Institutional information websites and the presence on social networks of Andalusian heritage

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Abstract— **Recent studies by the Spanish Tourism Institute points to the internet as a "clear driver of the sector" and as a potential source for promoting and selling regional heritage. However, the advantages that the Web and various Web 2.0 tools offer have not been exploited by a large number of buildings in the Autonomous Community of Andalusia, and its presence on the networks is rather scarce.**

Bearing in mind that the Web 2.0 helps disseminate information amongst an ever-growing audience, this paper aims to identify and evaluate the specific 2.0 tools that the organisms responsible use to promote buildings included in the General Catalogue of Andalusian Historical Heritage. To do so, the presence on the internet and the main social networks (Facebook, Twitter and YouTube channel) of each of the 3913 catalogued buildings were identified, analysed and categorised.

The results show that there is still a long way to go. In the majority of cases, the information regarding the various buildings published on these media is limited to a small description of it on the tourism page of the corresponding Provincial Council for the municipality or, in the majority of cases, of the City Council itself. Those that have their own website account for a negligible number of the buildings. Furthermore, as regards social networks, the buildings analysed are in an even worse situation, with a very low percentage that have an up-to-date and active profile on these networks. The presence of these resources in English and French was also analysed, and the figures are astonishingly low.

Index Terms— **Historical Buildings, Heritage, Andalusia, Web 2.0**

I. INTRODUCTION

The Web is a well-established means of disseminating information. It is not subject to geographical boundaries and has an ever-growing audience. Due to its very nature, especially the fact that it can be accessed easily from any part of the world, there is a need to offer multilingual information which is capable of meeting the needs of a greater number of users, thus overcoming language barriers.

Information is born, grows, reproduces and, sometimes, dies on the Web. This is why it is an ideal environment to convey information, which has an ever-growing audience and is affected by a large number of variables. Due to its very nature, especially the fact that it can be accessed easily from any part of the world, there is a need to offer multilingual information which is capable of meeting the needs of a greater number of users, thus overcoming language barriers.

On the other hand, on the Web, the overload of information, or *infoxication*, is more acutely felt than in other contexts. Therefore, on so many occasions when a search term is entered into a search engine, the number of web pages returned proves excessive and not all of them are either relevant to or useful for the user's objectives [1]. Traditionally, Information Retrieval (IR) has been understood to be the totally automatic process whereby, when given a search term and a collection of documents, the system returns an ordered list of documents potentially relevant to that search. An IR system with optimum performance would return all the relevant documents (which involves complete coverage) and only the relevant documents, with perfect precision [2]. A multilingual IR system requires the involvement of at least two languages in this process.

This has fuelled academic interest in multilingual IR and in techniques for processing natural language in developing this type of system. Translation is the focal point within multilingual systems and environments, allowing searches to be carried out in different languages that, additionally, may not coincide with the language of the documents [3].

Heritage and its management have an undeniable impact on activities such as tourism and on economic development [4, 5]. In Andalusia, Historical and Artistic Heritage is regulated by Law 14/2007 of 26 November, on the Historical Heritage of Andalusia (Official Gazette of the Autonomous Government of Andalusia (BOJA) number 248, of 19 December 2007) although state legislation set out in Law 16/1985 of 25 June, on Spanish Historical Heritage (Official State Gazette (BOE) number 155, of 29 June 1985) is also subsidiarily applicable. Article 6 of the Andalusian Law establishes the General Catalogue of Andalusian Historical Heritage (CGPHA, by its Spanish abbreviation), aimed at providing judicial and administrative protection of Andalusian historical heritage and conceived "as an instrument to safeguard the assets listed therein, and for searching for and promoting them".

