Handover Priority to the Data at Knob Level in Vanet

S.G.Sandhya, D.Saravanan, U.Palani, S.Usharani

Abstract: In vehicular adhoc networks (VANETs) the sensors are used for monitoring to the traffic environment and clearing to the traffic etc .In vehicular adhoc network emergency vehicles are suffered lot due to the traffic occurance. so that umbp is introduced .umbp is the one of the protocol which is specially designed for disseminating to the emergency messages in vanet region. It broadcast to the messages for all the directions such as it broadcast to the emergency messages for entire vehicles present over the vanet environment. So vanet environment iis critically challenged by delay, possibility of some terrorism activity. In this paper we proposed to the concept for assigning priority to the emergency messages by selecting the shortest path to reach the server with the help of dsrc technique . So that the emergency message was quickly reach to the server as well as sender. In real time safety related application it is majorly help for ambulance, fire engine, military vehicles. With the help of my proposed system we can prevent to the accident, we know to the blocked street information previously , To avoid traffic congestion. So we take decisions for changing to the route or path. Analysis and simulation result shows that the our proposed method is significantly improves that the performance such as delay, message propagation speed, message reception rate.

Index Terms: Vehicular Adhoc Networks, Umbp , Emergency Message, Priority, Shortest Path.

I. INTRODUCTION

In this work we are going to apply to the concept in umbp protocol for implementing to the priority concept in vehicular adhoc networks. In umbp protocol we introduce to the technique for priority assignment to the node(vehicles) at data level by making shortest path. So the message (emergency messages) are quickly reach to the sender.

It is majorly used for safety related communication technology .so that the delay will be reduced.Urban Multi hob Broadcast Protocol is one of the protocol which is specially designed for disseminating to the emergency messages in vanet. It provides lower priority message transmission delay as well as reduce message redundancy which means same copy of the message received will be reduced.[1,4,8] It includes novel forwarding node selection scheme for better utilizing to the iterative partition, mini slot, black burst for quickly selecting to the remote neighboring nodes. It allows signal for all the direction which means it allows to the signal for uni directional, multi directional, bi directional. It is based on the positions of the priority message sender. An UMBP it using that the technique is DSRC. Dsrc means Dedicated Short Range Communication. It is used for in the vanet is communicating with one vehicle into another vehicles. DSRC supports that vehicles to vehicles (V2V) communication as well as vehicle to infrastructure communication(V2I).The purpose of using this technique (dsrc) is to connect to the local sensors. In addition we can add admission control and network coding scheme for The purpose of better result. The purpose of adding admission control is to give that the priority over the priority packet. The purpose of adding network coding scheme is to reduce to the overall delay of the system.In our proposed scheme we introduce to the concept shortest path by giving priority will helpful for to reduce to the delay, To avoid broadcast storm problem, To reduce terrorism activity.[9,7,3]

II. EXISITING SYSTEM

A traffic accident may occur either on a road or at an intersection in the urban environment, Which triggers the initialization of an emergency message in UMBP.[11,14,18] However the emergency message has to be multi directionally broadcast if the source locates in an intersection area, and a single relaying node is selected to forward the message in each road branch. So that it takes more time for reach to the server and sender. For real time safety related application it is not good. It causes to the problems are shown below

➢ Delay
➢ Possibility of terrorism activity

In our proposed system it will overcome to the above problem by introducing to that the priority assignment by making to the shortest path for emergency message send and received.

III. PROPOSED SYSTEM

A traffic accident may occur either on a road or at an intersection in the urban environment, which triggers the initialization of an emergency message in UMBP. However, the emergency message has to be multi-directionally broadcast if the source node locates in an intersection area, and a single relaying node is selected to forward the message in each road so some problems are arised. In our proposed system we have introduced to the concept is priority assignment. The priority will be assigned by to the each node at node level. The priority can be assigned by to the node for making to the shortest path.[13]
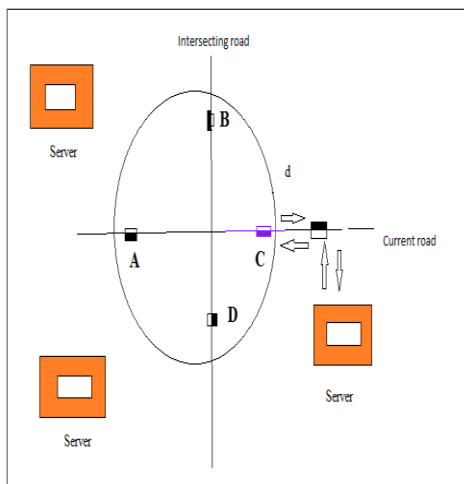

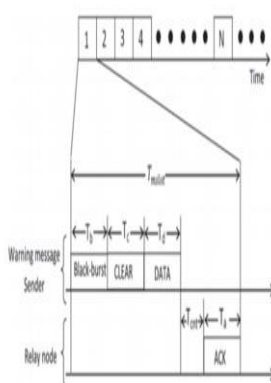Fig 4.1.Assigining priority to the emergency message.

Fig 4.2. Emergency message sends by the sender.

