REVIEW OF VARIOUS MANET PROTOCOLS

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ABSTRACT

A Mobile Adhoc Network is an accumulation of independent mobile nodes that will communicate together via radio waves used in military battlefield, collaborative work local level, personal area network and commercial sector. They provide access to information and services regardless of geographic position. They are scalable, have improved flexibility, robust due to decentralize administration. In this paper, a survey on various MANET techniques like DSDV, FSR, GSR, ABR, CGSR etc. has been done. Moreover, various challenges have been discussed in field of Manets. From the survey it has been evaluated that no technique is much efficient for these challenges. This paper ends up with suitable future directions.

Keywords: MANETs, Clustering , DSDV, AODV.

I. INTRODUCTION

A Mobile Adhoc Network is an accumulation of independent mobile nodes that will communicate together via radio waves. The mobile nodes which come in radio range of every other can directly communicate, whereas others needs the help of intermediate nodes to route their packets. Most of the node includes a wireless interface to consult with each other. These networks are fully distributed, and can focus on anywhere without assistance from any fixed infrastructure as access points or base stations. Figure 1 shows a simple ad-hoc network with 3 nodes. Node 1 and node 3 are not within range

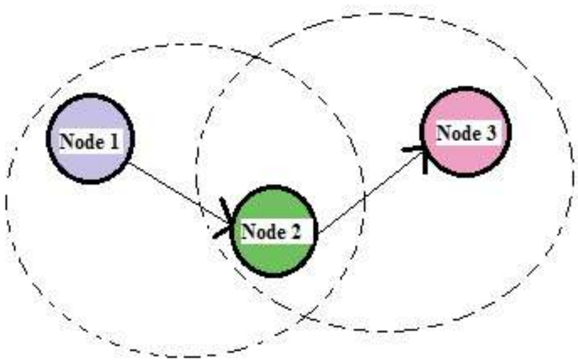

Fig. 1 Example of Mobile Ad-Hoc Network

of each other, nevertheless the node 2 may be used to forward packets between node 1and node 2. The node 2 will behave as a switch and these three nodes together form an ad-hoc network.

1.1 Features of Manets

1) Distributed operation: There's no background network for the central control of the network operations, the control of the network is distributed on the list of nodes. The nodes involved in a MANET should cooperate

with one another and communicate among themselves and each node acts as an exchange as needed, to implement specific functions such as routing and security.

2) Multi hop routing: Each time a node tries to send information to other nodes which can be out of its communication range, the packet should be forwarded via a number of intermediate nodes.

3) Autonomous terminal: In MANET, each mobile node is unbiased node, which may work as both a host and a router.

4) Dynamic topology: Nodes are free to go arbitrarily with various speeds; thus, the network topology may change randomly and at unpredictable time. The nodes in the MANET dynamically establish routing among themselves while they travel around, establishing their particular network.

5) Light-weight terminals: In maximum cases, the nodes at MANET are mobile with less CPU capability, low power storage and small memory size.

6) Shared Physical Medium: The wireless communication medium is available to any entity with the right equipment and adequate resources. Accordingly, access to the channel cannot be restricted.

II. VARIOUS PROTOCOLS FOR MANETS

2.1 Dynamic Destination-Sequenced Distance-Vector Routing Protocol

The protocol Destination-Sequenced Distance-Vector routing (DSDV) [1] is just a Proactive routing protocol that solves the significant problem linked to distance vector routing of wired networks i.e., Count-to-infinity, by utilizing destination sequence number. In this routing protocol, each node in the network have a routing table. All of the routing table offers the set of available destinations and the total amount of hops to each. Each table entry is labeled with a routine number, that'll be originated by the destination node. Periodic transmissions of updates of the Routing tables help maintaining the topology information of the network. When there is any new updation for the routing information, the updates are transmitted immediately. So, the routing information updates might either be periodic or event driven. The routing updates may be submitted two ways: one is recognized as a ‘‘full dump"and another is ‘‘incremental.' 'In the event there's full dump, the whole routing table is sent to the neighbors, where as in case there is incremental update, only the entries that need changes are sent.

2.2 Cluster Gateway Switch Routing Protocol

This protocol modifies DSDV[1] with a hierarchical cluster-head-to-gateway routing method of route traffic from source to destination. Gateway nodes are nodes which are within the communication ranges of several cluster heads. A package sent with a node is first sent to its cluster head, and then packet is sent from the cluster visit an entrance way to a different cluster head, and etc before cluster head of the destination node is reached. The packet is then transmitted to the destination from its cluster head. By forming several clusters, this protocol achieves a distributed processing mechanism in the network. However, one drawback with this particular protocol is that, frequent change or selection of cluster heads might be resource hungry and it could affect the routing performance.

