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IJCA Special Issue on Confluence 2012 - The
Next Generation Information Technology Summit

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CONFLUENCE - Number 1

Year of Publication: 2012

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{bibtex}confluence1005.bib{/bibtex}

Abstract

A Mobile Ad-Hoc Network (MANET) is a self-configuring network of mobile nodes connected by wireless links to form an arbitrary topology without the use of existing infrastructure. Battlefields, disaster relief activities, underdeveloped territories, classrooms are a few scenarios where MANET can be used. Ensuring effective routing is one of the major challenges in adhoc networks. To thoroughly and systematically study the Mobile Ad hoc Networks, it is important to study its routing protocol and evaluate its protocol performance. A very interesting aspect is understanding how users' mobility patterns impact on the performance of routing protocols. In this paper, we have studied the effects of two totally different mobility models on

the performance of three popularly used routing protocols Dynamic Source Routing (DSR-Reactive Protocol) and Destination-Sequenced Distance-Vector (DSDV-Proactive Protocol) and AODV. The widely used mobility model Random Way Point has been compared with City Section mobility model by implementing in NS2. Several experiments have been carried out to study the relative strengths, weakness and applicability of protocols to these mobility models. Our results show that the protocol performance may vary drastically across mobility models and performance rankings of protocols may vary with the mobility models used.

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Computer Science

Index Terms

Confluence

Keywords

Manet Dsr Dsdv Aodv Mobility Simulation