

Data Management on the Spatial Web

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ABSTRACT

Due in part to the increasing mobile use of the web and the proliferation of geo-positioning, the web is fast acquiring a significant spatial aspect. Content and users are being augmented with locations that are used increasingly by location-based services. Studies suggest that each week, several billion web queries are issued that have local intent and target spatial web objects. These are points of interest with a web presence, and they thus have locations as well as textual descriptions. This development has given prominence to spatial web data management, an area ripe with new and exciting opportunities and challenges. The research community has embarked on inventing and supporting new query functionality for the spatial web.

Different kinds of spatial web queries return objects that are near a location argument and are relevant to a text argument. To support such queries, it is important to be able to rank objects according to their relevance to a query. And it is important to be able to process the queries with low latency. The talk offers an overview of key aspects of the spatial web. Based on recent results obtained by the speaker and his colleagues, the talk explores new query functionality enabled by the setting. Further, the talk offers insight into the data management techniques capable of supporting such functionality.

1. BIOGRAPHICAL SKETCH

Christian S. Jensen is a Professor of Computer Science at Aarhus University, Denmark, and he was previously at Aalborg University for two decades. He recently spent a 1-year sabbatical at Google Inc., Mountain View. His research concerns data management and data-intensive systems, and its focus is on temporal and spatio-temporal data management. Christian is an ACM and an IEEE fellow, and he is a member of the Royal Danish Academy of Sciences and Letters and the Danish Academy of Technical Sciences. He has received several national and international awards for his research. He is currently vice-chair of ACM SIGMOD and an editor-in-chief of The VLDB Journal.



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