represented 67% of those of the Digital Public Library of America.

**The OAI-PMH protocol
must be further developed**

All records that make up Hispana are the result of harvesting according to the OAI-PMH protocol, which means that, in Spain, there are at least 207 repositories that publish their data in compliance with this standard. If we take into account that Hispana itself contains 614 digital collections in its directory, it can be seen that the OAI-PMH standard is only barely disseminated in Spain, as only 33.7% of digital collections in Hispana have an OAI repository.

The success of Hispana is based on two methodological principles, the first one being
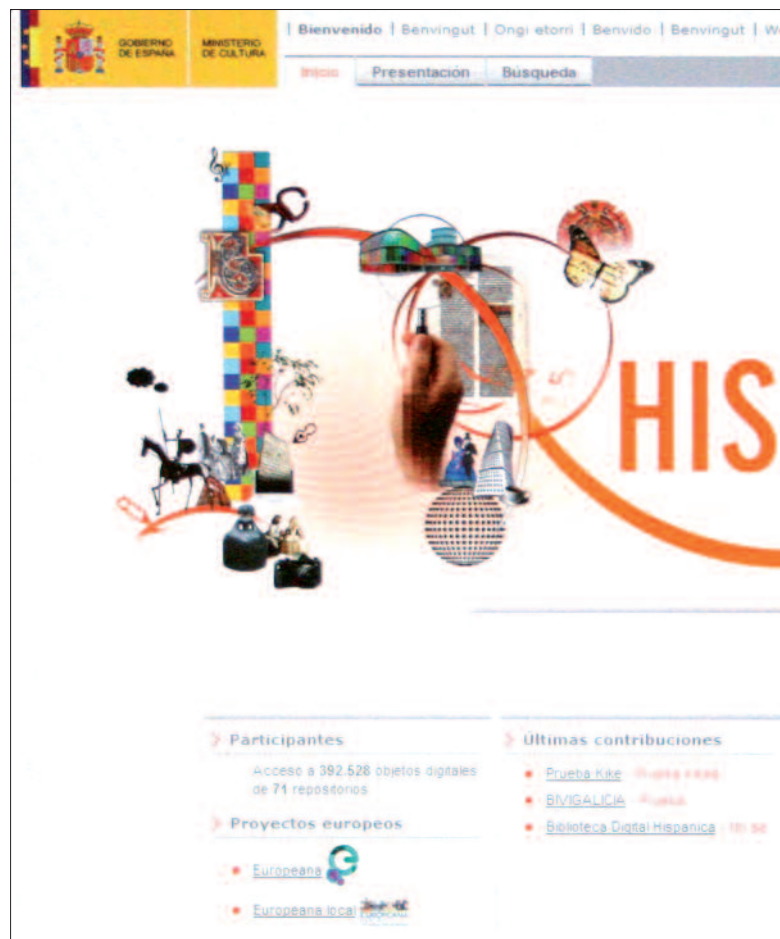
33.7% of the digital collections contained in Hispana have an OAI repository

standardisation. As mentioned, 207 repositories publish their data in accordance with a specific standard. The second one is cooperation. Through a policy of incentives and subsidies, the Ministry of Education, Culture and Sport has made many institutions and, in particular, Autonomous Communities, Royal Academies and memory institutions in general, join the OAI-PMH initiative,

five million digital objects

Left: Hispana home page. Above these lines: we can see that Hispana is ranked second among data suppliers to Europeana.

The boost from Europeana

On the other hand, we cannot ignore the boost received from Europeana in the creation of repositories and digital objects. In her book "The Contribution of Spain to Europeana", which can be read at Europeana, the platform of European cultural heritage[2], María Antonia Carrato provides a very exhaustive summary of the genesis and current status of the entire project.

In any case, and beyond the influence that Europeana may have had, Spain should be congratulated for its efforts and importance, as it is one

We should congratulate the managers of Hispana to date

of the most significant countries in Europe in terms of digitisation of historical and cultural heritage, as well as the managers of Hispana to date, trusting that 2015 will continue to see its development in conjunction with the Europeana Strategic Plan, especially as it refers to the development of the Europeana Data Model and, therefore, Linked Open Data. ■

which has, without a doubt, resulted in substantial improvements to the visibility and accessibility of collections.

The effectiveness of this principles is shown by the fact that Hispana is the second data provider of Europeana.

If it is also taken into account that Spanish universities also publish their information in OAI-PMH repositories, it becomes clear that an immense aggregation of results is achieved with less efforts than would be otherwise required. This cooperative methodology has clear historical roots in the Collective Catalogue of the Bibliographic Heritage and in the subsidies and agreements that the former Ministry of Culture established with Academies, Autonomous Communities and memory institutions in General.

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[1] Martínez-Conde, María Luisa. The success of Hispana. Entry in the Europeana Blog of 1 October 2014. http://pro.europeana.eu/pro-blog/-/blogs/the-success-of-hispana.

[2] In: Ramos Simón, Luis Fernando and Arquero Avilés, Rosario (coordinators). Europeana: la plataforma del patrimonio cultural europeo. Gijón, Trea, 2014. Pages 17-23. ISBN 978-84-9704-840-8.

Creation of microsites in DIGIBIB installations

The clients of DIGIBÍS are increasingly using the module for creating microsites to highlight collections and projects. This is a module of DIGIBIB 9.1, that allows for the creation of a data subset with independent presentation, where images, links, text, etc. are added, thereby creating a library within the digital library.