For example in traffic areas the emergency vehicles is coming. Before it will come it sends to the emergency message to the nearest server via nearest neighbour . In this process can be performed by assigning to the shortest route to reach the destination. For example consider 30 different vehicles are there. In our concept we not send to the emergency information to entire vehicles[7,15] With the

help of on board unit we can transfer to the emergency message only for particular vehicles only. so that the message will be quickly reach to the server and back to the sender quickly. In our proposed system have to that the following advantages.

❖ It reduced delay.
❖ To reduce terrorism activities.

IV. MODULES

In our proposed system we are using that to the four different types of modules. These are shown below

- Message Prioritization
- Secured Data Dissemination
- Handling the lost ACK scenarios
- Result Analysis Module

A. Message Prioritization

Message prioritization is the first modules of our proposed system.Messsge prioritization means giving first priority to the emergency message comes from nearest vehicles. In this method priority based directional broadcast is proposed for disseminating to the emergency message.Priority based directional broadcast is proposed for avoiding to the accident.In this method there are three different types of priority messages are used.[18] These are shown below

- Emergency request
- General request
- Entertainment request

A.Emergency request:

Emergency request means that the request that was sended by the sender in critical situation. Those request that comes under the emergency request is ambulance, fire engine.

B.General request:

General request meant that the request that consider to the not emergency such as blocked street, protest, etc

C.Entertainment request:

In this type of request not comes under the emergency or general request.

If very urgent request such as emergency request is received then that the highest priority will be assigned to that request.

B. Secured Data Dissemination

In vanet we can transmits to the data between two vehicles. If we transform to the message between two vehicles sometimes possibility of hacker to extract to the messages. In secured data dissemination we can transmit to that the high sensitive data between two vehicles in secured manner. The message include military, air force information. This kind of message are may be hacked for terrorists. So that some possibility for terrorism activity.So that we can transmits to that the messages must be secured. In order to avoid such circumstances, we need a secure message dissemination technique .

C. Handling The Lost Ack Scenarios

If sender sends to the information to the receiver(receiver get acknowledgement) then the receiver must be send to that acknowledgement to sender. Incase problems are occurred when send to the ack and reception " Rebroadcast problems" are occurred. In this problems are arised for that the reason is uncontrolled rebroadcast mechanisam. Because that there is no proper mechanisams are used for sending and reception of emergency messages. It is possible that the ACK packet sent by the segment leader responsible for relaying the warning message might get lost during the transmission.In the absence of an ACK, other segment leaders would have to resend the warning message unnecessarily. While the exact number of redundant retransmissions depends on how many vehicles have received the ACK packet.It can be substantial in poor channel conditions. In this paper, we propose the arrangements to handle the ACK [8]loss situation and thereby improving the efficiency of channel utilization.

D. Result Analysis Module

In this phase we are going to analyze all the results such as overall throughput and delay and overall energy consumption.This result will prove that the our proposed system will be the best message priority system.

V. RELATED WORK

A Secure Cooperative Approach for Non line-of-sight Location Verification in Vanet This paper shows that the NON- LOS communication in vehicles. LOS(line of sight) means direct communication between the replied node verifier is possible. However if there is no direct communication between the sender and receiver this is called for [3,17]NON-LOS(non line of sight communication). In this problem will be overcome by the technique collaborative protocol for verifying to the broadcast position. The disadvantage of this paper is several security methods are involved to improve to the message reliability.
Design and implementation of secure v2v formated communication. In this paper the authors implemented to the v2v communication device. With the help of these device we can communicate or share with to the information from one vehicle to another vehicle . The shared informations are

- ✓ Steering controlling
- ✓ Vehicle speed
- ✓ Breaking system
- ✓ Vehicle health

The technique used for this is cooperative driving concept. The main advantage of this system is that it focusing on message types according to that messages the driver will take precaution or actions to avoid accident.

Modeling Emergency Messaging for Car Accident over Dichotomized Headway Model in Vehicular Ad-hoc Networks. This paper shows that the analytical model for evaluating the performance of the emergency message. There are three different types of models are used for this concept. these are dichotomized headway model,breaking model,greenbergslograthemic model. It works based on that the three steps. The first step is with the help of above three model to generate vehicular mobility traces for analysis. The second step is derive to the probability of a rear end collision between two vehicles that travel in the same direction, when a sudden event ocscur. The last step is we quantify the probability of vehicles to failing to receive to the emergency message.

A Multi hob broadcast for emergency message dissemination in urban vehicular adhoc networks. The author introducing to the umbp protocol to this paper. umbp is the one of the specially designed protocol for that the purpose of disseminating to the emergency messages in vanet. One of the disadvantages of this paper[10,15,17] is it disseminate to the emergency messages all the vehicle presented over the infrastructure. So that it will take more time for reached to the server as well as sender. It caused to the delay.

VI. CONCLUSION

In this project, we have proposed to the priority assignment in urban multi hop broadcast protocol(umbp) by creating to the shortest path with the help of dsrc techniques. so that the emergency message will be quickly reach to the sender. Taking the road layout of the urban transportation system into account, UMBP adopts flexible broadcast strategies according to the positions of forwarding nodes. When the emergency message reaches an intersection area it does not forwarded into multiple road direction. Analytical and simulation results demonstrates that the proposed priority concept is able to disseminate emergency messages quickly, but also successfully reduce message redundancy and enhance message reliability. In our future work, we will adapt the proposed priority concept in umbp supports emergency vehicles like ambulance, fire engine, military, air force vehicles in intelligent transportation system.

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