Although the creation and updating of the General Inventory of Goods and Assets of the Autonomous Community – within the meaning of the legislation on heritage – as well as the management of income arising from heritage assets is the

responsibility of the General Directorate for Heritage, under the Regional Ministry of Finance and Public Administration of the Autonomous Government of Andalusia, everything that concerns the management and protection of Andalusian historical and artistic Heritage falls within the competencies of the Regional Ministry for Education, Culture and Sport. This Regional Ministry, together with its corresponding delegations in the various Andalusian provinces, is in charge of the protection, growth and increasing the value of the historical heritage of Andalusia, performing tasks relating to research, protection, conservation, restoration and promotion. Indeed, the General Directorate highlights the importance of promotion for facilitating the processes of conservation, research and protection "but, above all, it is the heritage itself that requires promotion in order to fulfil a fundamental right in a democratic society, and any method, whether exhibitions, publications, computer formats, conferences, musealisation of sites or other heritage centres, or any other method, is a worthy vehicle of promotion as long as it respects the fundamental premise that the preservation of the building is respected".

The Information System of the Historical Heritage of Andalusia (SIPHA), now part of MOSAICO, the Information and Management System of the Cultural Assets of Andalusia, has given rise to numerous advancements in this area through i) the creation of recognised standards regarding the various heritage entities, ii) the creation of the Andalusian Historical Heritage Thesaurus, iii) the incorporation of the Geographical Information Systems, iv) the creation of photographic and/or audiovisual documents collections, and v) access to various databases on the moveable and immovable Heritage of Andalusia or to the Andalusian Registry of Contemporary Architecture, among other products.

The present study is focused on the subject of the historical and artistic Heritage of Andalusia, or more specifically, on the buildings inventoried in the CGPHA, i.e. 3913 buildings (monuments, archaeological sites, among others) included in the catalogue.

II. WEB 2.0

Web 2.0 has been growing in parallel with the internet itself. It has brought about a social change, not only because it offers new tools that multiply the ways in which knowledge is created and spread, but also because it changes the medium through which individuals communicate with the environment. The internet has gone from the Web 1.0 generation, which was limited to offering information, through the intermediate step of Web 1.5, which incorporated more advanced capabilities, to the current Web 2.0, where page content depends on the information provided by the users, which fosters interaction between, participation in and creation of social networks or communities [6].

These advantages can be added to the other characteristics of Web 2.0 defined by O'Reilly [6]. Firstly, the Web is becoming an information platform that is constantly being improved by a community that continuously incorporates content and which takes advantage of collective intelligence to produce a large volume of highly valuable data. Furthermore, free software which is not limited to a single device, the search for simplicity in the transfer of information and the creation of a conversational space that brings enriching experiences to users make Web 2.0 an unbeatable agora to guarantee access to scientific knowledge and a solid foundation on which to build the scientific, technological and social system.

Web 2.0 is an online space where there is a new work distribution, new occupations appear and other traditional ones disappear, and original market niches and new possibilities emerge [7]. In other words, it is an environment whose characteristics make it suitable for facing up to the challenges that promoting cultural heritage poses, since it is an interconnected habitat which seeks to foster the greatest professional and personal comfort of people, always to the largest extent possible [8].

It is precisely within this contextual framework where researchers [8-9] tell of the existence of a new generation of technological tools whose design and implementation lay the foundations for optimising the awareness-raising processes of historical and artistic heritage.

III. METHODOLOGY

Para el análisis y evaluación de la presencia de los bienes inmuebles andaluces en la Web 2.0, se ha analizado y estudiado la información de los 3913 bienes inmuebles catalogados por el CGPHA (tabla 1).

TABLE I. Total buildings catalogued by province

Province	Municipalities	No. Cultural Heritage Buildings	Percentage
Almeria	79	530	14%
Cadiz	38	447	11%
Cordoba	71	549	14%
Granada	123	650	17%
Huelva	83	344	9%
Jaen	71	535	14%
Malaga	68	386	10%
Seville	68	472	12%

The province with the most inventoried buildings listed in the CGPHA is Granada, with almost 17% of the total buildings catalogued, followed by Cordoba, Jaen and Almeria, each with 14%. The province with the lowest number of catalogued buildings is Huelva with 344, or 8.8% of the total. As is the case with the number of buildings catalogued by province, the number of municipalities with catalogued buildings varies considerably from one province to another, so that there is a 100-municipality difference between the province with the most municipalities (Granada, with 123) and the one with the least (Cadiz, with 38), as shown in table 1.