2.3 Wireless Routing Protocol

This routing protocol defined whilst the group of distributed shortest path algorithms that calculate the paths using information concerning the length and second-to-last hop of the shortest way to each destination. WRP [1] reduces the amount of cases where a temporary routing loop can occur. Each node maintains four tables: 1. A distance table 2. A routing table 3. A link-cost table 4. A note retransmission list (MRL). WRP uses periodic update message transmissions to the neighbors of a node. Each time the consistency of the routing information is checked by each node in this protocol, which supports to eliminate looping situation and provides faster route convergence when link lost event occurs.

2.4 Fisheye State Routing (FSR)

This protocol [1] reduces the amount of traffic fortransmitting the update messages. The essential idea is that all and every update message doesn't contain information about all nodes. Instead, it offers update information regarding the nearer nodes more often than that of the farther nodes. Hence, each node may have accurate and exact facts about its neighboring nodes. The novelty of FSR is so it works on the special structure of the network called the ‘‘fisheye.'

2.5 Global State Routing (GSR)

In GSR [1] protocol, nodes exchange vectors of link states amongst their neighbors during routing information exchange. On the basis of the link state vectors, nodes maintain a worldwide understanding of the network topology an optimize their routing decisions locally. This protocol resembles DSDV, nonetheless it improves DSDV in the sense so it avoids flooding of routing messages.

2.6 Ad-Hoc On-Demand Distance Vector (AODV) Routing Protocol

AODV is part of Destination-Sequenced Distance-Vector (DSDV) routing protocol. AODV [1] is absolute of Bellman-Ford Algorithm. It is really a amalgamation of DSR and DSDV approach. It inherits the fundamental on demand mechanism of route discovery and route maintenance approach from DSR and hop by hop routing sequence. It works to minimize the necessity of systemwide broadcasts to its extreme. The algorithm use by AODV is explained below.

Three main control messages are utilized by AODV

Routing Request

Each time a route isn't offered to given destination a route request packet is flooded to whole network

Routing Reply

In case a node has valid approach to destination it'll unicast a route reply message to the foundation

Route Error

Whenever a node in given route gets lost or path breaks, the nodes on both sides on the given link issue a route error message with their end nodes[12].

2.7 Temporally Ordered Routing Algorithm (TORA)

Temporary Ordered Routing Protocol (TORA) [1] is ditributed, highly adaptive routing protocol that's made to work in dynamic multihop network. It has the capacity to provide multiple loop free routes and is founded on link reversal algorthm. As TORA is distributed routers simply need {to maintain|to steadfastly to keep information regarding its neighbours only.It is designed to minimize the a reaction to the topology changes as it doesn't need to locate new routes.It uses directed acyclic graphs to define the routes as either upstream or downstream. TORA uses arbitrary height parameter to ascertain the direction of link between any two nodes for confirmed destination. For every single possible destinatiom separate DAG should be constructed. TORA works on the important thing concept that links are bi-directional between nodes, packets are received correctly and in reliable manner and thus brodcasting is used. Multiple routes often exist for the destination although not one are necessarily the shortest ome. Instead of using shortest routes, TORA maintains the direction of another destination to forward the packets.

2.8 Dynamic Source Routing (DSR) protocol

This protocol requires each transmitted packet to move the entire address from the inspiration to the destination likewise the mechanism utilized in AODV. It [10] uses shortest hop path from the foundation to the destination. Thus, the building blocks learns multiple method of the destination and stores them in the route cache. It doesn't check for node disjoint or link disjoint properties before using these routes. DSR fits in to the number of routing protocols dedicated to minimum weight path routing.

2.9 Associativity-Based Routing (ABR)

The ABR protocol [1] runs on the query-reply technique to find out the routes to the destinations. However, in ABR route selection is primarily predicated on stability. To be able to select stable route each node maintains an associativity tick featuring its neighbors and the links with higher associativity tick are selected in preference to those with lower associativity tick. The disadvantage of ABR is so it doesn't maintain multiple routes or perhaps a route cache therefore the alternate routes won't be immediately available.

