

# Multicast Video Streaming using Wi-Fi offloading Method in a Proficient Approach

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**Abstract-** The wireless network is a connection established between the more than numbers of nodes. The nodes are mobile, laptop, pc, and etc. Thus the node has to be communicating to each other and transfer the data, information and etc; the transaction should be established between source nodes to the destination node. The transaction is established in the multicasting method. Multicast means single source node and more than destination node. One challenging issue in such wireless multimedia delivery systems is how to maintain the quality of service due to scarce resources in wireless networks. The Multicasting in wireless communications is a natural solution to the overloading problem in wireless live video streaming. When multiple wireless users within a certain range request for the same multimedia content, the transmitter can simply broadcast one copy of the content to all receivers, which is called multicasting. The service provider may categorize users into several multicast groups according to their demands in contents, and then perform multicasting in delivering. The Wi-Fi data offloading overcomes the aforementioned issues for delay-tolerant data. However, it comes at the cost of constrained mobility for users, as they are required to stay within a given area while the data is uploaded. The wifi offloading method has to be making the communication between more than nodes at a same time.

**Keywords –** *Wi-Fi offloading, Secure Communication*

## I. INTRODUCTION

The wifi offloading in wireless communications is a natural solution to the overloading problem in wireless live video Streaming. When multiple wireless users within a certain range request for the same multimedia content, the transmitter can simply broadcast one copy of the content to all receivers. The service provider may categorize users into several multicast groups according to their demands in contents, and then perform multicasting in delivering. the user-perceived video quality can be significantly improved by accounting for application requirements, and specifically the video distortion experienced by a flow, end-to-end. Typically, the schemes used to encode a video clip can accommodate a certain number of packet losses per frame. However, if the

number of lost packets in a frame exceeds a certain threshold, the frame cannot be decoded correctly. A frame loss will result in some amount of distortion. The value of distortion at a hop along the path from the source to the destination depends on the positions of the unrecoverable video streaming. Those devices with low computation capabilities may not be able to decode high-quality contents. Therefore, the service provider needs to deliver the same content in multiple qualities, such as in standard resolution (SD) and high resolution (HD), to satisfy these heterogeneous devices' requirements. The users are communicating to each other using the wifi offloading method. The communication is fully based on the wifi user link.

Indeed, peer-to-peer backup systems are limited by the low to medium availabilities of participating peers and by the slow up-links of peers' network connections. This limits the amount of data that peers can transfer and places peer-to-peer systems way behind datacenter-based systems tracking moving objects in a video sequence in real time, we can develop a real-time alert system to enhance current surveillance techniques.

In existing paper to leverage on the processing and storage capabilities of common devices located on the Wi-Fi access point's local area network (LAN) to implement a sort of store-and-forward HTTP(S) proxy, thus decreasing the waiting time to the point where the Wi-Fi connection of the access point becomes the bottleneck. We propose HOOP, a system for offloading upload tasks onto devices, such as gateways, in a secure and seamless way. Essentially, when a user reaches an HTML upload form on a HOOP-enabled website, her browser looks for a device running HOOP on the local network (say a gateway) to offload the uploading task.

HOOP requires only limited changes on the gateways and on the web server and none at the client side (i.e., at the mobile device's operating system and browser). HOOP is secure and it significantly reduces the users' waiting time. We analyze the security of HOOP and show that HOOP guarantees the confidentiality and the integrity of the uploaded data, with respect to various attackers, including the

gateway and eavesdroppers. In addition, we show that HOOP does not create new opportunities for an attacker to disrupt the upload or attack the online service.

Offloading traffic at Wi-Fi access points, it goes beyond by exploiting the storage capacity at the access points to fully take advantage of the Wi-Fi connectivity for delay-tolerant uploads. In [7], the authors study the trade-off between data downloading delays and user satisfaction in the case of 3G offloading; they show that, by predicting the users' offloading potential and by using appropriate incentives, data downloads can be efficiently delayed without sacrificing the users' satisfaction. This paper deals with Offline video calling over the wifi network area.

## II. DOMAIN

In Peer-to-peer storage systems initially relied on the set of all participating peers, typically constituted of users' desktop Cs, without any further infrastructure. However, it has been acknowledged since then, that those pure peer-to-peer architectures may fail to deliver gives reliable storage by exploiting the resources of peers, mainly due to the low availability of peers and the slow up-link of their network connections. This is not connection based which means that one program can send a load of packets to another and that would be the end of the relationship. The offline wifi conference call is fully based on the TCP protocol. The source node and the destinations are connected to the local wifi connection. The source node can be capture the video file, and transmit to the destination nodes. The destinations are received the packets are concert into the original streaming, and then transmit the video streaming to the source node. Thus the process is based on the full duplex method. The source and the destination are transmitting and received the data at the same time without any problem. The wifi device coverage range varied, defense upon the capacity of the wifi devices. The message has to be transmitted from the source to the destination node. it is based on the SMTP protocol. The communication of text type, and the video communication is proposed on this method.

## III. WIRELESS NETWORK FORMATION

The wireless network is a connection established between the more then numbers of nodes. The nodes are mobile, laptop, pc, and etc. Thus the node has to be communicating to each other. The communication must be very secure in this method using the routing protocol for the connectivity. The network connection is basically used to communicate to each other's nodes, share the files, and exchange the information from one node to another node. The network is wireless based; thus the network transaction is based on the spectrum allocation. The communication protocol is control the transaction from the source node to the destination node. The network coverage range is based on the Access point bandwidth capacity. The routing protocol is inter connect the all nodes to each other nodes.

## 1. CONNECTION ESTABLISHMENT

The source node and the destination node establish the connection over wifi. Thus the connection is fully offline based. The source and the destination are connected by the wifi network. The connection is established by the MAC address verification. The manual network formation is created on the source and the destination nodes, and assigns the same serial of IP address of entire network user. After the Ad-hock network criterion and the connect to the each other nodes.