An ad hoc file was designed to collect data for each province in a spreadsheet format, in which various categories were created. The name of the building (in cases where the entirety of the building was not catalogued, two points were added where the protected parts are described), the province and municipality where it is located, as well as the type of estate to which it corresponds according to the description provided in each building's CGPHA file, were determined. Furthermore, it was specified whether the monument has its own website and/or whether information regarding the building is available on the website of the City Council, the Provincial Council, or the Autonomous Government of Andalusia – as long as the information provided on these sites was different from the brief description included in the general catalogue mentioned above. It was also recorded whether the building analysed is mentioned on the websites of other public institutions and/or publicly funded private institutions, as well as other websites. Finally, it was also considered whether they have an account with the main social networks (Facebook, Twitter and YouTube channel), content syndication – i.e. RSS newsfeed – and geographic location data such as those offered by Google Maps.

The same procedure was followed to verify the presence of the other languages on the websites. In this case, we focused exclusively on English and French, finding out which of the resources listed above were available in these two languages.

This analysis took place over the course of a year and the data were updated recently, and the search for information (websites) was then carried out by province, following the classification criteria mentioned above. When choosing the websites (a maximum of five for each building), certain evaluation criteria were followed in order regarding the quality of information on the specified websites, namely the author, the content, the accessibility of the information, the ergonomics, the luminosity – or the number of links it contains to other websites – and visibility – its presence via links on other websites [9]. In some cases, where there was not sufficient information for a building, it was decided that portals or websites that offer information regarding various buildings should be included.

In order to locate the various websites, the search engine Google was mainly used, as well as the IAPH database, accessible via the Web. This database allows general searches to be made regarding any heritage building, as well as specific searches in the case of archaeological, architectonic and ethnological searches, including a total of 25,000 buildings (among which those with CGPHA-protection are of course included).

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IV. RESULTS AND DISCUSSION

After having gathered and analysed the information pertaining to the various buildings in the provinces of Andalusia, the total number of buildings per province, the number of municipalities with buildings in each province, and the type of each, was obtained. Although the catalogue description of numerous buildings already classified them, a large number of these had to be identified and established when the study was carried out. The majority of the buildings analysed were monuments, followed by archaeological areas and historical complexes (Table 2).

TABLE II. CLASSIFICATION OF BUILDING BY PROVINCE

			TOTAL
ALMERIA	Monuments	296	531
	Place of industrial interest	0	
	Archaeological area	74	
	Historical complex	4	
	Historic garden	1	
	Place of ethnological interest	0	
	Historical sites	140	
	Unclassified	15	
CADIZ	Monuments	315	448
	Place of industrial interest	0	
	Archaeological area	43	
	Historical complex	27	
	Historic garden	11	
	Place of ethnological interest	3	
	Historical sites	29	
	Unclassified	19	
CORDOBA	Monuments	352	549
	Place of industrial interest	20	
	Archaeological area	29	
	Historical complex	24	
	Historic garden	18	
	Place of ethnological interest	7	
	Historical sites	53	
	Unclassified	45	
GRANADA	Monuments	463	648
	Place of industrial interest	4	
	Archaeological area	37	
	Historical complex	16	
	Historic garden	48	
	Place of ethnological interest	6	
	Historical sites	69	
	Unclassified	8	
JAEN	Monuments	363	536
	Place of industrial interest	45	
	Archaeological area	81	
	Historical complex	26	
	Historic garden	4	
	Place of ethnological interest	4	
	Historical sites	13	
	Unclassified	0	
HUELVA	Monuments	159	344
	Place of industrial interest	4	
	Archaeological area	46	
	Historical complex	37	
	Historic garden	1	
	Place of ethnological interest	44	
	Historical sites	17	
	Unclassified	37	
MÁLAGA	Monuments	248	382
	Place of industrial interest	5	
	Archaeological area	67	
	Historical complex	9	
	Historic garden	6	
	Place of ethnological interest	18	
	Historical sites	7	
	Unclassified	22	
SEVILLE	Monuments	311	472
	Place of industrial interest	7	

SEVILLE		
	Archaeological area	30
	Historical complex	24
	Historic garden	6
	Place of ethnological interest	44
	Historical sites	13
	Unclassified	37

