

The Challenges of Developing a Collection of Primary Information, Media Sources and a Virtual Collection of Architectural and Artistic Works: An Experience at the Universidad Católica de Chile

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ABSTRACT

The Faculty of Architecture and Fine Arts of the Pontificia Universidad Católica de Chile has proposed the challenge of developing a Chilean and Latin American Multimedial File of Works of Art and Architecture.

This archive is a system composed of:

- Collections of primary information sources: blueprints, slides, documents, videos, and others.
- A virtual collection.
- A database which allows the access to real as well as virtual collections.

This project is based on the need of preserving and widespreading information concerning the patrimony of works of Architecture and Arts Latin-American Heritage. Furthermore, it gives account of the challenges set forth in the project's designing and executing processes, through the exposition of its methodological focus, description of the designed activities, products, and contents, and of the offered services.

1. General Context of the Project

1.1. Faculty of Architecture and Fine Arts, Pontificia Universidad Católica de Chile

On the occasion of the centenary of the Architectural Faculty, the University decided to launch a series of efforts aiming, on one side, the consolidation of the already accomplished goals, and on the other, the chance of projecting them to the future. Our Faculty is the fruit of the last one hundred years of study on the following disciplines: Art, Architecture, Design, Urbanism, and Urban and Regional Planning.

The proposal for the centenary is the development of a specialized Information Center in the various disciplines of the Faculty, based on: the cultural values of the current Library, which is one of the most important in the country and Latin America; the research activities, and the editorial task, including three magazines and their editorial committees, plus the publication of six annual publications.

This task is set forth at a time when there is awareness of the actual need of strengthening the educational and cultural development in our country. These are considered as absolutely essential goals to attain the consolidation of the economic development, and to preserve the cultural values inherent to an opening process and an internalization of the economy and communications.

Since the information existing in books and magazines cannot meet for itself the minim needs required for teaching and research in the above mentioned disciplines, the Faculty tends to increase and integrate the information concerning the works of the Chilean and Latin-American Artistic and Architectonic patrimony.

1.2. Information Center

The goal of the Center is "creating and producing", so as to "preserve and widespread" patrimonial and up-to-date national and Latin American productions in these disciplines. This action gives permanency to the idea that has sustained them, and also allows the present and future generations the access to information concerning the great works these disciplines have produced.

The Center is the integration of the books, magazines, and thesis collections, and of a Multimedia File of works of Architecture and Art, interacting with the research, teaching, editorial, and extracurricular activities of the Faculty.

2. Definition of the Multimedia File of Works of Architecture and Art

The project contemplates the development of a multimedial file that registers and keeps the information concerning Works of Architecture, Fine Arts, and Craftsmanship. Furthermore, it should transfer the information to several objective receivers of the educational system of the country.

These purposes came up from the statement of the following questions:

- What is the current situation concerning the collection of information about the different Works of Architecture and Art?
- What specific works would there be information registered about?
- What information -and in what sources- is required to get to know a work of Architecture or Art through still visual representations?
- How can the information concerning artistic and architectural patrimonies be preserved and widespread?

* Current situation of work information:

The amount of existing available information about works of Architecture and Arts Heritage is very limited, and its circulation is very poor. The few existing archives are hard to access, and their material is poorly preserved.

* Selection of Works

It was established that the selection of works included in the archive should fulfill the following requirements:

- Material currently available at the Faculty, product of research and publications. If these materials have not been kept in the archive, they are bound to deteriorate, and therefore, will not be accessible for the users.

- Institutional decisions of what is “preservable”, related to national priorities.
- Information concerning works of Art and Architecture existing in international organisms: Dirección de Archivos y Museos, Ministerio de Obras Públicas.

The Challenges of Developing a Collection

- * The contents of information needed to collect per work
 - Work of Art: Data concerning the work as well as the author; a set of visual representations of the whole, and of some important enhanced parts
 - Bibliographical References
 - Work of Architecture: Data concerning the work and its author; a set of blueprints, drawings, and documents; a set of photographic representations that gives account of the whole and its parts
 - Bibliographical References
- * The media source that each type of information requires:
 - Filing cards of the Works
 - Filing cards of the Authors
 - Documents
 - Blueprints and Drawings
 - 35-mm slides
 - Videotapes
 - References of books and specialized magazines.
- * Collections of primary media sources necessary to develop and store
 - Drawing Collection
 - Filing Card System
 - Slide Collection
 - Photo Collection
 - Videotape Collection
 - Documents
- * The different aim users to whom access privileges are necessary
 - Related disciplines researchers
 - University teachers
 - School teachers
 - University students of the related disciplines
 - School students
 - General users

- * The available technology

Multimedial Databases

Digitizing of the blueprints, slides, and videotapes.

Specific Goals

* Production of information in primary media sources to create a collection of blueprints, drawings, documents, files, slides, photos, and videotapes as a part of the database.

- * Digitizing the information to create a virtual collection

* Development of an image database that allows effective access, and integrating the different sources of the material, each for the various user levels, keeping the safety of the primary sources, which would only be accessed by qualified researchers.

* Putting this database to the disposition to the different educational levels, as a way of promoting cultural development

Project Staff

A multi-disciplinary staff was conformed for the development of the project, formed by:

- Faculty Teachers
- University Computing Services Engineers
- University Library Staff

Methodology

It is defined that the project requires the implementation of 3 independent lines of work:

- Elaboration of contents in primary media sources, and development of a virtual collection.
- Development of a database
- Products and transference of information to different segments of users.