2.10 Zone Routing Protocol (ZRP)

Zone routing protocol [1] is just a hybrid routing protocol which effectively combines the most effective options that come with proactive and reactive routing protocol. Each node defines an area around itself and the zone radius is how many hops to the perimeter of the zone. The reactive global search is done efficiently by querying merely a selected group of nodes in the network. The amount of nodes queried is in the order of [r zone / r network]2 of how many nodes queried using a network-wide flooding process [13].Unless the zone radius is carefully chosen, a node may be in multiple zones and zones overlap.

2.11 Zone-Based Hierarchical Link State Routing Protocol(ZHLS)

In ZHLS protocol [1], the network is split into non overlapping zones as in cellular networks. Each node knows the node

connectivity within its zone and the zone connectivity information of the whole network. The web link state routing is completed by employing two levels: node level and global zone level. The zone level topological information is distributed to all nodes. Since only zone ID and node ID of a destination are expected for routing, the route from the source to a destination is adaptable to changing topology. The zone ID of the destination is found by sending one location request to every zone.

2.12 Cluster-Based Routing Protocol (CBRP)

This can be a hierarchical protocol, and this protocol is grouped to the clusters. Each cluster has its cluster-head which coordinates the data transmission within the cluster and one other clusters. The advantage of CBRP [1] is that only cluster heads exchange the information, therefore how many the control packets transmitted through the network is less than traditional flooding methods significantly. The disadvantage of this hierarchical method may be the large quantity of overhead associated with cluster formation and maintenance and it has additionally temporary routing loops.

2.13 Particle Swarm Optimization

Particle swarm optimisation [1] may be the mathematical modelling of the foodstuff searching activities of a swarm of birds (particles). Each particle in the swarm is moved towards the perfect point by the addition of a velocity and its position. The velocity of a particle is influenced by three components: inertial, cognitive, and social. The inertial component simulates the inertial behaviour of the bird to fly in the previous direction. The cognitive component models the memory of the bird because of its previous best position, and the social component models the memory of the bird for the best position on the list of particles.

The steps associated with particle swarm optimisation are the following:

Step 1: Select how many particles randomly to start the perfect solution search.

Step 2: Initialise the particle position and velocity.

Step 3: Find the particle's individual cost effective for each generation.

Step 4: Find the particle's global cost effective, i.e., the particle nearest the prospective from among all the particles is obtained by comparing all the individual best values.

Step 5: Find the particle's individual worst value, i.e., the particle farthest away from the target.

Step 6: Update the velocity and position of the particle.

Step 7: Find the perfect solution with a minimum value for the updated new velocity and position.

2.14 Ant Colony Optimisation

Ant colony optimisation (ACO) is just a paradigm for designing metaheuristic algorithms for combinatorial optimisation problems. The initial algorithm that was classified in this framework was presented in 1991. Ever since then, many diverse variants of the essential principle have now been reported in the literature. The primary trait of ACO [1] algorithms could be the combination of a priori information regarding the structure of a promising solution with a posteriori information regarding the structure of previously obtained good solutions. An ACO is a famous swarm intelligence approach that's received inspiration from the social behaviour of real-world ants. In this algorithm, the most effective path for routing is identified by the pheromone deposited by ants. Upon finding the food, the ants return back to their nests and simultaneously deposit the pheromone along the paths. Therefore, the ants will likely move through these paths and strengthen (update) the existing pheromone. With time, the pheromone starts to evaporate, and its strength is reduced. At regular intervals, several ants are launched toward the destination node to find the feasible, low priced path from the origin node to the destination node. Each ant within an ACO considers two parameters to choose its next hop. The initial parameter is the amount of pheromone deposited on the trail to another location node, and the second parameter could be the queue length associated with the link.

2.15 Hybrid

Several heuristic traditional algorithms were used to locate a means to fix the routing problem in the MANETs, including GA and PSO algorithms. The ACO technique is independent of these routing problems, and the outcomes obtained using the ACO technique may be improved with PSO. Thus, a cross model that combines the ACO and PSO techniques may be suggested for the optimisation technique.

The steps mixed up in proposed hybrid model are the following:

Step 1: Initialise the number of particles and generate its value randomly.

Step 2: Initialise ACO parameters.

Step 3: Generate solutions from each ant's random walk.

Step 4: Update the pheromone intensities.

Step 5: If the solution is not the best, initialise the swarm with random positions and velocities.

Step 6: Select each particle's individual cost effective for every generation.

Step 7: Select the particle's global cost effective, i.e., the particle nearest the mark is obtained by comparing most of the individual best values.

Step 8: Select the particle's individual worst value, i.e., the particle farthest away from the target.

Step 9: Update the velocity and position of the particle.

