Multimedia Encryption, Transmission and Authentication

Edited by

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Chapter 26

QUALITIVE STUDY ON MULTICAST ROUTING PROTOCOLS IN MANETS

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26.1. INTRODUCTION

MANETs are considered for many commercial applications, including home networks, nomadic computing, community networks and emergency response networks. Also, there are many applications of MANETs that involve point-to-multipoint or multipoint-to-multipoint communication patterns. Disaster recovery, search and rescue, military applications, video conferencing or class room settings, public events, interactive television, temporary offices and multi-partiy gaming are common examples of these application [1]. As a consequence, multicast routing has received significant attention over the recent days.

Multicast communication is emerged to support applications that facilitate effective and collaborative communication among groups of users with the same interest. Multicasting is a scheme for sending the same data from a source to a group of destinations. This is efficient in saving the bandwidth and improving the scalability, which is essential in MANETs [2]. Multicast routing protocols is a transmission mechanism that allows a single data packet sent by a source to be replicated by intermediate nodes at each branching point of disjoint paths as necessary and passed to a selected subset of all possible destinations[3]. Multicast routing provides a more efficient solution than unicasting the data packets to each node separately or broadcasting them throughout the network. It reduces the transmission overhead both on the source as well as on the network nodes and speeds up the delivery of information at the destinations. Multicast routing protocol can be classified into four categories based on how