At Galiciana, the Library of Galicia, and at the National Defence Library, microsites can be accessed from the home page.

They all have a presentation of the site and allow for simple and advanced searching of the documents they contain.

Through these documents, Galiciana highlights the digital collections of a few libraries, such as the one of the Royal Conciliar Seminar of Santa Catalina de Mondoñedo or the Municipal Library of Local Studies of A Coruña, or a relevant collection, such as the one of the Festivals of Galicia, divided among several libraries. Also, coinciding with an exhibition, Galiciana created a microsite: ABANCA Incunables Collection. Therefore, it can be expected for this digital library to create new microsites on the occasion of new exhibits or new digitisation agreements, which can serve both to highlight a collection and to facilitate and guide the user in searching through it, as, within each site, works can be accessed from the list of titles, authors, places, editors or by origin library, depending on the collection that makes up the microsite.

The microsite of the Virtual Defence Library, dedicated to the Plans of Engineers of the Military Archive of Segovia, seeks to highlight a collection of approximately 14,000 plans dated between 1700 and 1930.

DIGIBÍS also offers custom microsite design, such as those of the Digital Library of Castilla and León.

Microsites of three Digital Libraries that have DIGIBIB installed: Festivals of Galicia, on Galiciana; Plans of Engineers at the Virtual Defence Library; and Digital Bullfighting Library, at the Digital Library of Castilla and León.

Launch of the Virtual Library of the Province of Malaga

Driven by the Delegation of Culture and Sports, and managed from the Cánovas del Castillo Library, the Provincial Council of Málaga has launched the Virtual Library of the Province of Malaga [http://bibliotecavirtual.malaga.es/].

Its aim is to gather, preserve and disseminate the digital collections of the bibliographic heritage of Malaga that is not protected by copyright, to be accessed by researchers, educators and the general public. Furthermore, in the future, it intends to link to digital repositories of other cultural institutions of a local or regional scope that wish to participate and that hold heritage collections of interest to the province of Malaga and, of course, include the works of the Cánovas del Castillo Library, which will be digitised.

The launch of the Virtual Library of the Province of Malaga has benefited from the collaboration of the Ministry of Education, Culture and Sports –though its subsidies to the bibliographical patrimony for the creation and transformation of digital resources and their dissemination and preservation through repositories– in the acquisition of a metadata and digital object management system with an OAI-PMH repository, developed by DIGIBÍS. This application incorporates the standards recommended by the European Union applicable to projects of this type: MARC and MARC-XML, LOD-EDM, ISO 2709, Dublin Core RDF, SWAP-JISC, MODS, which allows the Virtual Library of the Province of Malaga to be incorporated into projects like Hispana and Europeana, thereby obtaining greater disseminaiton.

The Virtual Library of the Province of Malaga currently has a total of 14,614 works, including books, periodicals, articles, manuscripts, maps, illustrations, photographs, and 62,464 digital objects, 49,264 of which allow for free text searches thanks to character recognition.

The initial collection that makes up the Virtual Library includes the Photographic Archive of the Temboury Legacy, the Federico Muñoz Archive and part of the Old Collection of the Cánovas del Castillo Library. In the "Collections" section, each collection can be browsed and its works can be viewed.

The main page also gives access to simple and advanced searching –with fields such as title, author, editor, series, notes, signature, subject, type of document or digital– and the list of titles, authors and collaborators, editors, locations and subjects.

It should be noted that the section on "Malaga personalities", which covers 23 renowned authors from the province, with links to their respective authority records, enriched with Linked Open Data (LOD), Wikipedia and the website containing their works or parts of it. ■

PROPRIETARY DEVELOPMENTS

Features of DIGIBIB

The new version of DIGIBIB, 9.1, includes new features and improves others that were already part of this renowned application developed by DIGIBÍS for digital library management and that contributes so much to the fact that its data represent a very high percentage of those that make up Hispana and Europeana.

BASIC PRODUCT

Administration module
• New Web Control Panel with improved design and distribution of features: Web Cataloguing, Content Manager, Administration, Themed Areas and Tools.

Cataloguing Module
• Update 19 MARC 21.
• RDA Updates
  • Inclusion of all the elements created in Update 19 for RDA cataloguing in all types of records (bibliographic, copies and authorities).
  • Visualisation of all elements created in Update 19 for RDA cataloguing in all types of records.
  • Export of all RDA elements created in Update 19 in all formats.
  • Automatic transformation of RDA elements created in Update 19 in metadata schemes.
  • Adaptation of MARC records to RDA records using the "Quick edit" tool

Management Module for Groups of Multimedia Objects
• NEnhanced edition of the information of multimedia objects: more validations, access with fewer clicks.
• New report on the number of downloads of multimedia objects from the Web, including EPUB and MOBI.

Home page of the DIGIBIB demo.
Free access for testing.

Web consultation module
• New standard design.
• Adaptation of cookies-consent policy on the website pursuant to European regulations.
• Improvement in the generation of bibliographic references in BibTeX format for their subsequent integration into reference management programs.
• Inability to view groups of multimedia objects not linked to records, preventing rights management issues.
• Addition of new optional RDA 33X fields to the section of bibliographic, copy and authority records.
• Improvements in the generation of links to digital objects, both internal and external, without the need to open external viewers in a model frame.

