NEIGHBOR ROUTING CONTROL USING RELATIVE ROUTING PACKET FLOW ALGORITHM (NRC-RRPFA) TO IMPROVE THE DATA TRANSMISSION ROUTING IN VEHICULAR AD HOC NETWORK

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Abstract
Vehicle ad-hoc networks are highly mobile wireless networks for energy consumption. The Ad-Network in the routing environment become probable in traffic conditions. A VANET provides a vehicle-to-vehicle connection that can be used in communication as in the form of data flow information in energy constraint level. The data transmission of the wireless communication device mounted on the vehicle network as well in the defined network. The relative transmission algorithm in each time slot is used to predict all users that are predictable to connect to the Routing relay nodes created mitigation. Therefore, try to find the nearest facility here from the specified location and the path between any two points of the service area destination defined factors dominate the average path loss and the propagation speed and time and the probability distribution of VANET vehicle infrastructure communication delays. To propose a Neighbor routing Control using Relative Routing packet Flow algorithm (NRC-RRPFA) to improve the data transmission routing in vehicular ad hoc network. To improve the Data speed, efficiency and determine the path, optimization problem. To address this, delay-tolerant communications also fly around. The protocol allows location based nodes to carry packets back to their anchor location from the point of relay nodes, where they periodically first separated to make easy communication medium. A unique feature of this protocol is that when it is moved away from the origin, the recorded geographic track is the improve the network communication to optimize the return path, the performance improvement will become even more by neighbor routing.

Keywords: Data Flow, Routing, Path Analysis, Transmission Control, Neighbor Discovering, and Tolerant Network.

INTRODUCTION
An ad hoc network's spontaneous distributed network with other nodes and each node is made up of nodes that have no communication with the base station and the access point without the help of the wireless communication device. Each node has a relay function for forwarding a packet from a neighbor node in one of the other nodes. If a node wishes to communicate with the other nodes of the transmitting node, the two nodes can communicate with each other via an intermediate node.

VANET is because it disseminates such a large area of important traffic safety information, and people believe that the ability to achieve it in real life is very limited, which are some issues for establishing major integrations. The main challenges for implementing VANET are mobility management, broadcast storm issues, network disconnection issues, network coverage and high bandwidth for data distribution technology. In almost no network, when the number of vehicles shaken by the network, broadcast storms are usually data broadcast. In the network, if there are more 300 meters from a very low amount of connected vehicles, instead, only disconnected networks appear. A data transmission mechanism suitable for the VANET environment has been proposed so far. The representative mechanism is the popular routing that uses the concept of store carryover. The carryover mechanism stores a packet buffer in memory for each node, and whenever a node meets another node, it forwards duplicate data packets. However, on all nodes in the data packet so that the transfer overlaps each node it meets, network resources such as radio bandwidth and all such nodes in the packet buffer will be consumed significantly.

Figure 1: Process of Node Distribution and Route Identification in VANET

Vehicles may not be able to connect to VANET’s business. VANET infrastructure may not be widely used in VANET. Figure 1: shows the Process of node distribution and route identification in VANET. In this case, some existing VANET architectures allow vehicles to communicate with each other in an ad hoc manner by using direct cellular technology. There is no existing architecture in order for vehicles to use infrastructure-based services, in addition, it is not difficult to manage vehicles in a part of a time period such as VANET. One of the main challenges in the design of vehicle ad-hoc networks can send information from the development of a dynamic routing protocol from another node (vehicle). VA has a very ever-changing topology. Traditional MANET dynamically turns the original route to NET. Some

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protocols that have been previously designed as MANET environments have been tested in VANET. By allowing it to be transmitted by another suitable node, the broadcast range is entered when the vehicle assisted data delivery protocol, and the vehicle sparse network packet is eventually transferred. When some strategic nodes using "carry-and-forward" have been prepared for relay allow it to be carried through. VADD requires each vehicle to know its location, and it also needs to include the connection line. External static street map statistics using the VADD protocol, Sparsely-vehicles in the connected network will try to use wireless communication channels as possible. If these channels are not available, forward forwarding strategies have been used to forward packets along the fastest available road car. Because the vehicle may deviate from its path, the route path must be constantly recalculated during transmission. To assist in this process, we use a graph of VADD weighted street expectations in packet transfer delay.

