Enhancement of Link Stability and Connectivity in Vehicular Ad hoc Networks

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ABSTRACT

Vehicular Ad hoc Networks is a promising sub-group of MANET. VANET is deployed on the highways and city areas, where the vehicles are mobile nodes. Safety and intelligent transportation are important VANET applications that require appropriate communication among vehicles, in particular routing technology. VANETs generally inherit their common features from MANETs where vehicles operate in a collaborative and dispersed way for promoting contact among vehicles and with network infrastructure like the Road Side Units (RSU) for enhanced traffic experience. In view of the fast growth of Intelligent Transportation Systems (ITS), VANETs has attracted considerable interest in this decade. VANET suffer from a major problem of link failure due to dynamic mobility of vehicles. In this paper we proposed a position based routing algorithm to identify stable path, this will improve the routing by decreasing overhead and interrupting the number of links. Link Expiration Time (LET) is used to provide the stable link, the link with the longest LET is considered as the most stable link. The multicast Ad-hoc On-demand Distance Vector (MAODV) is proposed to avoid the link breakages by using a link with longest LET. Data loss is reduced by avoiding link breakages and enhance throughput by reducing the communication delay.