9.1

- Improved support for ALTO files not including the position of terms in the <String> elements.
- Improvements in download statistics: downloads are recorded for all types of digital objects, including eBooks (ePub and MOBI).
- Improvements in the management of large PDF files, preventing performance issues when indexing or marking texts.
- Improvements in the navigation of Author-Title records.
- Ability to navigate through subfields starting with http, https and/or www.

"My library" module
- Registration of users in the Library without the intervention of its administrator.
- Ability to save access and browsing data for a user in the Library, organising all the information under a section called "My library":

Content Management Module (CMS)
- Ability to embed <iframe> elements to embed third-party videos or content.
- Code formatting, in advanced mode, to prevent displaying lines that are too long.

OPTIONAL MODULES

Linked Open Data.
- Europeana Data Model 5.2.6, published in December 2014.
- Update of EDM records based on the recommendations of the Europeana Ingestion Team.

Web Cataloguing Module
- Renewed cataloguing interface. The Summary tab is eliminated.
- New configuration of the summary that allows for quick consultation.
- New record visualisation screen:
  - "Back" option to return to the summary.

- New "Back" and "Forward" options to go from one record to another one.
- New feature to paginate groups of digital objects automatically.

UNICODE standard support
- Adaptation of all features of the cataloguing module and consultation Web interface to manage all types of UNICODE records, both within the client program and website.

Microsite manager for bibliographic records
- Ability to create a carousel of images to represent the most noteworthy works in the microsite.
- Ability to display the microsite in the Featured section of the presentation or a page accessible from the main menu.

Microsite manager for authority records.
- Ability to define a microsite based on authorities:
  - Set-up of a microsite from authority records.
  - Search of authority records within the microsite.
  - Inclusion of a list of authorities (persons, institutions, conferences and titles) generated from the authorities belonging to the microsite.
- Create a carousel of images to represent the most noteworthy works.

Advanced multimedia object viewers.
- New multimedia object viewers.

DIGIBIB APP
- DIGIBIB App for Android and iOS (Apple) mobile devices. ■

LAB APPLICATIONS

Features of 'All about el Greco'

"All about el Greco" is the first web catalogue created with DIGIMÚS, a management system developed by DIGIBÍS for the online cataloguing, harvesting and visualisation of the digital collections of a museum, historic site or temporary exhibit. "All about el Greco" is an example of the options and features that can be achieved with this application.

Thanks to its compliance with Lightweight Information Describing Objects (LIDO), established by the ICOM, and the Europeana Data Model (EDM), as well as the OAI protocol –through Dublin Core metadata– and Linked Open Data and Simple Knowledge Organization System (SKOS) models, "All about el Greco" is adapted to the latest standards at the European and international levels and his works can be harvested and displayed by aggregators such as Hispana and Europeana, as well as identified by search engines such as Google.
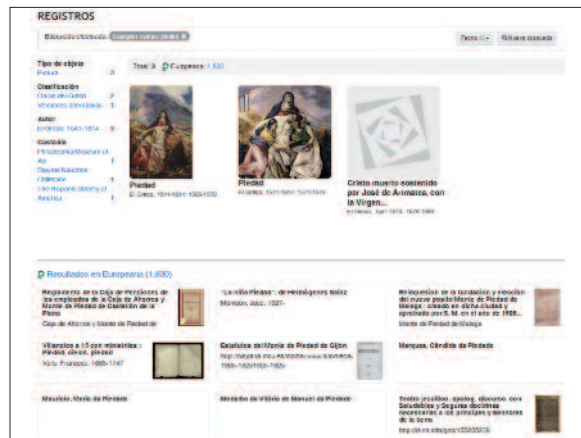
Adaptation to all European standards

The responsive and adaptive design of DIGIMÚS can be adapted to any device. Through its bilingual interface, in Spanish and English, DIGIMÚS also allows for multilingual description (for instance, when we incorporate a record of a work from a foreign institution in our catalogue).

Visual and attractive

Website searches are enriched with the Europeana and the Digital Public Library of America (DPLA) APIs, which are performed on both simultaneously and automatically through the interface itself. This expands results significantly.

The information of the work appears grouped into different sections: digital objects (image, sound, video, etc.), the image of which can be viewed in high-resolution viewers, allowing for observing even the smallest details of each work, and in 3D; the cat-

aloguing of the object (description, creation data, measurements, etc.) and the location, which shows the location of the work and includes access to Google Maps, while the history shows the events of creation, acquisition, exhibition, etc.

Maximum usability

The vocabulary of the Art & Architecture Thesaurus (AAT) of the Getty Conservation Institute in Linked Open Data, imported into the catalogue, has facilitated and standardised the use of artistic terminology, in addition to semantic navigation. DIGIMÚS allows for navigation not only by techniques and materials but also by agents, events or locations. There is also a timeline, accessible from the Chronology tab, that allows for exploring and showing the work of the painter and, therefore, his or her artistic evolution, over the years. ■

The new scope of the BIBFRAME model

The Bibliographic Framework Initiative project –known as BIBFRAME– started by the Library of Congress almost a decade ago, continues under development.

Perhaps the most significant advance is at the organisational level. As shown by the news, published on 20 June 2014 by the Library of Congress, "The Program for Cooperative Cataloging and the Library of Congress Support BIBFRAME as the Model to Help the Library Community Move into the Linked Open Data Environment", the Program for Cooperative Cataloguing (PCC) is included in the BIBFRAME initiative, keen to cooperate and participate in the development of this new cataloguing model.

