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(57) Abstract :

The present invention discloses a multi-layer neural network-based system for vehicle-to-everything communication in 5G network. The plurality of means for connecting vehicles to the Internet through a multi-technology network device, a mobile router that is able to form a mesh network of vehicles connected to the infrastructure; wherein the vehicles connect between themselves to perform Wireless Access in Vehicular Environments through cellular or wireless connections. Further, a multi-layer neural network (MLNN)-based Resource Allocation and sharing approach for device to device-based Vehicle-to-everything communications is provided. In addition, the numerical analysis is presented to approve the effectiveness of our proposed solution in terms of network sum rate, packet reception ratio, resource utilization ratio, and time complexity.

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