Evaluasi kinerja dari load balancing pada model mobilitas grid map dalam vanet = Performance evaluation of load balancing on grid map mobility model in vanet

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Abstrak

[ABSTRAK
VANET adalah sebuah jaringan tanpa infrastruktur yang terdiri dari entitas atau node bergerak yang memiliki perangkat wireless untuk berkomunikasi satu sama lain. VANET memiliki topologi yang dinamis yang disebabkan oleh mobilitas dari node-node pada VANET. Dalam simulasi pada vanet dibutuhkan model mobilitas yang mencerminkan keadaan sebenarnya. Model mobilitas menentukan pergerakan dari entitas/node, bagaimana node bergerak, kecepatan dan percepatan dalam VANET. Untuk mencegah kemacetan di jalan raya dilakukan load balancing/pengalihan arus kendaraan untuk membagi trafik kendaraan, dengan satu jalur jalan raya, kepadatan kendaraan akan sangat tinggi, pada topologi grid map dengan load balancing, kepadatan kendaraan dapat berkurang. Pada simulasi didapatkan penurunan kinerja pada model mobilitas grid map dengan load balancing. Pada load balancing, perubahan topologi yang menjadi lebih besar mengakibatkan penurunan kinerja dari load balacing pada model mobilitas gridmap dengan 19,3% pada delay, 5,08% pada packet delivery ratio dan 5,46% pada throughput dalam paramater AODV dan 0,01% pada delay, 12,70% packet delivery ratio dan 12,73% pada throughput dalam parameter DSDV.
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ABSTRACT
VANET is an infrastucture less network that consist of entities or mobile nodes that contain wireless device for communicating each other. VANET has dynamic topology due to node mobility. VANET simulation is need mobility model that reflecting the real situation. Mobility model determines the movement of mobile nodes how their location, velocity and acceleration in VANET. To prevent congestion on the road, grip map topology is use to divide the traffic, with the one lane road map, the vehicles density will very high, with load balance grid map topology the vehicles density will separated to other road. On simulation result we get the decrease performance on the load balacing of grid map mobility model. On the load balancing dynamic topology will cause scalability of the network and impact to performance of mobility model. From simulation, load balancing of grid map mobility model has lower performace than common grid map with 19,3% on delay, 5,08% on packet delivery ratio, and 5,46% on throughput with AODV parameters and 0,01% on delay, 12,70% on packet delivery ratio and 12,73% on throughput with DSDV parameters;VANET is an infrastucture less network that consist of entities or mobile nodes that contain wireless device for communicating each other. VANET has dynamic topology due to node mobility. VANET simulation is need mobility model that reflecting the real situation. Mobility model determines the movement of mobile nodes how their location, velocity and acceleration in VANET. To prevent congestion on the road, grip map topology is use to divide the traffic, with the one lane road map, the vehicles density will very high, with load balance grid map topology the vehicles density will separated to other road. On simulation result we get the decrease performance on the load balacing of grid map mobility model. On the

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