It should be noted that the PCC is international in nature, due to both its goals of universalising the BIBFRAME model (open and transparent, usable in archives and libraries) and its participants, which include the British Library, George Washington University and the Deutsche Nationalbibliothek.

Expansion in the list of implementers

The PCC recommends institutions to know and become familiar with the BIBFRAME model due to its consolidation as a future substitute of the MARC21 format, which already includes specific coding for RDA.

The first stage of experimentation is already under way, through the group called Early Experimenters, which will serve to implement the BIBFRAME model and, therefore, assess it for different applications.

Tight collaboration between OCLC and the Library of Congress

The interest of the Library of Congress (LOC) in Linked Data has lead to the collaboration of LOC and OCLC. Thus, while the LOC is making an effort to accommodate RDA cataloguing rules to linked data technology, the OCLC has published its bibliographical catalogue using the schema.org model and studied what institutions, including the Polymath Virtual Library of the Ignacio Larramendi Foundation and why they use and/or produce linked data. (Study of September 2014. See page 11 of this issue of DIGICLIC).

The Ignacio Larramendi Foundation, with DIGIBÍS, already interested in BIBFRAME

Progress in the metadata model has been very specific and drafts have been published regarding authorities, profiles, relationships or audiovisual resources in BIBFRAME.

The aforementioned implementers are taking advantage of MarcEdit version 6, which includes new tools such as MARCNext, which includes a SPARQL server and a BIBFRAME Testbed.

BIBFRAME in Spain

Currently, the two Spanish institutions interested in considering the option of establishing BIBFRAME are the Consortium of University Services of Catalonia (CSUC), which has announced testing, and the Ignacio Larramendi Foundation, which, along with DIGIBÍS, has included a prototype of authority records for its Polymath Virtual Library in its strategic plan for 2015 . ∎

High-resolution and 3D

DIIGIBÍS is a company committed to achieving the maximum quality in its digitisation processes. For this reason, when the Ministry of Defence, in its desire to give greater visibility to the collections accessed through the Virtual Defence Library, entrusted DIGIBÍS with a project to improve the visibility of maps and another one for the visualisation of 3D objects and the company started working until achieving its complete development. It is now included as part of its services.
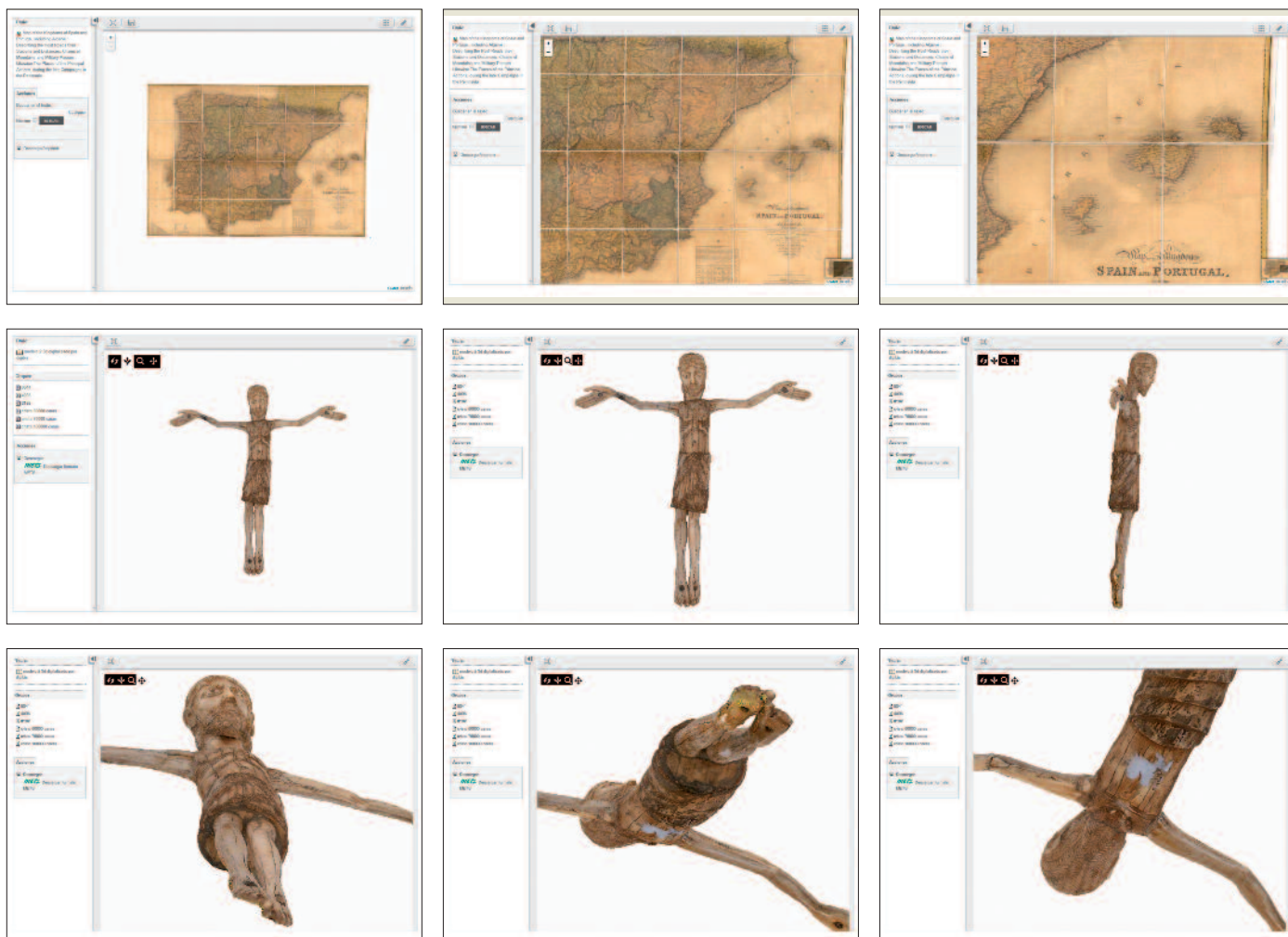
Three new viewers

