Development of an open-source content-management system for documentary art heritage

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Meeting:	**71. Art Libraries**

Abstract:

The documentation centre of ARTIUM, the Basque Centre Museum of Contemporary Art wishes to make the best use of the synergies derived from the recent advances made in information and communication technologies. Its objective is to become an open centre that experiments both with new formulas for organising, presenting and diffusing artistic and cultural knowledge, and with new ways of relating to users.

The task of developing a content-management system has provided us with the opportunity to create and interact with social networks by facilitating information-sharing among users. This task has involved setting up mechanisms needed for creating new material, adopting common standards and linking existing resources.

Key words*: content-management, web 2.0, social web, content syndication.*

1. Introduction

The ARTIUM documentation centre aims to become a dynamic, open-ended institution as well as continuing to be a leading documentary centre for contemporary culture. To achieve this, various services and resources are being designed to cover the informational needs of our users.

One of our main aims is to provide the conditions for creating and diffusing digital material and services in the area of culture and contemporary art. We are therefore developing an information strategy based on a comprehensive approach to managing documentary resources that is fundamental to the general planning strategy of the Centre.

We go beyond the innovative effect of the increasing use of platforms and digital devices and try to help digital culture to make a profound impact on the way we structure the languages used to build discourses.

Within this framework we have defined the following **general objectives:**

- To develop an information strategy based on the comprehensive management of documentary recourses as a fundamental part of the general planning strategy of the Centre.
- To establish a framework that allows us to manage intellectual capital, to generate knowledge and to make knowledge flow in a dynamic way between the user networks.
- To develop a technological platform that provides a suitable framework for responding to users' informational needs.
- To approach information management as a factor of change and competitiveness and also as a cornerstone of knowledge.
- To be able to identify, localise, create, organise and provide access to documents in any format, including electronic and digital texts, videos, music or any multimedia material.
- To provide services on the website that enable users to participate in defining and creating services and in making them known.
- To make use of the different applications and tools of the social website in order to share and make known our cultural heritage and to reach all kinds of audiences.
- To promote the development of information services by giving incentives to cooperation initiatives between different centres designed to develop their full potential.
- To facilitate user access to resources and information services about contemporary cultural heritage.

2. Development of the project

The information strategy proposed by ARTIUM should be seen as a way of reducing irrelevant information, avoiding duplication, promoting information-sharing and guaranteeing that all of the documentation processed reaches the end-user in the best possible way.

It is important to understand that documentation-management is crucial when designing an information system that achieves the optimum use of documentary assets. Creating a framework for organising, sharing and distributing information efficiently is vital to the management of the intellectual capital of the museum. We consider an information-management system to be a tool of great value because it is a technological platform that provides the appropriate framework to respond to all of these information needs.

Various different dossiers are being drawn up in the Museum with the objective of documenting the programmes of activities taking place in the Centre and offering informational and documentary support to the exhibitions organised in the Museum. On the one hand, we have dossiers on artists and on the other dossiers about films, videos and exhibitions.

These dossiers were diffused used individually-created static HTML pages. However it has become clear that there is a need to implant a content-management system in order to approach the task in a more efficient way.

Starting from these premises and considering our resources, we felt that we needed to have at our disposal a content-management system using free software that we could develop in our own library. We opted for Drupal, an open-source system developed by an active community of users, and we have started work on this project.

This new system will enable us to manage and structure all the information that is being processed, and cater for the following needs:

- information-sharing and bringing documents up-to-date (for people working on documentary dossiers).
- publishing documents in many different formats: doc, pdf, html.
- creating standardised structures for presenting heterogeneous documents.
- searching, indexing and consulting processed information flexibly and efficiently.

The basic functions of the content-management system that is being incorporated to the project include:

- Decentralised authorship that enables contents to be created by any authorised person.
- Control of different versions of documents.
- Tools for presenting documents in, and converting documents to, homogeneous formats.
- Profiles and authorship roles, to establish processes that enable the assignation to a document of properties necessary for publication, revision, restricted use etc.
- Tools for controlling and recording access that enable work groups to administer access to contents by different users, with assignation of profiles, and provide information about who accesses contents, how, and when.
- Access to contents using a 'friendly' interface based on web services.
- Information search tool based on search engines of webs and databases.
- Possibility of adding subscription services to contents.
- Tools for content use based on log-analysis applications designed to obtain access statistics.
- Tools of content integrity that make it possible to check the consistency of links and the availability of information shown on the web pages.
- Syndication of contents that enables the exportation of content in RDF/RSS format for use on other web sites.

