



RESEARCH ON ARCHITECTURAL PRACTICE AROUND THE WORLD

NEEDS FOR TRANSFER

BACKGROUND

The research project on professional practice around the world has been carried out, until now, by the Col·legi d'Arquitectes de Catalunya (Institute of Architects of Catalonia – COAC), for the International Union of Architects (UIA), on behalf of its Spanish Section, the Consejo Superior de los Colegios de Arquitectos de España (Superior Council of Spanish Associations of Architects – CSCAE).

The project began in early 1998 and has been growing over time. It is currently the best and most complete existing source of information about the architectural profession around the world.

The database contains detailed information on the profession in 94 countries and territories and a statistical search engine that was added at the end of 2005, enabling users to obtain search results based on theme and geographic area.

Since its creation, the set-up and maintenance of this database has been fully operated and financed by the COAC; however, this professional organisation has recently stated its impossibility to continue this work.

This report is intended to provide the basic information needed in order to prepare the transfer of this project to another host and manager.

CURRENT SITUATION

Description

The data is currently stored on the COAC *server* in Barcelona (Linux server: Processor Dual-Core Opteron™, 2 x 2.4 GHz, DDR RAM: 2 GB, hard drive: 2 x 250 GB, System: CentOS 5 + plesk 8.6, Security RAID 1Mirrored Operating firewall).

Since its beginning, the database has been improved and expanded based on information collected through more detailed questionnaires, thus, it currently consists of *three different databases*.

The first contains the data collected in response to the original format of the questionnaire. This is the '2002 edition' and the software used is Oracle. Countries that have not updated their information since 2002 are listed only in this database.

The second is composed of the data obtained in response to the second version of the questionnaire. This is the '2005 edition' and it was also created in Oracle.

The third database contains the information used for the statistics and maps that feed the search engine set up in 2005. This database is programmed in SQL and contains only the 63 countries that updated their information in 2005 and sent their replies using the new questionnaire.

To *manage and visualise the data* contained in these three databases, several programmes and programming languages are used:

Visual Basic is used for internal management of the Oracle databases.
Cgi in combination with html was used for visualisation of the queries on the internet.
An Excel spreadsheet is used to analyse the data.
Java allows for visualisation of the Oracle databases.
Flash and php are used to visualise the statistics and maps in MySQL.

Pros and cons of the current status

The fact that the information is stored in three different databases that run on two different software programmes is a consequence of the progressive set up and maintenance process over time, which led us to adopt the most adequate solution at a given moment.

Oracle was the software used by COAC when it launched the database back in 1999. It is a robust, but expensive, system that requires good programming skills. There are now several other programmes that are more common, more user-friendly and much cheaper (or even free) while providing the same level of performance.

Similarly, the different management and visualisation tools reflect the evolution of IT technologies over the years.

The Visual Basic data management system works efficiently on intranet, but not on Internet. This means the data manager must work on the internal network where the database is stored, and not from another site. Furthermore, as it stands, the programme cannot be directly transferred to a different manager.

On the other hand, Php, Flash and Java allow for Internet data management and seem much more appropriate for today's IT standards, even if Java is more expensive and difficult to use than other software.

PLANNING FOR TRANSMISSION TO ANOTHER OPERATOR

Server and OS

There are no particular server requirements that go beyond the common standards:

- robust
- ample storage capacity
- sufficient broadband
- the necessary backup system
- full security against hackers

We recommend using Windows or Linux as the OS, as they are the more common.

Merging the databases and database software.

When planning the transfer of this information to a new server with new management, the first priority should be to *merge the data into a single database*.

Even if, in principle, the new database format does not need to be defined beforehand and can depend on the software familiar to the new manager, we should think globally and define it in parallel to the format used for the general UIA database.

We therefore recommend programming the new database in SQL (MySQL or SQLServer).

The 2005 database should be used as the basis for the fusion because its structure is much more accurate than the initial 2002 version. This means the old files from the 2002 version must be entered in the new format, along with some replies from late 2007 that haven't yet been integrated.

Before merging the data, we should consider whether any adjustments or modifications to the structure of the database should be made (how the questions are worded, a new structure for certain answers...). Technically, there is no need to consider adding information at this time, as additions can easily be made at any moment.

Management and visualisation software

It would also be better to use one programme to maintain, manage and visualise all data. Preferably, one that works through Internet so the database can be managed remotely if necessary.

We recommend to using Java, Php or Asp, with integrated flash, as the new standard, knowing that php or asp are cheaper and less complicated alternatives.

FUTURE DATABASE MANAGEMENT

Human resources and data management

Finding a new server, restructuring the database and changing its management and visualisation software, as indicated above, are only the initial steps towards the future management of the database. *Human resources, even if minimal, are also necessary* to provide regular data management.

The manager's tasks include mailing questionnaires to the UIA Member Sections, collecting their answers, checking the accuracy of the information received and entering it into the database, as well as analyzing the data to produce statistics and reports and publishing it through the relevant media.

If some of these processes can now be made easier, the human factor is still key to ensuring the quality of the results produced.

In order to improve efficiency and reduce costs, the new dataset structure should give the UIA Member Sections the possibility to modify their information on-line, even if these changes must be validated by the general manager before they can be seen by the public. This needs to be taken into account when programming the new maintenance software.

One of the key factors in ensuring the quality of the project over the past ten years has been the close relations among all those involved in defining, setting up, managing and visualizing the database. This relation has been fluid and efficient and this shows in the results. It is important to maintain the key aspects of this situation when transferring the database.

With today's technology, servers and their managers do not need to be located in the same place; the indications above show that it would be possible manage this database remotely. However, once the information is merged into a single database and all the software issues have been solved, is *it essential that the person or persons managing the database remain close to those leading the research project.*

Access to information and financial resources

Until now, access to the database has been open to everyone and its use restricted only by the need to credit the source.

The high number of visits to the existing web pages indicates a potential for revenue. Associating sponsors to the database or making information accessible by payment are two options that could provide the financial resources needed to continue this work and, eventually, become a potential source of revenue.