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Mouse-Sensitive Following Path Suggestion for Drawing Travel Routes in Web Map Systems

PDF (Size:595KB) PP. 393-402   DOI: 10.4236/jgis.2012.45045

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ABSTRACT
This paper proposes a web map system for drawing an arbitrary travel route using a mouse-sensitive following path suggestion. The interaction model of the system allows users to intuitively understand the sequence of user actions needed to draw a conceived route and reduces the number of user actions required. Moreover, the system allows users to understand at a glance several drawing alternatives (static suggestion) and also consider a particular drawing alternative (dynamic suggestion) without making any commitment. The proposed architecture of the system reduces the influence caused by communication delay between a map server and a web client by delivering in advance road network data from a map server to a web client. Experimental evaluations on a prototype we developed demonstrated that the proposed system enables users to draw arbitrary routes within noticeably less clicks, in less time, and with less stress than previous systems.

KEYWORDS
Computer-Aided Route Drawing; Following Path; Web Map System, GIS

Cite this paper
P. Martinez Lerin, D. Yamamoto and N. Takahashi, "Mouse-Sensitive Following Path Suggestion for Drawing Travel Routes in Web Map Systems," *Journal of Geographic Information System*, Vol. 4 No. 5, 2012, pp. 393-402. doi: 10.4236/jgis.2012.45045.

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