High-resolution digitisation and software processing has allowed for images to be viewed at a very high resolution using the DIGIBIB, DIGIARCH and DIGIMÚS programs.

In this way, materials, such as maps and manuscripts in particular, can be zoomed in until reaching a very clear and detailed image of the digitised object.

It is important to point out that these are proprietary modules included in the general DIGIBÍS application that allow for exploring digitised images without the need to use a specific plug-in.

The high-resolution viewer allows us to scroll through the image using the mouse or keyboard. The zoom buttons, on the top left, are visible at all times, even though the mouse scroll wheel or the ¨+¨ and ¨-¨ keys can be used as well. On the bot-

viewers

tom right, a thumbnail of the image shows a shaded area representing the exact portion being displayed. This is an active thumbnail that can be clicked to change the area displayed.

A 360-degree viewer has also been developed, to allow for travelling across the entire surface of objects of a documentary interest, nearly always museological, from any of its sides. Similarly to the previous ones, it includes zoom buttons and a button to rotate the image left or right.

DIGIBÍS has developed the 3D viewer as an additional module in its DIGIBIB application. The 3D viewer not only allows us to rotate or move the object in all directions but also includes high-resolution visualisation of any of its sides.

The digitisation of objects for 3D visualisation has begun

DIGIBÍS has not only developed these viewer modules for multimedia objects but its digitisation department has also begun to photograph all types of objects in a way that complies with 3D viewers, which implies the use of digital cameras and a comprehensive set of programs. Photography sessions will depend on the characteristics of the object (size, structure, angles and curves, texture, etc.). To ensure the best possible results, an average of 150 photographs are taken. ■

Left: several zoom levels of the high definition viewer. Below: different screen shots of the 3D viewer. These viewers are available now on our applications for the digital management of libraries, archives and museums.

L A B   A P P L I C A T I O N S

PROPRIETARY DEVELOPMENTS
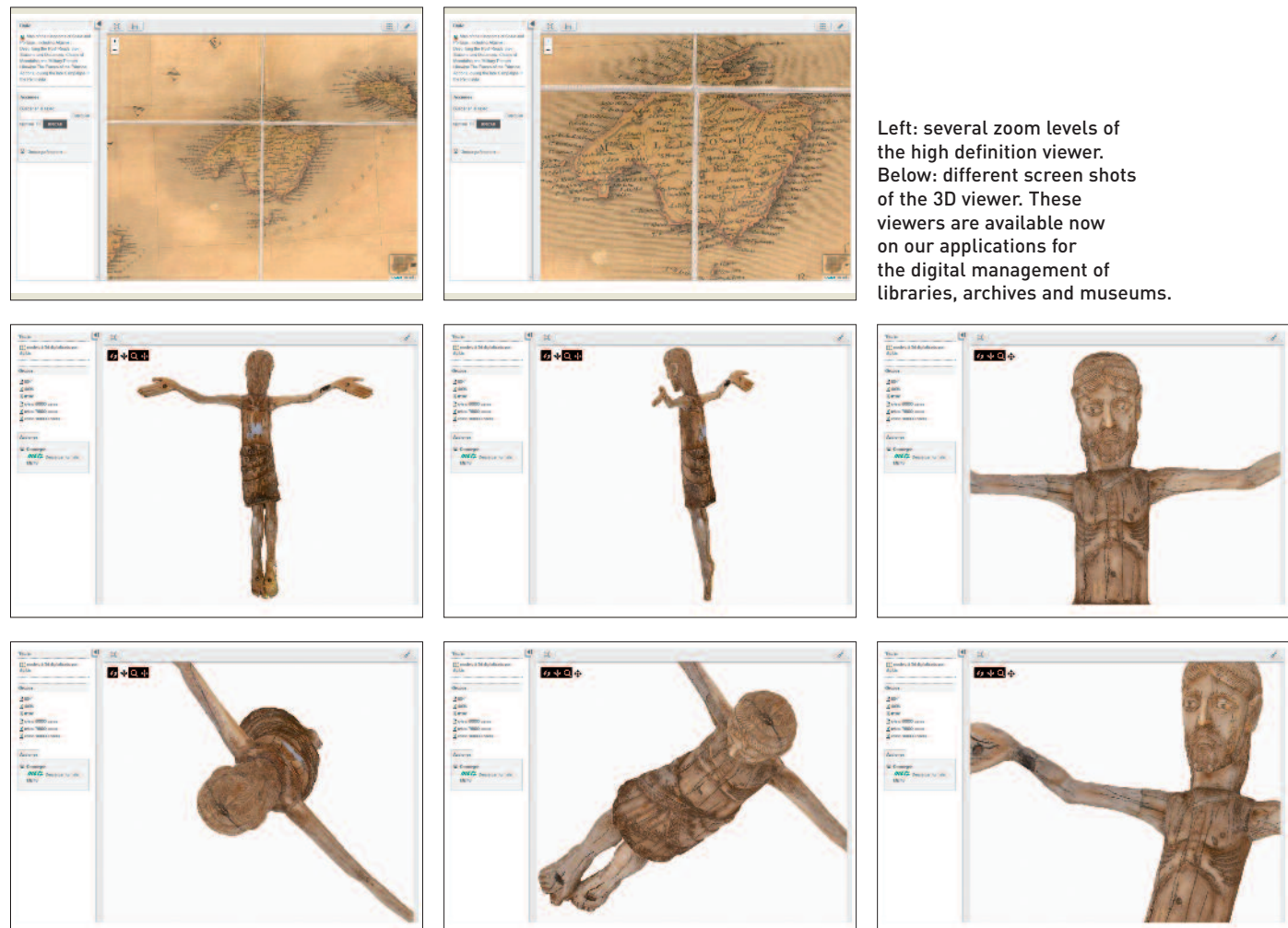
Prototipo de museo virtual con nuestra aplicación DIGIMÚS