RELATED WORK

Mobile telecommunication technology and location tracking equipment are recognized as a key component of the computing environment of the future, with low cost reduction, location services (LBSs) breadth. LBSs, which offers many new opportunities, presents a new threat to the mobile user’s ability to locate the location - the location of the invasion [1]. There are a number of different technologies to ensure Location privacy, for example, is proposed in the concept Quiet period concept, pseudo terminal concept, and Protection from zone in the area. Wireless Sensor Network (WSN) comes with localization recently, they have found that a wide range of challenges that provide a low-cost solution fits in with the reality.

WSN is a group of infrastructure-less Wireless ends or working together to provide the body the goal was to monitor data from the source of the environmental sink. Generally, Wireless sensor networks, depending on operating, are more vulnerable to wireless attacks Wireless network. Wireless sensor network issues can be a source of privacy Safety hot research topics, and a probability the location of the Wireless Sensor Network (PSLP) privacy protection program is a source of words [2]. Alt is a very powerful enemy, which can be used as a hidden Markov model but to compute data such as the source state (HMM), this is taken into account. In order to respond to the node that looks at this type of enemy is responsible for fake behavior, wrong source, Source, used in order to redirect routing path. The vehicle ad-hoc network (in VANET), where safety is essential, is expected to improve road safety and traffic conditions. VANET, Vehicle Access Control Authorization Both vehicle and vehicle roadside device communication are an important security services [3][4].

On the other hand, automobiles are also required to prevent abuse and attacks on their privacy of personal information. The Privacy Security Authentication (PPA) program is proposed in VANET. Have the existing PPA system, and the authentication and privacy mechanisms for securing the classification investigation, through their key encryption. Draw helps people find information about the location, milestone, basic elements that are useful in some of the daily life and navigation of the route [5]. With such GPS and online services, Google Maps is easy to navigate outside. Inside the building, however, is unable to navigate, which in nature is not possible with the characteristics and controls of the GPS, which has led to the formation of the internal navigation system very easily. Although the indoor navigation system has been developing for a long time, there are still some limitations on reliability, and indoor space information. Buses and readers are placing the RFT tag for all alternative bus stops so that it can monitor inter-city bus transportation[6][7]. Bus counts, status information and alerts for the city’s local server, bus future receives, subsequent stops, bus routes and the estimated arrival time are displayed on the year. The system is described in this way in real time to implement a plan to track easy and cost-effective buses. The Wireless Charging Type Sensor Network (WRSN) is a sustainable power supply for the sensor node battery powered by recent years, and it has been focused on attracting. However, in current technology, enable energy mobile charger to fill one node at a time. In this way, it is a poor measurement, not suitable for large-scale WRSN systems. Wireless energy transmission technology based on multi-hop energy mobility has made great strides. It provides basic support in order to reduce problem calibration. In this study, the problem of non-reflexive problem of node power can also be modeled as the optimization problem. Location-based mobile social network services, such as querying the user’s location in order to reach normal location providers, do not pass through a plurality of non-trusted / trusted users.