The contents have been structured in the following way:

Fig. 1. Map of the site

- *Catalogue.* From this section you can access the library management system, which contains the library catalogues and all the information that is being digitalised.
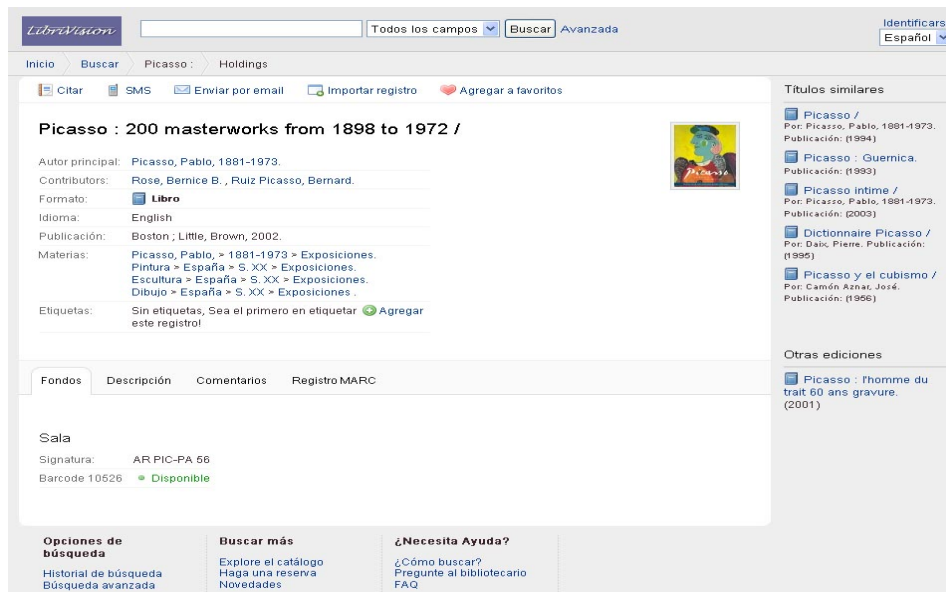
Fig. 2. Example of a catalogue entry

We are working on a catalogue that is accessible online, meets the demands of the social web for digital material, and is generally adapted to the new forms of user interaction through localisation and information management.

To carry out this project we selected **VuFind**, an open-source tool that provides an interface that is both efficient and attractive to users.

- *Artists*. This provides access to all of the documentation that is being produced in the Centre about contemporary artists. Users can consult artists' biographies, works, exhibitions, ARTIUM exhibitions, general bibliography, bibliography in the museum library and electronic resources.

Fig. 3. Artists. Sergei Bugaev

- *Literature for art*. This section documents one of the activities organised by the library which attempts to combine art and literature, thus providing a new way of discovering art. It contains information about the guest writer and the chosen work of art.

Fig. 4. Literature for art: Bernardo Atxaga

- *On film-making.* The museum organises debates and cycles with the aim of going deeper into some of the most representative films in the history of the cinema. This section includes dossiers on programmed films, providing their technical specifications and synopsis, their context within the history of film-making, information about the director and actors, and documentary resources available.

Fig. 5. On film-making

- Exhibitions: this section provides information about the exhibitions organised by the museum. It contains information on the artists participating in each exhibition, the texts written for it and the articles that have appeared about it in the media.

Fig. 6. Exhibitions. Laocoon devoured

- Cinema programmes. The library has about a thousand film programmes dating from the 1930s to the 1960s. These have been documented, digitalised and included in the image database. We aim to place this information at the disposal of all of our users.
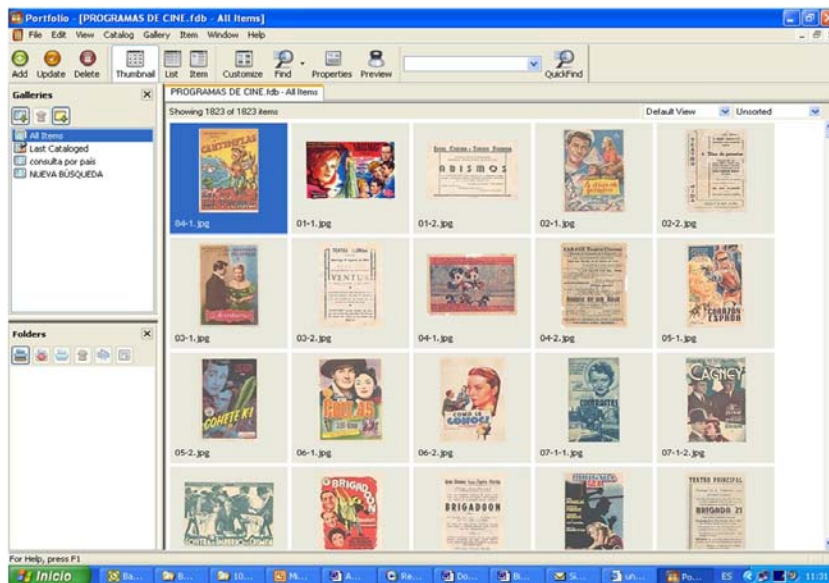

