

GIS-based Cartographic Design: Development and Evaluation of the Tourism Symbols of the National Park Service (NPS) and Saudi Commission for Tourism and Antiquities (SCTA)

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Abstracts:

We live in a globalized world of cultural and linguistic diversity, and new communication technologies are expanding at a remarkable pace. In this environment, tourist maps designed to facilitate the movement of persons and improve the safety, security, and comfort of users of tourist facilities and sites must communicate with individuals from multiple cultural backgrounds. Many countries create tourist maps in paper or digital form; unfortunately, these maps do not use standardized symbols, and the symbols that are used can be confusing and unclear for people from differing cultural backgrounds (Johnson, 1983). This paper employed human factors and testing methods (questionnaire survey) to improve the design and comprehensibility of tourist map symbols. The tourism map symbols that evaluated in this work, they came from the U.S. National Park Service (NPS) and Saudi Commission for Tourism and Antiquities (SCTA). To achieve the goals of this study was designed questionnaire for two different participant cultures (i.e., American and Saudi Arabian students), different symbols shape (i.e., 2D and 3D symbols), and for different displays (i.e., with or without a map). Moreover, Efficiency was measured by the percentage of correct meanings assigned to each symbol by a sample of respondents. A score of 50% correct responses was used as a critical measure of efficiency of each symbol. The final phase of the work was to customize all symbols that have a score of 50% correct responses and add them to the ArcGIS software. All these symbols were converted to *.style format to support with most GIS software and PNG format to support with others web map program.

Keywords: Map Tourism symbols; Symbol Standardization; Evaluation; GIS; Customization