A THREE DIMENSIONAL LOCATION BASED ROUTING WITH GPSR ENABLED METHODOLOGY

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ABSTRACT

In the networking technology transferring data with equal speed in the router with their accuracy is the biggest task. Sending the exact data with same time in the networking environment is difficult. In the existing system the many techniques are used to give the equal preference for entire client is used. The main disadvantage in the existing system is the server decrease the performance of sending the data to more than one client with equal speed. This paper proposed **Wireless Mobile Ad Hoc Network (WMANET)** to overcome the existing system disadvantages. This proposed system will send the data from the server to the multiple clients in the network. For sending the data to the clients' **Greedy perimeter stateless routing Algorithm** is implemented in the proposed system. This proposed system will help to send the data that are split into packet to the client with the equal speed and in the same time. The advantage of the proposed system is the transferring the file with the equal speed and secure manner that are encrypted with the signature key. This proposed system will enhance the networking technology to send file the random of the router.

KEY WORDS: Networking, Greedy Algorithm, 3D GPSR, routing algorithm.

I. INTRODUCTION

In modern existence, a system configuration is varying speedily. **WMANET** found difficult field which is an active scattered system that has no permanent infrastructure and it has users usually they are recognized as nodes with transmitter and receiver. Routing protocols has a significant position to discover packets from source to destination amongst randomly available scattered nodes which also ensure the firm delivery of packets to their destinations. **WMANET**s has capability to gear the topology changing malfunctions in nodes with system reconfigurations for numerous types of applications are extremely flexible without any preinstalled infrastructure so it termed as ad hoc network for mobile or much simply known as mobile ad hoc network. Wireless Mobile ad hoc networks a flat network infrastructure that has shared medium with highly demandable for communication. Many techniques have been established to give the same speed of accuracy for data transferring in the networking. There are numerous researchers conducted the experiment to proceed the data security and velocity of data transferring in the network.

Today, to lever this difficulty a lot of approaches are projected however it is very hard to decide which one is best. Additional **WMANET**s are also active varying network topology of nodes. Nowadays, different routing protocols were available for transferring data over WMANET with dissimilar behaviors towards routing and the main problem is to choose the correct routing protocol with high reliable and efficient for MANET to transfer file from the source to the destiny.

II LITERATURE SURVEY

MOBILE ad-hoc Networks (MANETs) are autonomous, distributed and self-configuring networks comprised of mobile wireless nodes. The advantage of this type of networks can potentially operate without a fixed infrastructure or centralized administration. This makes route discovery and maintenance very challenging task The performance of mobile ad hoc networks in general and that of the routing algorithm, in particular, can be heavily affected by the intrinsic dynamic nature of the underlying topology. In this, nodes move randomly according to one tuning parameter to obtain different levels of randomness in the mobility

pattern and proposed an entropy-rate based metric that quantifies link uncertainty and evaluates its stability. Numerical results show that the proposed approach can accurately reflect the random mobility in the network and fully captures the link dynamics.

Additionally, studies are required to understand how to control mobility could bring benefits at each network layer. Fundamental innovation is expected from a cross-disciplinary and holistic effort with other fields such as robotics, autonomous navigation, mechanics, and distributed control. In recent times, location-based routings in wireless sensor networks (WSNs) are attracting a lot of attention in the investigate society, particularly because of its scalability. In location-based routing, the system size is scalable without the signaling overhead as routing decisions are inherently localized. Each node here aware of its position in the network through some positioning device like GPS and uses this information in the routing mechanism.

III METHODOLOGY

In the proposed system used the Greedy Perimeter Stateless Routing algorithm which is a direction-finding procedure for mobile ad-hoc networks that uses a greedy algorithm to perform the routing and orbits around a perimeter. A greedy algorithm known to be an algorithmic model can follow the problem solving investigative procedures by giving best preference at every phase with the intention of making decision.
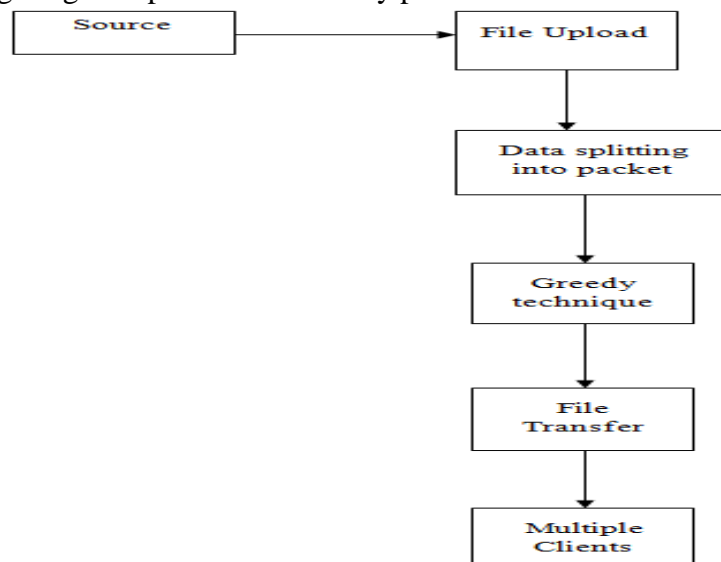

