CONTENTS

Abstract

Wireless mesh networks (WMNs) facilitate both data transfer and real-time applications over wireless medium. Owing to the shared nature of wireless frequencies, bandwidth limitation is a major challenge facing WMNs. If real-time multimedia applications, such as live video streaming, are shared among multiple clients using unicast communications, it could result in network resources starvation. Multicast transmission saves network resources by replicating live multimedia transmitted data from one source to multiple destinations using the same stream. This has developed a novel implementation of a multicast extension to ad hoc on-demand distance vector (MAODV) routing protocol in Linux kernel 2.6 user space, which is referred to as unidirectional link-aware MAODV (UDL-MAODV). Multicast video transmissions use user datagram protocol, which does not use implicit handshaking dialogues for guaranteeing reliability of data. Therefore the authors propose and have implemented modifications to the MAODV route discovery process to improve the reliability of multicast video transmissions.

LIST OF FIGURES