If a trusted (malicious) user learns confidential information, it may be dangerous to place these users yourself. Searches are proposed based on a mobile social network agent transfer algorithm (BAFM) that uses a secure multi-party calculation and internal product secure computing that can be trusted as the relevant user agents for the server [9][10]. Track users’ privacy, and reach the agent who switched to an Internet server to hide the query between the actual trend and the user’s request server. It is a safety analysis program that is an electronic way to effectively protect users of the orbit. In order to safeguard the demanding ID and location, it must use social relationships between users, and the Privacy Confusion Protocol in place suggests the Multi-Hop Location Privacy Protection (MHLPP) protocol. A pocket drop attack, in which the attacker must drop the packet with evil intent, one of the nodes [10]. The technology has been proposed to detect partial drop attack ad hoc networks in some radio years. It is based on the process that the ethics ad hoc network can use to maliciously collect messages for the benefit of routing, instead of routing some common attacks [11]. A variety of attacks are being investigated that can be implemented on top of different layers of the ad-hoc network[12]. The impact of these attacks Power network parameters, such as the number of messages, the number of messages, the overhead rate is reduced, it was used News latency is being explored[13]. Test results Flood attacks, mainly programs can affect power / power20, 54% of the energy of the deteriorating network leads this is due to the increased number of cached messages this overhead rate of 28.7%. Wireless Sensor Network (In WSN) collected of interest, considerable research, especially in the context of performing surveillance and monitoring tasks [14]. However, it is difficult you mix an exotic trade with a variety of contrasts Optimization criteria, such as energy consumption in such a network. Packet loss rate coverage and lifetime. When you extend the service life of energy storage, mobile wireless sensor networks (MWSNs) are the most important issue, optimal is critical. Therefore, in this paper, the centralized immune Voronoi deployment algorithm (CIVA) proposes to increase coverage based on both the binary and probabilistic model [15][16].

In multi-purpose artificial bee colonies, mobile wireless sensor networks (MWSNs) provide the optimal path between data transmission and source [17]. First, the versatile features are defined in order to calculate the eligibility function. This calculation eligibility function for creating the optimal way is used in the artificial bee colonies algorithm. The function of this mechanism is similar to the behavior of a bee. The tracking system is used to specify the maximum gain of the contact antenna towards the rocket [18]. Discharge terminals on the catalyst, the rocket used to be a beacon. The ground station was shifted when information on real-time GNSS positioning took off. During the air campaign of Magnitudo Rocket there was optimization of system, production and verification [19]. Adaptation of changes in the path and threats the network
element can help enhance it, reveals Representation of Volume Winners Customer Satisfaction. A service request to complete, while ensuring application performance Maintain network resources and risk tolerance levels this was associated with data transfer [20].

MATERIALS AND METHODS

Route search algorithms provide tools for finding shortest or least impedance paths in paths and networks. To find the most effective path to a series of locations is possible through network analysis. The computation of finding paths between different sources and destination nodes on the network is computationally intensive at the center of many transmission and network analysis problems. To propose a Neighbor routing Control using Relative Routing packet Flow algorithm (NRC-RRPFA) to improve the data transmission routing in vehicular ad hoc network. Advances in path control path algorithms between end nodes for finding and the availability of high-quality network data, applications within the described network analysis are a common method for many traffic problems it now.

Network simulations resembles the path between any two destinations from the specified location or service area, is trying here to find the nearest facility. Figure 2: shows the Relative Routing packet Flow algorithm. The Vehicle Ad Hoc Network (VANET) provides important information about roads and traffic conditions. It sends safety messages and entertained passengers. The rich onboard processing resources of the vehicle are a unique feature of VANET compared to other nodes. In-vehicle vehicle data distribution, data is sent to another vehicle to the vehicle. If the vehicle is outside the range of the base station cluster, the base station sends data to the vehicle through other vehicles. In peer-to-peer dissemination, the source node stores data in its storage and does not send them to the network until another node requests them. It is proposed for delay tolerant applications.

Relay Term Routing Analysis

The data transfer mechanism has two drawbacks: one greatly reduces the reliability of establishment and frequent connection disconnection and reduces the reliability of data transfer connection. There is a common, adequate routing path, another large amount of data blocks where it will spread in the environment, making it possible to find a rare relay vehicle and VANET for long-term data transmission.

Analyzing this issue from another angle, the process of exchanging data in the meantime, if it can be completed in a very short time, cannot be transferred in a faster VANET over the network area, it can be exchanged using large volumes of data blocks that can disconnect and reconnect to a very small (or no) connection. The data sets, in addition to someone, have been installed at the system for the purpose of sending them through the connection, which makes us generally less vulnerable to external use of the environment.

