

Ko, Young-Bae; Vaidya, Nitin H.

Location-aided routing (LAR) in mobile ad hoc networks. (English) Zbl 1120.68317

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Summary: A mobile ad hoc network consists of wireless hosts that may move often. Movement of hosts results in a change in routes, requiring some mechanism for determining new routes. Several routing protocols have already been proposed for ad hoc networks. The paper suggests an approach to utilize location information (for instance, obtained using the global positioning system) to improve performance of routing protocols for ad hoc networks. By using location information, the proposed Location-Aided Routing (LAR) protocols limit the search for a new route to a smaller “request zone” of the ad hoc network. This results in a significant reduction in the number of routing messages. We present two algorithms to determine the request zone, and also suggest potential optimizations to our algorithms.

MSC:

[68M10](#) Network design and communication in computer systems

Cited in 14 Documents

[68M20](#) Performance evaluation, queueing, and scheduling in the context of computer systems

Full Text: [DOI](#)