Fig: 3.1 Data flow diagram

Formulation of Algorithm

- Let J be an empty series of jumps.

- Let our current position $x = 0$.

- While $x < n$:

  - Find the furthest lilypad l reachable from x that is not after position n.

  - Add a jump to J from x to l's location.

  - Set x to l's location.

- Return J.

A greedy algorithm is an algorithmic paradigm that follows the problem solving heuristic of making the locally optimal choice at each stage with the intent of finding a global optimum.

A greedy algorithm is an algorithmic strategy that makes the best optimal choice at each small stage with the goal of this eventually leading to a globally optimum solution.

This means that the algorithm picks the best solution at the moment without regard for consequences.

During various difficulty levels in the process the greedy approach does not frequently create a most favorable key, but however a greedy heuristic may give up nearby finest results which could be considered as a globally best solution in a sensible time. Greedy algorithms are able to be characterized for its short sighted, non-recoverable features and they suits perfect for problems with optimal substructure. Despite all these points the greedy algorithms found best for the available existing problems which can use selection algorithm to rank the alternative options in a search.

IV RESULTS AND DISCUSSION

In this section the server connection and the file upload that are send to the multiple nodes is established. This will start from the data browsing from the server to the destination with the speed of the accuracy with the pocket delivery. The following figures were the screenshots of the result obtained for this method.

Fig 4.1 Server

Fig 4.2 Browse the Data
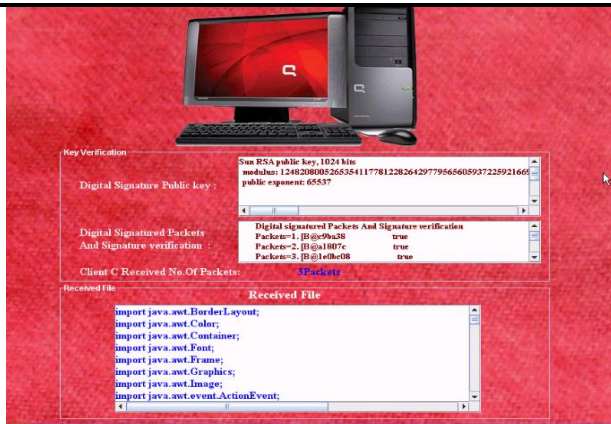

Fig 4.3 Data Gathered

Fig 4.4 Generate Keys

Fig 4.4 Assigned the Encrypted Data On Corresponding Packets

Fig 4.5 Client A

Fig 4.6 Client B
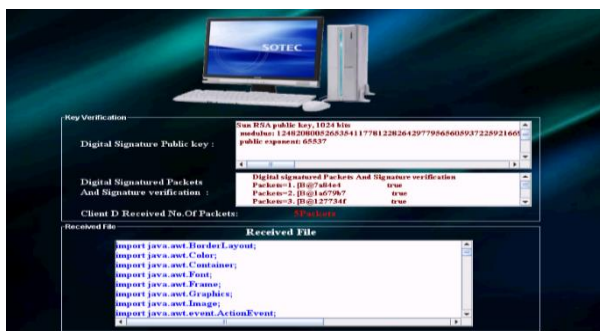
Fig 4.7 Client C

Fig 4.8 Client D

Fig 4.9 Router

Fig 4.10 Location FANET

V. CONCLUSION

In networking environment there is no equal preferences were given for the entire packets to be sent between the client and the server and also the server decreases the performance of sending the data to more

than one client at a time. The proposed Wireless Mobile Ad Hoc Network (WMANET) to overcome the existing system disadvantages. This proposed system will send the data from the server to the multiple clients in the network at the same time with the help of Greedy perimeter stateless routing Algorithm. This proposed system will help to send the data by splitting it into different packets to the client with the equal speed and in the same time. The advantage of the proposed system is the transferring the file with the equal speed in a secure manner by using signature key for encryption. From the results obtained from the experimentation it is evident that the proposed system will enhance the networking technology to send file the random of the router. In future the work can be enhanced in dense network using deterministic progress based strategies.

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