Following the signature of an agreement between the Gómez Pardo Foundation and the Ignacio Larramendi Foundation, within the framework of the promotion and dissemination of historical, cultural and scientific heritage related to this institution, we have started to develop a prototype virtual museum using DIGIMÚS.

Its contents, the collection of the Félix Cañada Museum, will be developed by DIGIBÍS through the application of Information and Communication Technologies (ICT) and according to international regulations on data exchange, ensuring their maximum dissemination.

Top: website of the Gómez Pardo Foundation, with news of the agreement. Above, from left to right: Xavier Agenjo, project manager of the Ignacio Larramendi Foundation, Benjamín Calvo, director of the Gómez Pardo Foundation, Jorge Luis Costafreda, Ph.D. in Geological Engineering of the Gómez Pardo Foundation, and Tachi Hernando de Larramendi, managing director of DIGIBÍS.

Dissemination of cultural heritage: foundational goal and common practice

The signatories of the agreement, Benjamín Calvo Pérez, director of the Gómez Pardo Foundation, and Tachi Hernando de Larramendi Martínez, patron of the Ignacio Larramendi Foundation and managing director of DIGIBÍS, along with the Geological Engineer of the Gómez Pardo Foundation, Jorge Luis Costafreda Mustelier, and the Project Manager of the Ignacio Larramendi Foundation, Xavier Agenjo Bullón, agreed that one of the next steps would be the development of a prototype digital museum.

The art collection held by the Félix Cañada Museum will thus increase its dissemination and visibility and will increase the number of people familiar with this collection located in central Madrid.

A prototype with DIGIMÚS, the virtual museum application from DIGIBÍS

The prototype digital museum will be developed using the DIGIMÚS program, developed by DIGIBÍS. High-resolution and 3D-object viewers included in DIGIMÚS and its innovative and responsive graphical design make it a very appropriate and suitable program for museums and temporary exhibits and facilitates accessibility and dissemination both through the Internet and the Linked Open Data application.

The prototype is already fully immersed in Linked Open Data (LOD) technologies and, like all DIGIBÍS applications, follows international regulations rigorously. ∎

The Semantic Web in Archives, Libraries and Museums

The Ramón Areces Foundation and the National Library of Spain held a conference on the Semantic Web and Linked Data in archives, libraries and museums on 10 April 2014.

The conference announced the application of linked data in national and international institutions, especially the work done at the National Library of Spain, and the strategies for the future.

After a welcome by the organiser, librarian and consultant Karen Coyle delivered her presentation, titled, "Linked Data: what is it, what isn't it and why should we care?". Lectures were organised around three round tables. At the one dedicated to libraries, Gildas Illien, of the National Library of France, participated, talking about the semantic web at the National Library of France. He was followed by María Luisa Martínez-Conde, of the General Sub-Directorate of Library Coordination, who delivered a presentation on semantic enrichment in digital libraries of the Secretariat of State for Culture, and by Xavier Agenjo Bullón, of the Ignacio Larramendi Foundation, who spoke of the application of Linked Open Data in archives, libraries and museums from a business perspective.

Semantic Web and Linked Data: Present and Future Objective of Archives, Libraries and Museums today

At the museum round table, Emmanuelle Bermès, of the Pompidou Centre, spoke of the semantic focus of museum data at the digital Pompidou Centre, as well as Reyes Carrasco, of the General Sub-Directorate of State Museums, who gave a presentation on the connectivity of museums through Linked Open Data and Thesauri in SKOS, at the national (CER.es) and international level).