TOTAL			
	Monuments	2507	
	Place of industrial interest	85	
	Archaeological area	407	
	Historical complex	167	3913
	Historic garden	95	
	Place of ethnological interest	126	
	Historical sites	341	
	Unclassified	183	

The results show that there is a large percentage of websites from public institutions (Autonomous Government of Andalusia, various Spanish Universities, Ministry of Education, Culture and Sport; the Governments of other Autonomous Communities, among others) as well as websites that are not from institutions, but which prove relevant. Of these websites, we have identified numerous blogs (specialist blogs or those written by enthusiasts of archaeology, history, art, etc.), specialist magazines (architecture, archaeology, history, art), encyclopaedias and tourism websites. There are also websites with relevant information about the City Councils and about various municipalities, although these account for a lower percentage. In short, all of the buildings analysed are listed in the IAPH database, and some of these even appear on Andalusia's official tourism website. There are also numerous cases where City Councils dedicate a special section of their website to tourism, in order to promote the heritage of their respective localities. On occasion, there are private websites dedicated to tourism, as in the case of HispaVista or the Michelin Guide, and, on other occasions, this information is financed the Provincial Council, the European Union, the Ministry, the Autonomous Government of Andalusia, etc., as is the case with the spain.info website.

Furthermore, an analysis was carried out of which sources had an accessible English or French translation on their website. Table III shows the number of Web sources available in Spanish, English and/or French, as well as the total resources available by province

TABLE III. NUMBER OF BUILDINGS REPRESENTED, BY PROVINCE

		ES	EN	FR	TOTAL
ALMERIA	Official websites	5	2	0	
	City Council	12	2	1	
	Provincial Council	9	0	0	
	The Autonomous Government of Andalusia	526	0	0	890
	Other public institutions	4	2	0	
	Other publicly funded private institutions	2	1	2	
	Other	306	3	0	
	Social networks	12	1	0	
CÁDIZ	Official websites	11	0	0	
	City Council	54	2	0	
	Provincial Council	0	0	0	
	The Autonomous Government of Andalusia	446	0	0	1005
	Other public institutions	11	3	1	
	Other publicly funded private institutions	9	7	3	
	Other	425	8	0	
	Social networks	25	0	0	
CÓRDOBA	Official websites	14	4	1	
	City Council	53	17	13	
	Provincial Council	0	0	0	
	The Autonomous Government of Andalusia	548	0	0	132
	Other public institutions	28	8	6	
	Other publicly funded private institutions	38	30	21	
	Other	496	3	0	
	Social networks	22	0	0	
GRANADA	Official websites	180	77	9	
	City Council	110	0	1	
	Provincial Council	37	2	2	
	The Autonomous Government of Andalusia	647	0	0	1885
	Other public institutions	65	13	17	
	Other publicly funded private institutions	29	11	18	
	Other	601	19	15	
	Social networks	32	0	0	
JAÉN	Official websites	3	3	0	
	City Council	39	1	1	
	Provincial Council	2	0	0	
	The Autonomous Government of Andalusia	532	0	0	1116
	Other public institutions	10	7	7	
	Other publicly funded private institutions	12	11	11	
	Other	457	9	0	
	Social networks	11	0	0	
HUELVA	Official websites	7	0	0	
	City Council	56	4	0	
	Provincial Council	5	5	2	
	The Autonomous Government of Andalusia	325	0	0	785
	Other public institutions	5	3	3	
	Other publicly funded private institutions	12	5	5	
	Other	343	5	0	
	Social networks	5	0	0	
MÁLAGA	Official websites	11	6	0	
	City Council	68	19	6	
	Provincial Council	0	0	5	
	The Autonomous Government of Andalusia	363	0	0	1015
	Other public institutions	8	5	3	
	Other publicly funded private institutions	8	8	8	
	Other	426	29	19	
	Social networks	26	0	0	
SEVILLA	Official websites	20	5	0	
	City Council	32	0	0	
	Provincial Council	0	0	0	1189
	The Autonomous Government of Andalusia	446	0	0	

	Other public institutions	18	3	13
	Other publicly funded private institutions	13	13	13
	Other	571	28	28
	Social networks	21	0	0

As regards content syndication, the two most frequently used tools are news channels, RSS, and news blogs, although, once again, it is worth mentioning that daily user content is rarely created. The use of these two tools, better suited to the initial years after the implementation of Web 2.0 – around 2006 in Spain – is also evidence that, in the majority of cases, those in charge of managing our heritage seem to live with their backs turned to the technological innovations that would help their work gain a wider audience.

