Reduction the Effect of Mobility in Link Transmitting Using Efficient DSR Route Cache for MANETs

Ayoob A. Ayoob, Norrozila Sulaiman, Muamer N. Mohammed, and Ghaidaa M. Abdulsahib
Faculty of Computer Systems & Software Engineering, University Malaysia Pahang, Malaysia

ABSTRACT
Communication between mobile users is becoming more popular than ever before due to the recent technological advances in wireless communication devices. Ad hoc networks are generally closed in that, it's a collection of two or more devices equipped with wireless communications and networking capability; they do not connect to the Internet and are typically created between participants. This means that a formed network can be de-formed on-the-fly without the need for any system administration. Many routing protocol methods have been proposed in Mobile Ad-Hoc Network but still the challenges are to improve the routing performance. The DSR (Dynamic Source Routing) routing protocol dependent on the cache memory for every node to store the routing path from source to destination. This paper presented a new algorithm using DSR routing cache technique to improve the routing between mobile nodes to reduction the effect of mobility in link transmitting that can solve link broken problem. The simulation results show a low delay, stable link in routing and better performance in terms of Route Discovery Time. It indicates that DSR cache outperforms DSR standard and had a high quality of packet delivery.

KEYWORDS: Ad hoc networks, broadcasting algorithm, routing protocols, DSR, link reliability.