Concerning the execution of the project, the decision was the application of a helical development methodology in which the three lines of work are set off simultaneously. This simultaneous activity generates an overall prototype of the system, which allows having a complete vision of the problem

about to undertake. After successive repetitions its validity of contents can be proven, as well as the feasibility of the process related to cost/benefit, and its functionality for the different types of users.

3. Description of the Project

3.1. Production of Information in Primary Media Sources, and the Creation of a Virtual Collection

The aim of this line of work is obtaining, processing, filing and digitizing information.

The contents of information of each work must meet certain requirements: Objectivity, veracity, conceptual and graphical quality, as well as a certain amount of information, documents, and still images that can be considered as representative of the chosen work.

This determines that the process of obtaining information is an investigation conducted by academics of that specific discipline, which guarantees that the contents of the archive meet certain defined requirements.

This condition determines three sources of information:

- Information proceeding from scientific research
- Information proceeding from research performed for the publication of books and magazines
- Related research performed to recollect and develop information.

The specific process of the line of work subsequent to the development of the investigation requires the carrying out of the following activities:

- Creation and typing of the filing cards of the works and authors, in a predefined format.
- Selection of the documents (drawings, sketches, texts, original writings of the author, and so forth).
- Identification of the necessary information for the understanding of the works: architectural blueprints, and other graphic representations, as well as 35-mm slides and videotapes.
- Classification of data in its original source so as to be incorporated to the Library Catalogue.

- Selection of a group of slides, drawings, and other documents, and further digitizing of them. Incorporation of the material in their original media source to the respective Collections of the Library.

3.2. Development of the Database

This line of work has the following goals:

- Developing a relational database which integrates textual and visual information.
- Give access to the collections via media sources, physically located inside the Library.
- Administer and give access to the virtual collection, integrated in the database.

The specific process of this line of work involves the execution of the following activities:

- Analysis of the data model
- Construction of a computational prototype that allows testing of the functionality of the system, as well as the testing by the different types of users.
- Creation of a software administered by Oracle Database for Unix platform. This would allow the electronic storing of the contents in an Information Server.
- Development of a software network that allows the publishing of the contents of the File in Internet. This development would be made using the standard for publications in World Wide Web, which would mean, theoretically, that Internet users from any place in the world could have access to it.
- Feed the database with all the information prepared in the development of information stage.

3.3. Products and Transference of Information to Different Segments of Users

This line of work has the following goals:

- The offering of this data service to as much institutions as this Project could benefit (Universities, State Departments, Museums, and others of the kind, all over Latin America)

- Promote this data service in all those information servers related to ours, so as to constitute ourselves as an accessible node from its own publications.

The Multimedial File will generate the following specific products:

- * Design Plan Collection
- * 35-mm Slide Collection
- * Videotape Collection
- * Documents
- * References
- * Virtual Collection

The integration of all the information will be managed by the database, through which direct access to the virtual collection, as well as to the physical location of the real collection will be possible.

The user services will be the following:

- Free access to the database and the virtual collection, via Internet. The information will not be reproducible. An additional service of duplication of information, will be offered to users from educational and cultural institutions, under prior request.
- For undergraduate university students, free access, via Internet, for borrowing of the material contained by the different collections, requests of reproduction of scanned drawings and original documents.
- Free access, to all levels of the File, as well as to original collections, collections in primary media sources, and virtual collections, to researchers and teachers of the disciplines related to the contents in this File.

4. Current State of the Project

The first stage of the project privileged the development of an initial module, methodologically based on: a) investigating how the multimedial technology permits the development of visual and textual virtual collections; b) finding out which is the most effective form of recovering that information; c) establishing what information and what processes are required for the construction of an archive in original sources, and a virtual collection of works of Art and Architecture accessible to different levels of users.

The results were the following:

- Carrying out 3 module of information production united to the computational prototype:

Art: A selection of works from the Museum of Fine Arts, Santiago de Chile, including paintings, sculptures, and 2 expositions: those of Claudio Bravo and Gil de Castro.

Architecture: Chilean Churches and Chapels- the source of information of this module is the research paper Half a Century in Architecture in Chile: Churches and Chapels, Fernando Pérez et al.

Traditional Art crafts: Selection of Chilean Crafts, Source Programa de Artesanía FABAPUC.

- Laboratory facilities based at FABAPUC, which include the necessary facilities for the development of the prototype. This infrastructure is the foundation for the development of the next stage.

- Computational prototype, and development of the specifications of the system's functional design. A relational database SQL that integrates textual information with images was developed. Two prototypes are available: one concerning Art and Artists, and another concerning Architecture and Architects. Both are models that specify the relevant information that the File must contain.

Furthermore, the structure of this prototype was taken to the UNIX platform, which allowed the creation of a massive electronic publication service, reaching the complete Internet community.

5. Challenges for the Consolidation of the File

The consolidation of this project requires, on one hand, that the volume of information contained in it be representative of the Architectural and Artistic patrimony of the country, counting on international information with special emphasis in Latin American works. On the other hand, this information should be complete and including different media sources.

The next stage of the project will allow the consolidation of the file in terms of its validation as a register tool, and as a means of preserving the information about the Artistic and Architectonic patrimony of the country. It will establish the bases of an increasing and permanent process in time by the quality of the information, and finally, will relate the project with museums, and national and international libraries.

These are our future challenges and commitments.