The archives table featured Alfonso Sánchez Mairena, of the General Sub-Directorate of State Archives, with a presentation on the semantic web in the Portal of Spanish Archives (PARES). ■
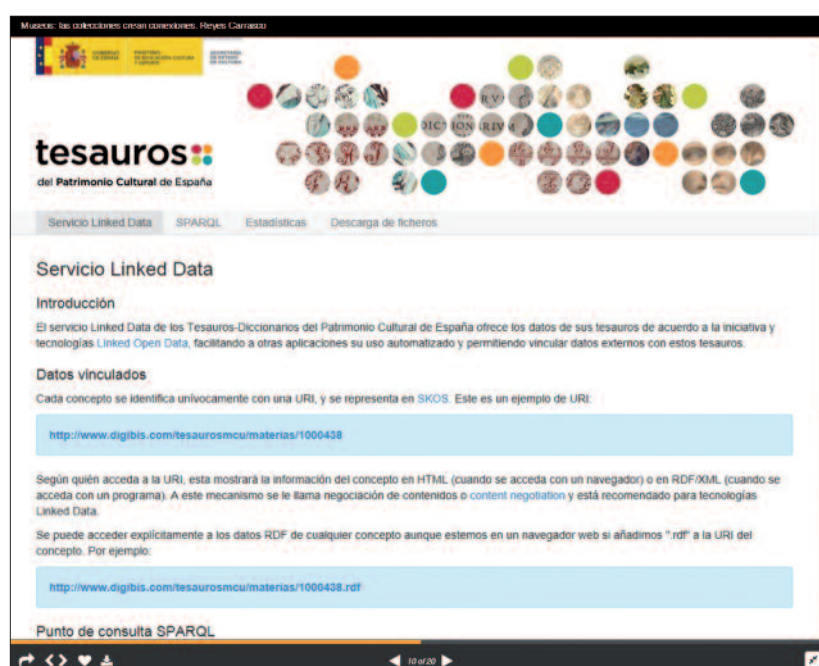
Slide of one of the presentations, with examples based on the work by DIGIBÍS.

Conferences organised by the Ramón Areces Foundation and the National Library of Spain

E V E N T S

VI IBERCARTO Convention

On 23 and 24 October 2014, The Working Group of Portuguese-Spanish Map Libraries (Ibercarto) held the "VI Ibercarto Convention 2004-2014. A decade of work in the conservation and diffusion of cartography", which took place at the National Geographic Institute.

Important institutions, such as the National Library of Portugal, the University of Porto, the Municipal Library of Coimbra, the National Library of Spain, the Simancas Archive and the Cartographic and Geologic Institute of Catalonia, among others, were present at the event. The convention was divided into five sessions, dedicated, respectively, to: diffusion and conservation; cartographical production, application to old collections; cataloguing and regulations; and distribution and visualisation on the web.

DIGIBÍS participated in the 4th session (Cataloguing and Regulations) with the presentation "Cartographic collections and semantic enrichment of geographical data on DIGIBIB", led by César Juanes Hernández, of the Innovation department. With it, DIGIBÍS presented the latest developments in the management of Digital Cartographic Collections.

The purpose of this conference, held every two years at a Spanish or Portuguese city, is to disseminate the developments of the Working Group to the scientific community, to professional producers of cartography, to those working in conservation and description of cartographical materials and, in general, to all users of cartographical documentation. As the title shows, this specific convention commemorated the official journey of the Ibercarto Group.

The presentation by DIGIBÍS, as well as those of others speakers, was published in the *Revista Catalana de Geografía*, era IV, volume XIX, issue 50, corresponding to November 2014. It can be accessed online at: http://www.rcg.cat/?edition=87. ∎

Top: César Juanes Hernández, of the Innovation Department at DIGIBÍS, explains his presentation. Below: website of the VI Convention and the Spanish Geographical Society dedicated to Ibercarto.

REDIAL: Latin America, Europe and document collections

On 24 and 25 November 2014, at the Marqués de Valdecilla Historical Library, belonging to the Complutense University of Madrid, the VIII Meeting of Spanish REDIAL Centres was held, titled "Cultural contributions to Europe by Latin America and their reflection in document collections".

Organised by the Spanish division of REDIAL (European Network of Information and Documentation about Latin America) and the Library of the Complutense University of Madrid, the annual meeting held two open sessions that included presentations about document collections and digitisation projects related to social research on Latin America.

Goal: to enhance cooperation between centres working with Americanist collections

The meeting was intended to enhance mutual understanding and cooperation between centres working with Americanist collections in Spain and Europe.

As part of a tradition at these meetings, Araceli García Martín, director of the AECID Library and coordinator of the event, delivered a lecture on the Americanae project, currently under development.

The Americanae project

Americanae would be based on the implementation of an aggregator of Americanist collections at an international level, which would be carried out through the harvesting of metadata following the OAI-PMH protocol. This protocol would facili-

tate the aggregation of all resources found in the different institutions that make up REDIAL, as is the case of the digital collections of Hispana, which were also mentioned by Araceli García. This would all be feasible with cutting-edge technologies such as the DIGIHUB 3.0 harvesting program, developed by DIGIBÍS. In her presentation, Araceli also included the technological approach of participants, working packages and the budget of this project.

European attendees at the meeting included Fabiola Rodríguez López, of the National Library of France, and Anna Svensson, of the University of Göteborg.