As regards social networks, there are numerous buildings that have a profile, whether created by a public institution (Autonomous Government of Andalusia) or by an individual to encourage tourism. These profiles are mainly found on Facebook. The bodies that manage the social networks of the majority of the buildings in Andalusia tend to be institutions which are part of the Autonomous Government of Andalusia, or private institutions that have some kind of link with these, such as museums. Figure 1 represents social networks exclusively in Spanish, since no multilingual presence of any kind was found on the Web.
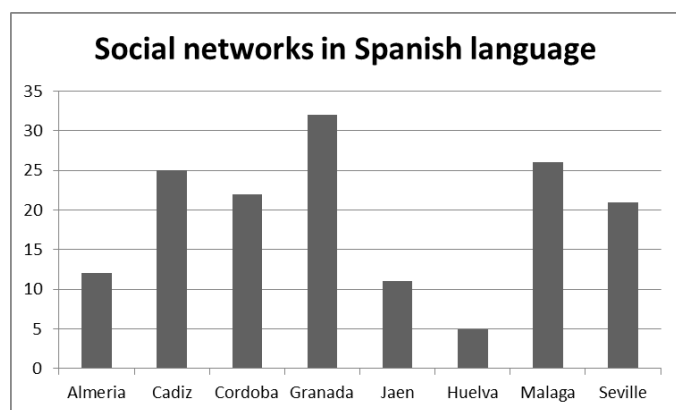

Fig. 1. Social network profiles

Finally, the buildings that are featured on Google Maps, or on other available devices, were identified. Unlike the profiles or pages on the social networks, the number of buildings that are locatable on a map is high, which allows the user to identify it without any problems (Figure 2).
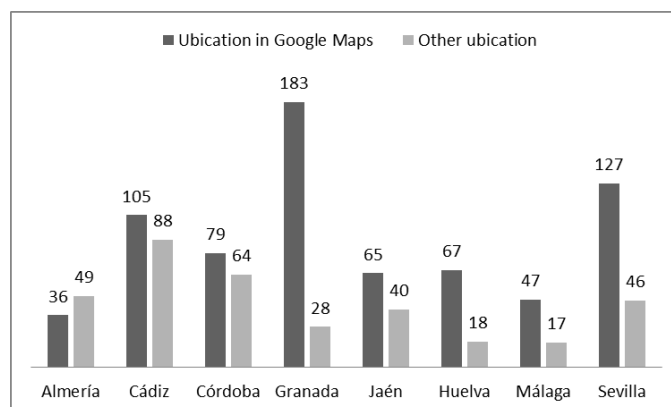

Fig. 2. Profile on Google Maps and others

V. CONCLUSIONS

The results show that Andalusian monuments do not use the full potential that Web 2.0 offers for promoting its heritage. In fact, it has been found that very few buildings have a consolidated presence on the Web, which are on their own websites that exclusively concern the monument. Promotion by City and Provincial Councils of the buildings catalogued in their locality or province is also scarce, focusing, in the majority of cases, exclusively on the most visible monuments. Nonetheless, the role of the Autonomous Government of Andalusia should be emphasised, since all the buildings have been categorised and catalogued on its website and it provides a description, image and the location etc. of each.

Furthermore, the majority of the monuments that do use this tool do not communicate effectively. The majority, with certain exceptions such as the Council of the Alhambra (Granada) and the Palace of Viana (Cordoba), do not regularly update their Web content, or exceed 1000 followers Facebook or 500 on Twitter, and barely reach 30 subscribers on YouTube. It is also worth pointing out that there are no links provided on other websites, and this prevents them from having good visibility on the most well-known search engines, such as Google or Yahoo. This factor negatively affects them because they lose visibility in a community of which the online presence is increasing and which is more dependent on the advantages of the internet when it comes to creating networks.

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