Step 10: Terminate the method if the most number of iterations is reached or if an ideal value is obtained. Otherwise, check out Step 3.

III. LITERAUTRE REVIEW

Chinara, Suchismita, and Santanu Kumar Rath [2] made an extensive survey of some bench-mark one-hop clustering algorithms to comprehend the study trends in this area. The literature offers the logic of cluster formation for different algorithms in achieving a linked cluster architecture and an intensive simulation survey of the performance on the cluster maintenance aspects such as for example cluster density, frequency of cluster reelection, frequency of cluster changes by the nodes and the granularity of cluster heads. Rachedi, Abderrezak et al. [3] proposed a design predicated on mechanism design that enable clusters with single trusted node to be created. This mechanism motivate nodes that not fit in with| the confident community to participate by providing them with incentives in the proper execution of trust, which may be employed for cluster's services. To make this happen goal, a *RA* selection algorithm is proposed that selects nodes predicated on a predefined selection criteria function and location. This kind of model is famous as *moderate*. On the basis of the security risk, more *RA* nodes must certanly be included with formalize a *robust* DDMZ. Here, they considered the tradeoff between security and resource consumption by formulating the issue as a nonzero-sum non-cooperative game involving the CA and attacker. Finally, empirical results are provided to aid solutions. Khan, Md Mosaddek, and Md Mamun-or-Rashid [4] focused to launch a new-fangled clustering technique by which it's possible to enhance the routing performance of existing protocols. Another important aspect of the paper is to supply a cluster head selection algorithm which could effectively maintain the clusters and provides more stability. Proposed clustering idea is helpful for geographically related nodes effectively in various turf of routing. To steadfastly keep up the clusters and their stability, it offers a new idea to select cluster head within the cluster, also the election of secondary cluster head for avoiding further election right after the unavailability of primary cluster head. This idea is evaluated in network simulator and it outerformed the present clustering techniques. Torkestani [5] proposed an understanding automata-based weighted cluster formation algorithm called MCFA in that the mobility parameters of the hosts are assumed to be random variables with unknown distributions. In the proposed clustering algorithm, the expected relative mobility of every host regarding all its neighbors is estimated by sampling its mobility parameters in several epochs. MCFA is a completely distributed algorithm by which each mobile independently chooses the neighboring host with the minimum expected relative mobility as its cluster-head. This is performed based solely on the neighborhood information each host receives from its neighbors and the hosts need to not be synchronized. The experimental results indicate the superiority of MCFA over the most effective existing mobility-based clustering algorithms how many clusters, cluster lifetime, control message overhead reaffiliation rate, and. Lindeberg, Morten [6] identified the challenges of realizing video streaming over MANETs, and analyze and classify the proposed techniques. Since 65 % of the identified involve cross-layering design, they studied the distribution of joint optimization and parameter exchanges. Because of the importance and complexity of evaluating the techniques, they analyzed the most popular methods, indicating that the investigation domain is suffering from an issue of comparability. Ferdous, Raihana et al. [7] proposed Cluster head(s) selection algrothim based on an efficient trust model. This algrothm aim to elect trustworth stable clusterhead(s) that provide secure communication via cooperative nodes. Simulations were conducted to evaluate trust clusterhead(s) in term of cluster stability, longevity and throughput. Nguyen, Dang et al. [8] presented some new findings on the complexity of the clusterhead selection algorithms. Two variants of the cluster head selection are examined: the distance-constrained selection where every node in the network must be loacetd within a certain distance to the nearest cluster head; and the size constrained selection where each cluster is only allowed to have a limited number of members. They showed that the problem of minimizing the set of cluster heads is NP-hard for both variants. They proposed two distributed selection algorithms, each having logarithmic approximation ratio, for these variants. They also discussed, using NS-2 simulations, the resulting cluster size distribution and cluster head density, which impact the efficient operation of the network. Hussain, Khalid et al. [9] proposed an efficient cluster head selection algorithm, for choice of the cluster head efficiently in Mobile ad hoc networks. Additionally they evaluated proposed algorithm through simulation in OMNet++ in addition to on test bed; they experienced the end result based on assumption. For further evaluation additionally they compared proposed protocol with other protocols like LEACH-C and consequences show perfection. Kim, Yuna et al. [10] proposed a Distributed Energy Efficient Cluster Formation scheme, which exploits the expected residual energy of mobile nodes to choose CHs and starts the cluster formation from leaf nodes to lessen the amount of clusters. The scheme includes the cluster maintenance algorithm and the cluster construction algorithm, both of which is often performed at each node in a distributed way without the global knowledge. They proved the correctness of the algorithms, and reveal that the DEECF scheme is better than other clustering schemes in more energy efficien. Gupta, Neha et al. [11] discussed that weight based clustering approach is based on combined weight metric that takes into account of several system parameters like the mobility, degree difference, transmission range and battery power of the node. One way to support efficient communication between nodes is to partition