Neighbor Routing Control Assessment

First of all, we have to select an alternative routing path, explores not the QoS requirements to the use of flow. Instead, using the default protocols used in the shortest-path routing of the current network, we can achieve a switch forwarding rule higher bandwidth is being studied mounted using the SDN controller. Secondly, we are, by the timely delivery of these applications of sensor data and control signals, according to delay requirements, has developed a new guarantee mechanism. These new mechanisms queue router / switch and reserves, pre-assigned a high priority queue control / flow sensor. Third, we will explore how an application can take advantage of the opportunity offered by SDN.

To verify data path and peer to peer data transmission:

Input: compute a node, P2P
Output: peer to peer data transfer and avoid traffic

Step 1: Start
Step 2: Select a source and destination node
Step 3: finding short path
Or each node in VANET
Distance[v] <- infinite
Previous[v] <- UNDEFINED
Step 4 Compute the Previous node in optimal path from source
From the above analysis, we know that the VANET cause of a large amount of data blocks in general can spread over a period of time given the short connection caused by the auto-over movement of the link. VANET can connect to multiple locations and disconnect data to find multiple routing path data via a regular routing layer system with the help of a relay node, extending the connection period in order to transfer large volumes of data blocks.

### Node Aware Status Monitoring

The list open the stream switch specification definition that must be supported by the open switch corresponding to the flow counter. The list contains port counters for each counter and each flow. We are especially interested in sending counter bytes and you must count in port units. The controller can request the message to be sent to the switch and the number of bytes included in the acquisition time of the transmission request-response message acquisition by sending the value of these counters. It 100% accurate time, such as the delay in receiving messages by the controller and the delay in controlling the processing should be noted that these measurements are not necessary. Nevertheless, they estimate that they use a good link for monitoring.

**Relative Routing Packet Flow Algorithm**

We propose a self-contained protocol to establish a basis for a common high mobility vehicle network based on information available on a particular geographic location. In order to target a particular geographical location of the store information on the highly mobile terminal’s dense network and the Round-Robin protocol does not use an infrastructure network. This position sends specific physical location data over a period of time, to hold information on routing delay occurrence on time flow transmission in routing. Use the RRPF protocol to replicate and collect data used mainly for a particular posting moving for the vehicle and Dynamic network transmissions.

**Input:** Data source

**Output:** The selection path is performed by data transmissions through all the node area Step 1: Start

Step 2: Initial S centroids

Step 3: To assign the every node centroid

Step 4: To recalculate the positions of centroids data transmission in every node

Step 5: If (Position)

- Assign every node

- Else

  - Choose the cluster heads for every group

Step 6: To join the connection node

Step 7: To sensor node sends to the base station

Step 9: Assume the all node region

Step 10: End

In the method for finding the QoS path of flow, the network diagram for searching the destination node to traverse the algorithm 1 has been described. It through the way, it will bypass links with available capacity with much less capacity than required less traffic. By calculating the available capacity, it is updated regularly to reflect the current state of the network. When it reaches the target node, it stops searching and establishes a critical flow path. Note that this path is not necessarily the widest (maximum available capacity). It should be noted that the shortest path is enough space evaluation.

### RESULT AND DISCUSSION

The accuracy of the distance calculated by the model is calculated and the error of the distance between the actual distances is minimized by the improvement. The exact distance is estimated from the proposed system’s estimate. The path loss and node distribution are modeled as the distance values of the average filter combination log-normal shadow calculated from the attenuation model using ns2 simulator. The proposed system Neighbor routing Control using Relative Routing packet Flow algorithm (NRC-RRPFA) to improve the data transmission routing in vehicular ad hoc network is compared with network node simulation of route identification algorithm (NNSRIA) if the highest channel has been selected, the two models are obtained by statistical modeling due to the distance values.

Through this, sensor nodes transmit to be a feature of range from the source to destination.

