Abstract – Video on demand is one of the most required technology used by the mobile users. But this technology still suffers with many problems because of low speed transmission and network load. In this present work we have defined an intermediate router between the server and the client. The router is responsible to setup the communication rate, bandwidth, modulation schemes and other parameters to perform the effective communication. In this present work we have also considered the problems of bottleneck and the network fault. The suggested work includes the dynamic window size estimation by the router based on the buffered data. The concept to avoid duplicate acknowledgement and the modulation scheme is suggested to perform the effective use of bandwidth.

Video on demand services in wireless network play an important role to provide video services anywhere anytime. In wireless and Mobile technology make lots of client to enjoy their time. Using the wireless technology allow the lots of user moves freely in wireless range. We are try to provide video on demand services in mobile ad hoc network.

Keywords— Video on demand; Mobile Ad Hoc Network; Wireless network; Bandwidth utilization.

I. INTRODUCTION

In Recent advances in high speed network have facilitated the popularity of multimedia such as Video on Demand (VOD). Within the application field (e.g. movie on demand, distance learning, interactive news), these are expected to provide continuous media distribution to high number of client distributed geographically and with different access speed to the interconnection system. Video on Demand are simple in implementation but have obvious disadvantages. The limited capacities and lack of scalability make it difficult to provide acceptable service to all the client when number of user become large, which is very common on the internet. Distributed server architecture has been proposed in order to handle naturally distributed client more efficiently. Many research works have also be done for VOD services on different networks, such as residential LANs, residential ASDL networks, CATV networks and the internet. In recent work to implement the VOD we need to answer the three things i.e. architecture for VOD, what should be the communication protocol used to download the video, and how to ensure the client can receive truly video. should This study focus on design the architecture for VOD services, Bandwidth utilization on network.

Our major in this paper focuses on VOD services. The research issues in VOD services: first is this system is open to future wireless technology?, and second is the system is expandable to do support mobile client with heterogeneous capabilities?

Presently many researchers are engaged in developing the Solutions that fulfill the various requirements, and numerous algorithms related to VOD services have been proposed. This paper presents a through survey of the existing work on VOD services for mobile ad hoc network. The purpose is to provide understanding of the VOD services and to stimulate new research directions in this area.

The rest of the paper is organized as follows: In section 2 describe the related background of the video on demand services and mobile ad hoc network. Section 3 defines the challenges of the VOD system over mobile ad hoc network and section 3 also describe the various scheme of multicasting and broadcasting is used to bandwidth utilization. Section 4 describes the different architecture for VOD services. Section 5 describes the related issues of the video on demand system.
II BACKGROUND

The current trends impact on video on demand services due to deployment of various types of network infrastructure and availability of different types of mobile device. The VOD services and technology are useful in campus education and entainment industry. Wireless technology provides high level of freedom for accessing these technologies without any boundaries. This document provides the general overview of the video on demand system over the mobile ad hoc network. A mobile ad hoc network (MANET) is the collection of autonomous nodes or terminals that communicate with each other by forming multi-hop network and maintaining connectivity in decentralized manner. All nodes in MANET are capable of dynamic movement. This means topology of these network keep on changing. MANET nodes have limited energy and unpredictable topology. In recent years, user demand for these services has gain more popularity.

Video on demand system is interactive multimedia and make their client to enjoy your time to access any video any time. The current VOD system is divided into three parts client, server, peer to peer. Periodic broadcast support the VOD technique. This approach based upon the client server approach but not suitable for mobile ad hoc network because wireless technology does not support the lots of client using the separate connection channels. Broadcast approach avoids the bottleneck problem of the client and server.

III. CHALLENGES OF VOD IN MOBILE AD HOC NETWORKS

The mobile node in MANET is few because the smaller range of the network. The communication range in mobile ad hoc network is small. IEEE 802.11 standard support the 100m to 250 m communication range for mobile devices. For transmitting the data from one node to another node significant amount of bandwidth and power of other nodes also consumed. The architecture design of video on demand system provides help to improve the VOD system to cover the communication range between nodes.