The Larramendi foundation was present at the ceremony, with the participation of Xavier Agenjo Bullón, who spoke of "The theme aggregators in Europeana", as an analogy to the REDIAL initiative. ■
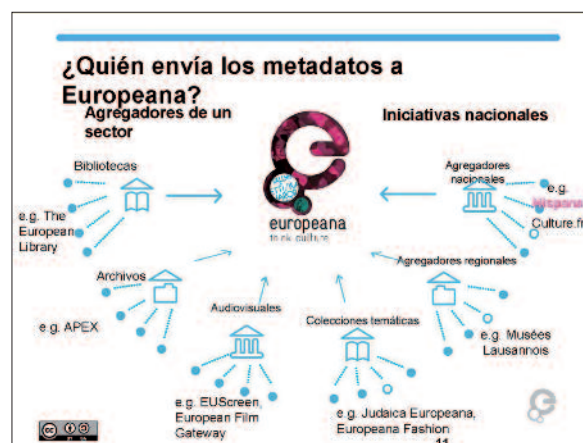
Digitisation Days 2014

Held at the National Library of Spain on 19 and 20 May 2014, Digitisation Days was a significant event aimed at specialists and people interested in text digitisation. It was organised by the Succeed project and the Impact Centre of Competence in Digitisation.

The meeting was created with the goal of introducing an updated view of digitisation technologies for textual contents, sharing experiences in

An updated view of new digitisation technologies was presented

the application of these new technologies and discussing the near future of digitisation. New approaches to the creation, transformation and exploitation of historical documents in a digital format were also analysed.

DIGIBÍS, as a leading company in the industry,

Round tables were formed to discuss issues such as intellectual property or digitisation policies

wanted to participate in order to get to know the needs of researchers and clients, participate in the discussions about the future of digitisation and build new connections with representatives from libraries, companies and institutions participating in digitisation projects.

During the event, the DATeCH (Digital Access to Textual Cultural Heritage) International Conference [http://www.datech2014.info/] was

held, as well as the Succeed Awards Ceremony.

The use of round tables or working panels on issues such as intellectual property or digitisation policies was interesting. In addition, part of these two days was used for a sample of the latest digitisation technologies presented by leading companies in the industry. ■

Impact Hackathon

The second hackathon/workshop of software developers, organised by the Succeed Project, took place on 10 and 11 April 2014, in the "Claude Shannon" classroom of the department of Computer Languages and Systems of the University of Alicante.

This workshop brought together different European companies, including DIGIBÍS, to work on new ideas to improve Optical Character Recognition (OCR) of books digitised from old collections.

Jesús Domínguez Muriel at the Impact Hackathon.

> The workshop was attended by experts from different European companies, including DIGIBÍS

The Succeed Project http://www.succeed-project.eu/] is a support effort of the IMPACT group [http://www.digitisation.eu/] funded by the European Union, which promotes the assimilation and validation of research findings in massive digitisation, focusing on text contents.

National and European Presence

During the two days of the Impact Hackathon, programmers and researchers from Germany, Poland, the Netherlands and different parts of Spain collaborated to work on open tools and solutions. For the purposes of work efficiency, small working groups were created and some areas where open-source tools must be further implemented for the digitisation of texts were identified in advance.

A Git local repository, established from the beginning, allowed collaborators to insert code samples, prototypes or interesting projects to share with the group over the two days. Some of the topics discussed were: Tesseract OCR engineering, the creation of XSLT style records for format conversion and the generation of Debian packages.

Unique opportunity to get to know developers from all over Europe involved in digitisation

Jesús Domínguez Muriel, director of Software Development projects at DIGIBÍS (which was presented as the company that programmed the simultaneous consultation API in the DPLA and Europeana), opened research on open-source OCR tools and frameworks. He made a very detailed analysis of the situation and, finally, he suggested the desirability of creating a Wikipedia-style page where algorithms could be gathered; it would be very useful to share not only algorithms but also implementations, without having to reinvent (or re-implement) progress already made.

The IMPACT Centre of Competence in Digitisation is a non-profit organisation. Its goal is to make the digitisation of printed texts from old collections "better, faster and cheaper". It provides tools, services and facilities to advance the state of the art in the field of document digitisation, language technology and processing of texts from old collections. ■

EVENTS

New certification in research and development for **DIGIBÍS**

As a result of its annual project in research and development, DIGIBÍS has once again been accredited as a technological innovation company in 2014, through the AENOR certification in R&D&I.

The 2014 project, "Consultation Interfaces of Archives, Libraries and Museums in the Data Web", focused on advancing the application of Linked Open Data (LOD) through the transformation of thesauri, controlled vocabularies, subject header lists, according to SKOS (Simple Knowledge Organization System) for a better use, visualisation and operation of these resources.

The project has focused on advancing the LOD application

This is an objective set by Europeana itself in its 2015-2020 Strategic Document, which DIGIBÍS has deemed essential to develop and that will benefit all its clients without representing an extraordinary effort.

The technological innovation project, developed throughout 2013, has also included the development of new tools for the interpretation and visualisation of cultural heritage data using time-lines and integrated geographical representations on the websites of digital archives, libraries and museums created using DIGIBÍS software and the integration of 3D digitisation technology, along with the creation of tools and applications that allow for the visualisation and

AENOR
Producto Certificado
Proyecto I+D+i

management of digital objects in new formats: high-resolution images, 360-degree views and 3D objects.

The investment in this project, which has exceeded 295,000 euros, has been distributed between project management, documentation and innovation, programming analysis and systems technicians.

This effort, which is part of the corporate philosophy of DIGIBÍS from its foundation, has resulted in the renewal of the AENOR R&D&I certificate, with the corresponding tax exemptions. ■

DIGICLIC IN ENGLISH
ONLINE EDITION

You can read DIGICLIC on our Website:
http://www.digibis.com/digiclic.html