## 2. COMMUNICATION PROCESS

The MAC protocol secures the unauthorized person accessing process of the network. The network access point has to be securing the communication process. The source can be capture the video and then transmit to the destination nodes using TCP protocol. The destination nodes are received the video streaming and then similarly capture and transmit the video to the source node. The video communication process is established by the same network user.

## PERFORMANCE EVOLUTION

Thus the method has to be securing the data on the transaction time. Thus the method should be evolves the security, traffic on the transaction, packet loss problem, and through put of the transaction. the lower-bound of the income loss ratio of the proposed spectrum allocation to the income-centric benchmark, and provide detailed discussions regarding the impacts of weight Wi-Fi spectrum efficiency, and Wi-Fi network enhance the communication between the more then users.

## SYSTEM TESTING

System Testing (ST) is a black box testing technique performed to evaluate the complete system the system's compliance against specified requirements. In System testing, the functionalities of the system are tested from an end-to-end perspective. System Testing is usually carried out by a team that is independent of the development team in order to measure the quality of the system unbiased. It includes both functional and Non-Functional testing

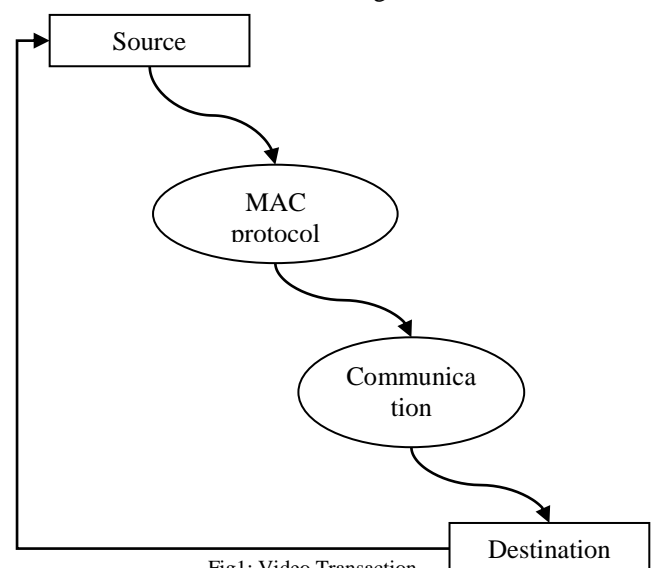


Fig1: Video Transaction

**System Architecture**

A system architecture or systems architecture is the conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system. System architecture can comprise system components, the externally visible properties of those components, the relationships (e.g. the behavior) between them. It can provide a plan from which products can be procured, and systems developed, that will work together to implement the overall system. There have been efforts to formalize languages to describe system architecture; collectively these are called architecture description languages (ADLs).

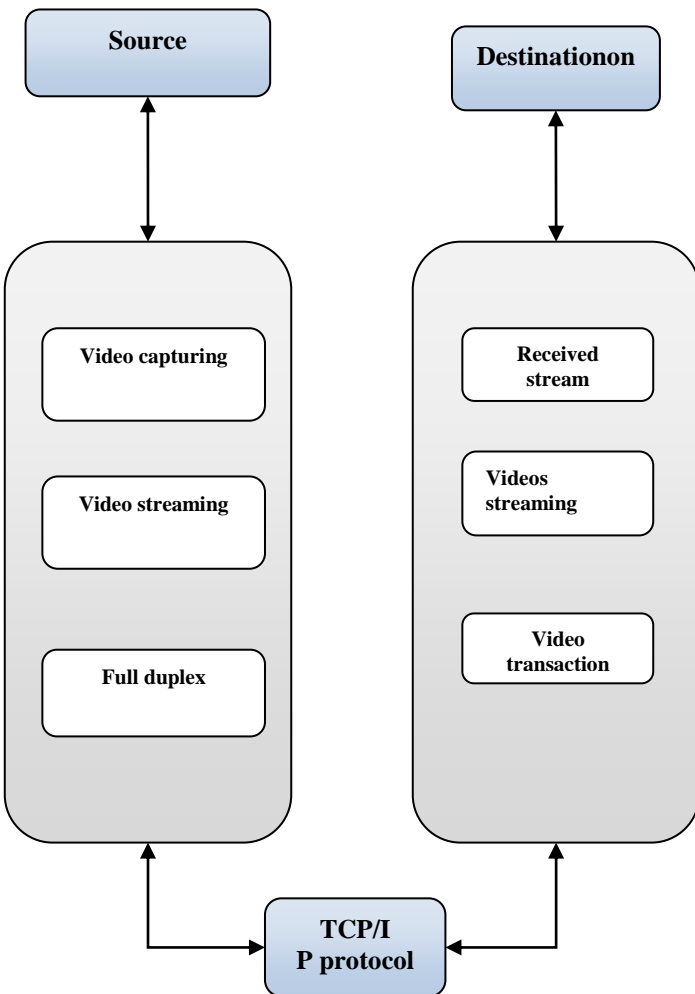


Fig2: System Architecture

**CONCLUSION**

The system enables mobile users to fully exploit the Wi-Fi link by relaxing the speed constraints due to the link that connects the LAN to the Internet. The communication between the more than nodes using wifi frequency. Thus the method is possible on the without internet connection and it based on the MAC protocol. The MAC protocol is secured the communication process.

**FUTURE ENHANCEMENT**

The wifi video streaming process enhances the communication process between more then users, and transaction speed is slow. The future work of this project is reducing the traffic problem and increasing the speed of the network transaction. The distance of the wifi network is very low, thus the problem is overcome on the next process.

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