



Semantic web usage in the tourism industry in Andalusia, Spain

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Abstract

Andalusia is the 4th tourist destination among the 17 autonomous Spanish communities, and recently reached 100% rates of tourism recovery, returning to pre-pandemic normality. The semantic web permits access to structured data and the use of optimized processing tools, and thus plays an important role in tourism development. This work empirically studies the current usage of semantic web formats, ontologies and touristic topics on 65 web sites relevant to tourism in the Andalusia region. The results showed that 57 % of examined sites used semantic markup, with almost 85% of all semantic annotations made by only 14 % of all websites, with sites related to the provinces of Granada and Sevilla having more structured data than the rest. Most semantic annotations (98.5%) are made using three formats (Microdata, JSON-LD and RDFa) and only three ontologies ('Schema.org', 'Data Vocabulary' and 'RDF') are used in almost 90% of all markups. However, none of the special tourism ontologies appeared in the examined tourism web sites. Therefore, Andalusian tourism websites should be improved with semantic web tools to achieve a better future performance.

Keywords: Andalusia, Ontologies, Smart Tourism, Tourism Data, Tourism in Spain