National Level Seminar On

SOUVENIR

TRENDS IN WIRELESS TECHNOLOGIES

(UNDER ISTE CHAPTER AND ISTE STUDENT CHAPTER)

Date: 16th & 17th, March, 2007

Organized By:

CE / IT / EC / EEE / MCA Dept.

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motivated the design of many other protocols which follow a similar concept. Advantages and performance issues of these two algorithms will also be highlighted.

Jignesh Smart, Lecturer, GDCST, S. P. University.
Title: Data Compression in SMS

Abstract: SMS (Short Messaging Service) is one of the most popular data service available to mobile phone users. As the name suggests, it is intended for sending short messages. The SMS PDU (Protocol Description Unit) for GSM allows the user to send a message of up to 160 characters. Actually the message is packed into 140 bytes. What if one wants to send a longer message? Either you change the specification of the PDU (which is of course very difficult considering the changes in hardware and software required and the committee approval processes invoived) or you develop some more efficient encoding method. This paper describes a compression-cum-encoding technique developed by the author that uses the latter approach.

Dr. G. R. Kulkarni, Professor and Head / **Prof. A. C. Suthar,** Asstt. Prof. , Dept. of E. & C., CCET, Wadhwan
Title: Parallel Concatenated Recursive Systematic Error Correcting Codes for use in Next Generation Wireless Communication

Abstract : Turbo-codes to achieve the ultimate limits of capacity of a communication channel. This paper reviews the reasons for this, in particular their attainment of the ultimate limits of the capacity of a communication channel.
In this paper we describe the two fundamental concepts on which they are based on concatenated coding and iteractive decoding methods. Other applications of this principle have emerged, and discuss with practical applications of turbo-codes has been appeared from mobile phones to deep-space exploration. It can be applied to many other processes includes like euqalisation and synchronisation many mores.

Ms. Sonal Popat, Lecturer, AITS, Rajkot
Title: Implementation of MANET Routing Algorithms using NS2

A **Mobile Ad** hoc **NET**work is a collection of wireless mobile nodes dynamically forming a temporary network without the use of any existing network infrastructure or centralized administration. Due to the limited transmission range of wireless network interfaces, multiple "hops" may be needed for one node to exchange data with another across the network. All nodes are capable of movement and connected each other dynamically but they are vulnerable to failure. This failure is either battery drainage or due to limitation of node which cannot participate in network operation due to change in the topology. So routing the packets in such an environment is difficult, number of protocols for routing has been developed for MANET, However a comparison between them is lacking to help determine an optimal one. This research paper addresses this issue by comparing the relative performance of three key Ad hoc routing protocols; Destination-sequenced distance vector (DSDV), Dynamic source routing (DSR) and Ad hoc ondemand distance vector (AODV).

Routing protocols for Ad hoc networks can be classified into two main categories: (1) Proactive or table-driven and (2) Reactive or on-demand. In Proactive protocols each node maintains tables that on-demand version of DSDV where the path results in store routing information. For example, nodes in Destination-sequenced distance vector (DSDV) algorithm maintain route information to every other node in the network. As the network status changes, full updates are exchange among all nodes. Reactive protocols are characterized by path discovery mechanism that is initiated when a source needs to communicate with a destination that it does not know how to reach. The route discovery is usually in the force form of query flood. The differences between on-demand protocols are in the implementation of the path discovery and optimizations of it. Dynamic source routing (DSR) uses source routing, with every packet carrying the full path information with it. while, Ad hoc on-demand distance vector routing (AODV) is an on-demand version of DSDV where the path results in exchange of the portions of the routing table necessary for establishing the route.