IEEE 802.11g, 80211.b provide maximum bandwidth i.e. 54 mbps and 11 mbps respectively. If the video server is enabled with the 802.11b protocol, it can transmit maximum of 36 video streams of 1.5 mbps concurrently. Due to the limited bandwidth in MANET, it is impossible to satisfy all the request at a time. Therefore some services delay is inevitable for any VOD system. In this survey we study the different type of multicast and broadcast scheme is used to utilize the bandwidth.

A. Patching

Patching is the technique is developed for the internet that enable video on demand services to utilize the multicast service at the network layer. The basic idea of patching is allow to client to join the existing multicast for remainder of the video and download the missed portion of the video over a dedicated patching stream. In wireless technology patching technique is implemented at the media server. This application of patching has limited scalability due to fact that every media stream has to come from the base station. To improve the scalability of patching wireless architecture is used.

B. Patchpeer

Patchpeer is also the technique to utilized the bandwidth of the system. Patchpeer take the advantage of the wireless network and overcome the scalability issue of the patching technique in the traditional wireless network. In the patchpeer technique client receive the regular stream from the main base station for the remainder of the video ,and the patching from the neighboring peer for the missed portion of the video. Patchpeer technique is better than patching technique.
C. **Batching**

A request arrives for a video with in a period can be batched together and served with a single multicast stream this is batching. With the help of batching many request of for the same video served simultaneously and utilized the proper bandwidth of the network. In general service provider is to batch many request as possible, science the profitability of the system is directly related to batch sized. Batching could be used to provide acceptable service with the limited server capacity. If the load on the system is low then batching is not required.

D. **Peer to peer grid**

It is network aware multicasting scheme. The adaptability of the system achieved through the network-aware delivery and interest self organization. This scheme uses the dynamic buffering algorithm and video multicast strategy to achieve the optimal utilization of the resources. VOD system benefit from the secure and efficient organization in grid computing and flexibility and scalability in peer to peer models. Collection of peers is called peer groups that share the similar interest and workload.

IV. **ARCHITECTURE FOR VOD**

In this survey we study the different type of architecture is implemented foe VOD system like client server architecture for VOD system, distributed architecture for VOD system , wireless hybrid network architecture for VOD system.

A. **Client server architecture**

In client server architecture VOD system is divided into three parts the client server, local forwarder. Broadcasting technique is used to utilize the bandwidth. Client server architecture uses the broadcasting approach to avoid the bottleneck problem in the client and server. The video server store the files ,mobile user are client who subscribe for VOD services provided by the system. It is not possible for video server to transmit a video to client located in wide geographic range. So local forwarder is used local forwarder is refer to as a node. local forwarder receive the video packet from the server and then broadcast the packets via the w NIC. Local forwarder and the server are connected via the WLAN / LAN

B. **Wireless hybrid network architecture**

In wireless hybrid network component based architecture is used to provide the VOD services. The component based architecture is overcome the problem of self adaptable. This architecture is capable to provide VOD services for different types of devices. Three components are used in component based architecture central VOD service provider, media forwarder MANET client. Central VOD service provider is the main server to provide the VOD services to the client. It provides the services to the end client through the media forwarder. Media forwarder is responsible to provide video services within limited range. Global forwarder is responsible to provide video services through WIMAX, 3G. MANET client such as laptop user, PDAs, mobile phones, notebooks.
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V. ISSUES
Many issues are there related to video on demand services. Broadcasting of the video services in VOD system in MANET is challenging issue. Many broadcasting scheme are available to transmit the video data but some scheme are not feasible for the MANET environment. The main issue for the video on demand system is:

- Is the design system open to future wireless technology?
- Is the system expandable to do support mobile client with the heterogeneous capabilities?

VI. CONCLUSIONS
This paper outlined the issues, goals and approaches of the video on demand services in mobile ad hoc network. In this survey we study the how to reduce the bandwidth cost because in wireless network limited amount of bandwidth are present. So the different type of scheme is used to utilized the complete bandwidth of the network like patching, batching, peer to peer etc. in this survey we focus the bandwidth utilization and different architecture for VOD system. Most of the cases client server approach is used for video on demand services.

REFERENCES