Fig. 7. Film programmes

The following are some of the modules that we have used to build the website:

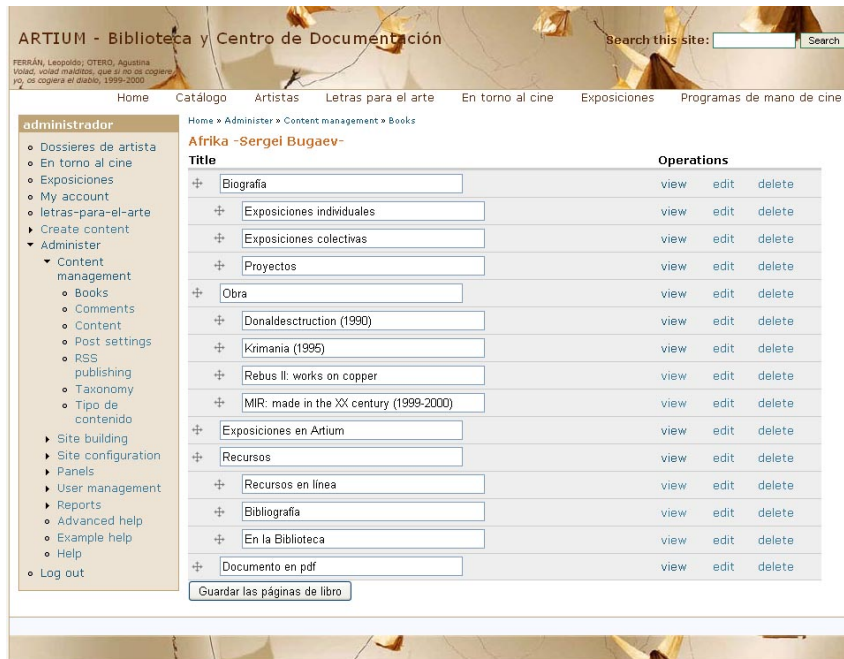**BOOKS**: these are the basic building blocks of the site.

Fig. 8. Structure of one of the site books

CCK (Create Content Type): this module enables us to define the content types that are used to classify the views.

The content types we have configured include:

Dossier type: new 'books' must be registered in one of the following categories:

1 Artists

2 Literature for art

3 Films

4 Exhibitions

5 Directors

6 Actors

Organisation: this new field makes it possible for us to list 'books' according to our own criteria. For example, authors are listed by their surnames, followed by their first name; film titles are listed by their titles eliminating the preceding articles, etc. This enables us to maintain the name of the artist, director or film in direct order within the *Title* field .

Links between nodes: the content types can be used to link different nodes and, more importantly, to show these links in views. Thus 'films' are linked to 'directors' and 'actors + actresses', and 'artists' are linked to 'writers who have participated in the *Literature for art* programme'.

CCK BLOCKS: this module serves to create blocks automatically using the different content types established using the CCK module.

Classification: so far, we have created two classification vocabularies, one for the countries of origin of artists, films etc, and another for the different artistic disciplines.