#### Table 1: Parameters

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Size</td>
<td>600 m x 600 m</td>
</tr>
<tr>
<td>Network location</td>
<td>Random</td>
</tr>
<tr>
<td>Primary energy</td>
<td>0.8 J</td>
</tr>
<tr>
<td>Number of nodes</td>
<td>100</td>
</tr>
<tr>
<td>Transmission Power</td>
<td>100W</td>
</tr>
<tr>
<td>Routing Protocol</td>
<td>AODV</td>
</tr>
</tbody>
</table>
Table 4.1 describes the specifics of the dataset to estimate the demonstration of the planned method. An Experiment was performed with sources and a simulation time 60s. The maximum packets transmission of the sensor nodes could be achieved in 10s.

Table 2: Network Traffic Time and Packet Size Delivery

<table>
<thead>
<tr>
<th>Sec</th>
<th>NNRSA No of bandwidth(kbps)</th>
<th>RRDF No of bandwidth(kbps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>950</td>
<td>1082</td>
</tr>
<tr>
<td>20</td>
<td>750</td>
<td>1270</td>
</tr>
<tr>
<td>30</td>
<td>850</td>
<td>1205</td>
</tr>
<tr>
<td>40</td>
<td>550</td>
<td>1500</td>
</tr>
<tr>
<td>50</td>
<td>500</td>
<td>1505</td>
</tr>
<tr>
<td>60</td>
<td>350</td>
<td>1413</td>
</tr>
<tr>
<td>70</td>
<td>400</td>
<td>1120</td>
</tr>
<tr>
<td>80</td>
<td>350</td>
<td>1150</td>
</tr>
<tr>
<td>90</td>
<td>300</td>
<td>1180</td>
</tr>
<tr>
<td>100</td>
<td>400</td>
<td>1200</td>
</tr>
</tbody>
</table>

Above table 2 gives the comparative analysis output of the proposed scheme with the existing approaches.

Table: Network Traffic Time and Packet Size Delivery

Figure 4: Network Traffic Ratio Comparative Analysis

Above figure 4 describes the network packet ratio in size between proposed and existing system. In this gray color represents NNNSRA, yellow color represents NRC-RRDF. From this our proposed system have low network traffic compare to existing system.

Packet Delivery Ratio

What identical IP Analysis for Ad Hoc On-Demand Distance Vector protocol used to data speed is to reduce compare to NNNSRA algorithm provide the result for below show in the graph. In this graph is declare Time is mile seconds and data speed is Ratio divisible of proposed and existing system following formula.

\[ \text{SPEED} = \frac{E_p}{P_p} \times 100 \]

Figure 5: Comparison of Data Speed

Figure 5 describes the data speed graph our proposed systems false detection ratio is highly accurate than NNSRA.

Energy Efficient

The proposed method has been tested for its energy efficient. We have used the various size of the data set to measure the energy. It is something overview efficient information.

![Figure 6: Comparison of Energy Efficient](image)

<table>
<thead>
<tr>
<th>Algorithm</th>
<th>Efficient in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSON</td>
<td>68</td>
</tr>
<tr>
<td>NNNSRA</td>
<td>70</td>
</tr>
<tr>
<td>NRC-RRDF</td>
<td>90</td>
</tr>
</tbody>
</table>

![Figure 6: Comparison of Energy Efficient](image)

End to End Delay

Messages delivered to the source to destination. In this way, the vitality utilization is concentrated amid the locale following stage.

![Figure 7: Comparison End to End Delay](image)

Figure 7 describes the delay performance produced by different methods, and it indicates the proposed plan has increased the period.

CONCLUSION

The purpose of VANET is to be sent with a large amount of data blocks evenly, so that the rapid expansion, more number of VANET applications, and more images can increase the vehicle traffic, a short video, and the VANET improvement capability of geographical information. To improve the node simulation data transfer using Neighbor routing Control using Relative Routing packet Flow algorithm (NRC-RRPFA) to improve the data transmission routing in vehicular ad hoc network, this improve the efficiency as well previous system, even though performance of traffic in essential utilization. The VANET control is less efficient because of the large data block that becomes more and more transparent efficiency. The data process, in addition to someone, have been installed at the system for the purpose of sending them through the connection, which makes us generally less vulnerable to external use of the environment.
REFERENCES