ad hoc networks into clusters. Various clustering schemes have been proposed to form clusters. Proposed IWCA algorithm can enhance the trust ofcluster formation followed by malicious node removal from cluster head or member selection. Katal, Avita et al. [12] proposed an effective clustering technique which is being used for the election of Cluster Heads and Super Cluster Head. It uses five parameters i.e. Communication range, Hop Count, Battery Power, Relative Velocity, Fairness at a time to select aCluster Head. Always an efficient node which passes all of the criteria will become the Cluster Head. After the selection of Cluster Heads, the election is performed to select a Super Cluster Head. A node is selected as a Super Cluster Head only if it is having maximum battery power and it is not a Cluster Head. The technique used chooses the best of the nodes to become Cluster Head and Super Cluster Head. This technique seems to increase network life time also because of the slow dissipation of the energy. Liu, Ying et al. [13] minimized the ``back tracking" problem by applying physical contexts shared by the network layer with the overlay so as to efficiently guide application flow. They have devised an intelligent cluster head and path selection algorithm for overlay routing and compared its performance with the popular Chord protocol and a baseline AODV routing protocol. Simulation results indicated that: the integration between logical and physical routing gives a large improvement in the number of hops for each transmission path; and the selection of a good cluster head has only a moderate increase in transmission time. Saxena, Madhvi et al. [14] made an attempt to develop an energy aware algorithm based onclustering for longer life of MANET. In this approach network is divided into small and self manageable groups for improving the network lifetime. The proposed algorithm would be an energy efficient clustering algorithm that uses both scalability and energy metric for cluster layout. Max-heap is used forselection of cluster head. The Clusters are designed using max-heap on the basis of energy level, the node which has the highest energy in the cluster will act as a cluster head. John, Jeena, and R. Pushpalakshmi [15] proposed Ant Colony Optimization approach for the perfect choice of cluster heads. This algorithm optimizes communication workload, node lifetime, and mobility. The cluster structure is optimized by the defined probability function for clusters. The probability function is calculated using the parameters such as for instance residual energy, energy drain rate and mobility factor. Node that has the most value for the probability function will select as acluster head. The entire communication workload is calculated periodically. If its value is high, then cluster head is reassigned. The main advantage of this algorithm is so it can better balance the vitality use of the nodes and raise the stability of the node. Experiment results reveal that proposed work results in more energy efficient and stabilized clusters. Sadok, Djamel F. Had et al. [16] presented a heterogeneous technology routing Framework, targeted towards scenarios where in actuality the heterogeneity of devices and networking technologies is present. The contribution is many fold. It includes aframework, which encompasses a procedure for bootstrapping networks, a routing protocol effective at coping with multiple network interfaces, and a tuning with multipath extensions. They evaluated the performance of the bootstrap, routing and multipath mechanisms by means of simulation and a genuine testbed implementation. The multipath evaluation simulates HTR networks with WiMAX, 3GPP LTE and Wi-Fi support. Results show this can effectively improve the information delivery ratio for ad-hoc networks and so it reduced the end-to-end delay without major effect on network energy consumption. Included in HTR tuning, they investigated next the impacts of tuning the HELLO refresh interval timer on route convergence and its subsequent energy consumption reduction in this phase. Additionally they compared tuned HTR with the popular optimized link state routing protocol. Results reveal that varying the HELLO refresh interval can enhance the convergence time and reduce the power consumption without major effect on network behavior. The proposal also included a new distributed address allocation algorithm, namely, the dynamic node configuration protocol. This paper conducted a comparative analysis involving the Prime, Prophet and the DNCP schemes using static and dynamic topologies when it comes to network setup time, energy consumption and control message overhead. Results reveal that the DNCP had a lowered electric batteries consumption and less control message overhead although it slightly suffers regarding setup. Touzene, Abderezak, and Abdulsalam Alkathiri. [17] proposed a new extended grid-based broadcasting algorithm in mobile ad-hoc networks which reduces considerably the broadcast storm problem. EGBB algorithm is dependant on a logical 2-dimensional grid cells view of the geographical region of the MANET. EGBB algorithm reduce the amount of rebroadcasts by utilizing gateway nodes for every grid cell, where only gateway nodes are accountable for rebroadcasting the message to be able to solve network congestion problem. They extended the area of a node in a grid cell from the nodes located in mere eight adjacent grid cells as originally in grid based broadcast to any node in just about any grid cell within the node's transmission range to improve the reachability and reduce how many hops. In addition they added a brand new adaptive feature to suite mobility conditions and traffic load . They developed a simulation model centered on NS2 simulator to assess the performance of EGBB and compare the outcomes with the GBB; the efficient counter based scheme; and the position-aware counter-based algorithm. The simulation experiments showed great results for new algorithm EGBB. EGBB outperforms GBB, ECB and PCB when it comes to end-to-end delay, quantity of saved rebroadcasts, and network density, packet collision ratio under different traffic load, and mobility conditions.