Fig. 9. Classification of artistic disciplines

VIEWS: this module serves to configure the different views of the site.
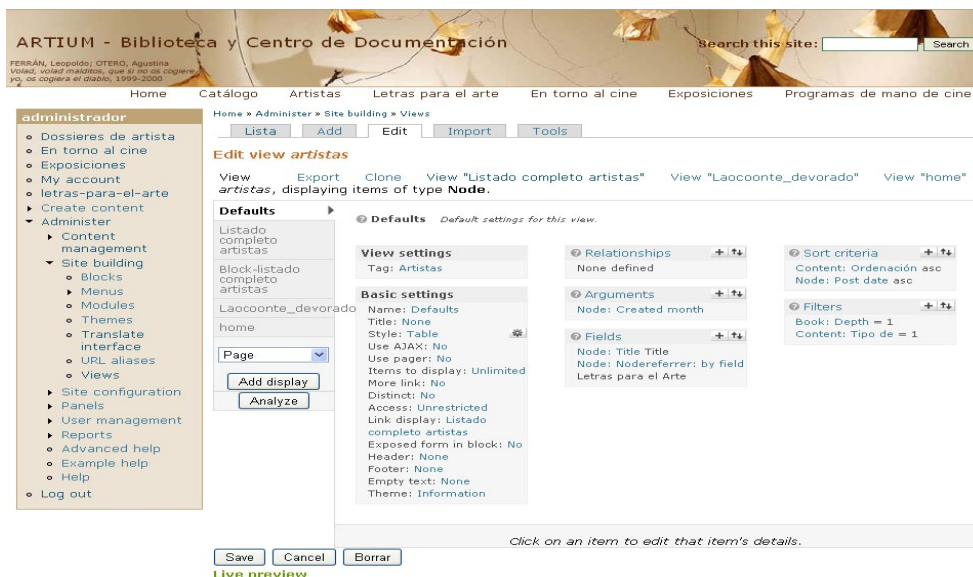

Fig. 10. One of the views we have configured on our site

Different views of webpages can be grouped together using the **Tabs** module (for example: films + directors + actors and actresses).

INSERT VIEWS: this is a module that serves to put views directly into nodes. For example, on our site it enables the list of artists participating in an exhibition to appear within the structure of the exhibition 'book'.

- **PANELS:** before configuring the home page, we used the Views module to construct the different views that we wanted appear on it. In our case, for each page with the complete list of dossiers (artists, literature, film, exhibitions) a new view was set up where only the last five dossiers appeared (except in the case of exhibitions, where we only included the last three). Once the views had been set up, we used the Panels module to configure the home page.
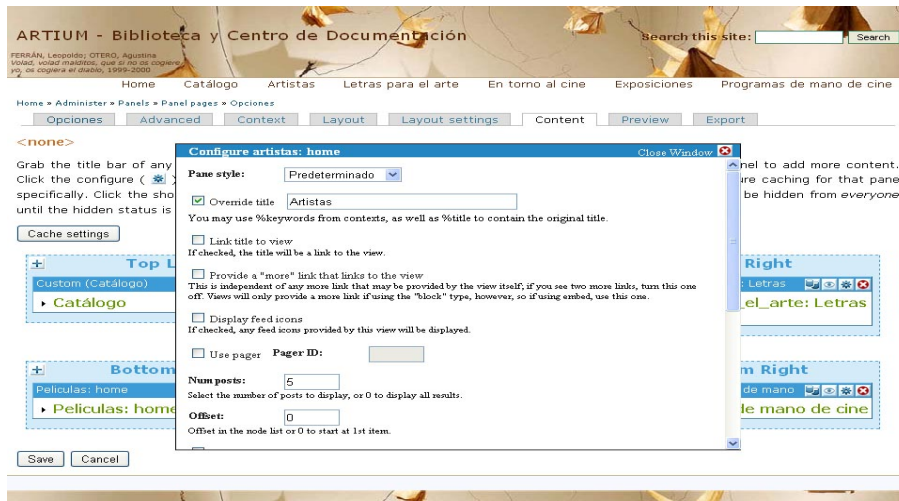

Fig. 11. Building the site structure

VIDEO FILTER: this module is used to load videos of all kinds on the site nodes using a simple label.

[video: URL OF THE VIDEO]

Fig. 12. Video inserted in one of the dossiers

GOOGLE ANALYTICS: serves to install the analytic used by Google to see how visitors interact with the website.

COULOIR SLIDESHOW: makes it easy to put together presentations of images in Javascript. It sets up a block for each presentation.

ADDTHIS: allows us to insert a block in the webpages with the icon so that the content of the page can be shared on the social web.

THEMES: a group of files that governs the whole appearance of a website. To configure the appearance of our site we selected *Foliage* from the default themes provided by Drupal and modified it using the style sheets .

3. Conclusion

The design of the services in the project is based on the intensive use of information and communication technologies. This means not only changing the form that information takes and the ways in which it is diffused, but also experimenting with new formulas for organising, presenting and spreading knowledge about art and culture, such as digital collections and online services.

The documentary centre plays a crucial role in achieving the objectives of the Museum, whether in the area of managing the art heritage in its Collection or by carrying out activities of research and diffusion of contemporary culture. One of the general objectives that we have marked out for ourselves is to make the best possible use of the available resources by creating programmes and services that make it easier for users to access information.

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