Traffic-Aware Data Delivery Strategy for Vehicular Ad Hoc Networks

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Abstract—**Vehicular Ad Hoc Network (VANET) is an emerging class of wireless network that operates in a vehicular environment to provide communication between vehicles. VANET can be used by wide variety of applications to improve road safety, traffic efficiency and driving comfort. With the high dynamic nature of this network, communication linkage among vehicles in the environment suffers from link-breakage problem hence requires a reliable data delivery strategy to cope with this issue. In this paper, we presents a data delivery strategy called Traffic-Aware Data Delivery (TADD). The idea is to use static nodes placed at each road junction to collect real-time traffic information to improve the situational awareness of the real road conditions. With these static nodes, traffic conditions of their surrounding roads can be obtained and a reliability score for each road can be determined. These scores is then used to select what it considers the most reliable path to deliver the data packet to its destination. A path recalculation is also used to re-evaluate the delivery path at each junction during data transmission.   A new path is then used if the selected path becomes unreliable. The simulation result shows that the proposed strategy is capable of providing feasible situational awareness in vehicular environment and achieves a higher delivery ratio and lower end-to-end delay.**

(Pt9)Keyword—**Coverage Area, Data Delivery Strategy, Information Collection, Static Node, Vehicular Ad-hoc Network**

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