Ref No.	**Techniques**	**Features**
[2]	One-Hop Clustering Algorithms	Provides a shorter path for packet transmission, minimize the maintenance overhead
[3]	Dynamic Demilitarized Zone RA selection algorithm	Clusters lifetime are reduced Prolongs cluster's lifetime.
[4]	cluster head selection algorithm	Effectively maintain the clusters and provides more stability.
[5]	learning automata based weighted cluster formation algorithm	Better performance in number of clusters, cluster lifetime, reaffiliation rate, and control message overhead
[6]	video streaming over MANETs	Increase efficiency
[7]	Trust-based Cluster head Selection Algorithm	Successful delivery ratio and throughput
[10]	Distributed Energy Efficient Cluster Formation Scheme	Longer network lifetime, Lower number of clusters.
[12]	clustering technique used for the election of Cluster Heads and Super Cluster Head	Maximum battery power, Increase network life time.
[13]	Distance-aware Overlay Routing with AODV	Selection of a good cluster head, Moderate increase in transmission time.
[14]	Clustering Based Energy Efficient Algorithm Using Max-Heap Tree	Minimizes the power consumption and maximize the network lifetime.
[16]	heterogeneous technology routing (HTR) Framework	Lower battery power consumption and Less control message overhead.

[17]	extended grid based broadcast algorithm	Extra-battery, power consumption, Maintain its good performance.

IV. CHALLENGES OF MANETS

1) Limited bandwidth: Wireless link continue to possess significantly lower capacity than infrastructured networks. Additionally, the realized throughput of wireless communication after accounting for the effectation of multiple access, fading, noise, and interference conditions,etc., is generally not as when compared to a radio's maximum transmission rate.

2) Dynamic topology: Dynamic topology membership may disturb the trust relationship among nodes. The trust are often disturbed if some nodes are detected as compromised.

3) Routing Overhead: In wireless adhoc networks, nodes often change their location within network. So, some stale routes are generated in the routing table that contributes to unnecessary routing overhead.

4) Hidden terminal problem: The hidden terminal problem identifies the collision of packets at a receiving node consequently of simultaneous transmission of these nodes which are not within the direct transmission choice of the sender, but are within the transmission choice of the receiver.

5) Packet losses consequently of transmission errors: Ad hoc wireless networks experiences an increased packet loss consequently of factors such as for instance for example increased collisions consequently of presence of hidden terminals, presence of interference, uni-directional links, frequent path breaks consequently of mobility of nodes.

6) Mobility-induced route changes: The network topology in a supply hoc wireless network is highly dynamic consequently of movement of nodes; hence an on-going session suffers frequent path breaks. This example often results in frequent route changes.

7) Battery constraints: Devices utilized in these networks have restrictions on the power source to have the ability to maintain portability, size and weight of the device.

8) Security threats: The wireless mobile ad hoc nature of MANETs brings new security challenges to the network design. Whilst the wireless medium is susceptible to eavesdropping and ad hoc network functionality is initiated through node cooperation, mobile ad hoc networks are intrinsically subjected to varied security attacks.

V. CONCLUSION

In this paper, an overview of different protocols of MANET like DSDV, FSR, GSR , ABR, CGSR etc. has been discussed. Moreover, various challenges have been explained in field of MANET. As Mobile Adhoc Network is an accumulation of independent mobile nodes that will communicate together via radio waves used in military battlefield, collaborative work local level, personal area network and commercial sector. Therefore, they provide access to information and services regardless of geographic position. They are scalable with improved flexibility and robust due to decentralize administration. From the survey it has been evaluated that no technique has much efficiency to overcome these challenges.

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