World Academy of Science, Engineering and Technology
International Journal of Humanities and Social Sciences
Vol:16, No:11, 2022

Towards Addressing the Cultural Snapshot Phenomenon in Cultural Mapping Libraries

Authors : Mousouris Spiridon, Kavakli Evangelia

Abstract : This paper focuses on Digital Libraries (DLs) that contain and geovisualise cultural data, highlighting the need to define them as a separate category termed Cultural Mapping Libraries, based on their inherent connection of culture with geographic location and their design requirements in support of visual representation of cultural data on the map. An exploratory analysis of DLs that conform to the above definition brought forward the observation that existing Cultural Mapping Libraries fail to geovisualise the entirety of cultural data per point of interest thus resulting in a Cultural Snapshot phenomenon. The existence of this phenomenon was reinforced by the results of a systematic bibliographic research. In order to address the Cultural Snapshot, this paper proposes the use of the Semantic Web principles to efficiently interconnect spatial cultural data through time, per geographic location. In this way points of interest are transformed into scenery where culture evolves over time. This evolution is expressed as occurrences taking place chronologically, in an event oriented approach, a conceptualization also endorsed by the CIDOC Conceptual Reference Model (CIDOC CRM). In particular, we posit the use of CIDOC CRM as the baseline for defining the logic of Cultural Mapping Libraries as part of the Culture Domain in accordance with the Digital Library Reference Model, in order to define the rules of cultural data management by the system. Our future goal is to transform this conceptual definition in to inferencing rules that resolve the Cultural Snapshot and lead to a more complete geovisualisation of cultural data.

Keywords : digital libraries, semantic web, geovisualization, CIDOC-CRM
Conference Title : ICCHNT 2022 : International Conference on Cultural Heritage and New Technologies
Conference Location : Rome, Italy
Conference Dates : November 14-15, 2022