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# “Elastic Validity Region for Querying Mobile Point-of-Interests”

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## **Abstract**

A region-based querying has been widely used to update the freshness of query result and reduce the query traffic in diverse wireless networks. Most prior querying approaches implicitly assume infrastructure-based networks but we need to relax this assumption by considering limited coverage or even unavailability of the network. Designing an efficient query processing mechanism is admittedly challenging in an infrastructure-less network because of the lack of centralized coordination, limited computing and communication capabilities, and time-varying network topologies. To address these issues, we discuss an elastic validity region and its corresponding query operation in a mobile ad hoc network with mobile point-of-interests.

## **Bio**

He received his B.S. degree (summa cum laude) from Dept. of Computer Science and M.S. degree in the Dept. of Computer Engineering from Hankuk Aviation University (a.k.a., Korea Aerospace University), Korea, in 1996 and 1998, respectively. He received the Ph.D. degree in the Dept. of Computer Science and Engineering from The Pennsylvania State University, University Park, in 2005. He is currently an Assistant Professor with tenure in the Department of Computer Science, Texas Tech University (TTU). Before joining TTU, he was an Assistant Professor in the Dept. of Electrical Engineering and Computer Science, South Dakota State University, from 2005 to 2009. His primary research interests are in the areas of Mobile Data Management and Privacy, Data Caching, Querying, and Dissemination, Cyber Attack Countermeasures, Data-Intensive Evacuation Assisting and Disaster Relieving, and IoT Networks and Mobile Computing. He was awarded Texas Tech Alumni Association New Faculty Award and Air Force and Office of Naval Summer Faculty Fellowships. He was a guest editor of special issue on dependability and security for wireless ad hoc and sensor networks and their applications in Int'l Journal of Distributed Sensor Networks and has served on the program committee of many conferences. He is currently leading the T<sup>2</sup> WISTOR: TTU Wireless Mobile Networking Laboratory. He is a senior member of the IEEE.