The Internet as the Perfect Tool to Document Construction Projects

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Summary

Over the last few years, many web sites have been created that allow construction professionals to present their current and past projects to a wide audience on the Internet. This can be achieved by either presenting projects on company web sites or sites dedicated to that specific web site. It is also possible to group projects in databases that are the basis to more encompassing web sites. One of the few web sites geared primarily to works of bridge, structural and civil engineering is the Structurae database. This paper presents the possibilities of documenting such works of engineering both to a professional audience as well as the general public.

Keywords: Internet, documentation, marketing, database, construction, architecture, engineering

1.   Introduction

The Internet has developed since its inception into a great tool for the construction industry both in the actual day-to-day use for construction management or to disseminate information around the globe and to make that information available to a selected audience or the general public. The rise of interactive server technologies has made the possibilities and options for presentation and documentation of construction projects virtually endless that cannot all be covered in a short paper. The following will show the advantages, possibilities and limitations of documenting buildings and other works in a structured on-line database of which there are currently several available on-line.

2.   Construction-Themed Websites and On-line Databases

Plenty of construction-themed websites have been created in the last decade. Many are the result of classical print publications moving some content to the Internet other are created by professional associations and government agencies. Some web sites have no affiliation whatsoever with the above and are completely new creations that offer also different possibilities to the construction industry. Exemplary among these are three on-line databases originating from Germany: archINFORM, Emporis and Structurae – all of them also available in English and the latter being the author's own project.

3.   Structurae in Detail

Structurae presents primarily structures which have a significant involvement by civil or structural engineers in terms of design such as bridges, tunnels, dams, towers, long-span roofs, skyscrapers, etc. Other built structures which might be of interest to engineers, but otherwise more architectural or historical in scope, are also included. They are generally grouped into six larger categories: bridges and viaducts, buildings,

Fig. 1: www.structurae.de

dams or retaining structures, tunnels or underground structures, towers or masts, and offshore structures. The database also includes larger projects comprised of several individual structures, such as highways, railroads or urban renewal projects. Besides the main focus on actual built works, information is also available on the persons and companies involved in design or construction of any of the listed structures.

3.1 Available Information & Data

Firstly, construction projects are either document as single and individual structures or so-called large-scale projects if several non-identical structures are part of the construction endeavour. For simplicity, only the possibilities of documenting individual structures are described in this paper, as the method for large-scale projects is similar in principle.

A structure entry is shown as a single web page on Structurae with several distinct sections containing in order: basic information, typology, participating persons and companies, construction-related products used on this project, technical data, chronology, notes and remarks as well as internet links and printed references. Many of the listings actually link to other data entries in the database and are represented as single web pages of their own. A second page is created if more than one image is available to illustrate the project.

In order to accommodate a large variety of structural types, the database and website have programmed to allow for a large degree in flexible allowing both standardized data input – which is automatically translated into the three available languages – as well as free text passages.

3.2 Limitations

Despite all the flexibility that has been programmed into Structurae, there are of course limitations to what can and what is actually entered into the database.

One of the obvious reasons is legal limitations. Both in terms of text and images, much of the information cannot be published without the consent of the author, which especially with regard to images is often only available at a price. Copyright law is complex especially where architecture is concerned and varies from country to country. Due to the nature of the Internet, it is theoretically necessary to adhere to every copyright law in every country, though this is hardly practical.

Another obvious reason is simple editorial choice. There are databases which attempt to document or catalogue all structures within a certain domain. However, Structurae tries to limit its content to structures that are in some way significant, historically important or at least structurally special or interesting. This definition is intentionally kept a little vague to make the limitations not too stringent and to keep some editorial leeway.

Other limitations are more practical, e.g. temporary or removable structures are not indexed out of principle as they can only be differentiated with difficulty and cannot be localized physically most of the time. Additionally, some features may require too much server space or other resources which are not (yet) available.

4. Conclusion

Structurae was initially started as a platform to promote civil and structural engineering works in contrast to architectural projects. Since then, Structurae has been developed into a large database of current and historical construction projects that offers clearly structured information to a wide audience. While this method of documenting structures does have its limitations and does not offer the same freedom as a company website with reference pages might, it allows a much broader range of information to the user. At the same time it is an excellent marketing tool for all companies involved in construction.