Trust Based Optimal Routing in MANET's

Abstract:

A MANET ( **Mobile Ad Hoc Networks** ) is an autonomous collection of mobile users that communicate over relatively bandwidth constrained wireless links. Since the nodes are mobile, the network topology may change rapidly and unpredictably over time. The network is decentralized, where all network activity including discovering the topology and delivering messages must be executed by the nodes themselves, i.e., routing functionality will be incorporated into mobile nodes.

Existing System:

MANETs are unplanned, self-organizing networks

composed of mobile nodes that utilize mesh networking

principles for inter-connectivity. They do not have a fixed

infra-structure which makes them easy to build over an area.

Mobile Ad hoc networks (MANETs) have several advantages

compared to traditional wireless networks. These include ease

of deployment, speed of deployment and decreased dependency

on a fixed infrastructure. There have been many studies done

in this area to improve the quality and efficiency of the routing

protocols in MANETs. However unique characteristics of

MANETs topology such as open peer-to-peer architecture,

dynamic network topology, shared wireless medium and

limited resource (battery, memory and computation power)

pose a number of non-trivial challenges to security design. The

fixed infrastructure less environment makes the transactions

less secure. Traditional routing algorithms in MANETs do not

work with cryptographic techniques.

**Proposed System:**

Cryptography procedures were introduced in them to make secure transactions. This paper proposes a secure, trusted, optimal scheme for routing in MANETs.

**Modules:**

1. **Login Module.**
2. **Sender Module.**
3. **Trusted Center Module.**
4. **Receiver Module.**
5. **Key Generation Module.**
6. **Routers Module.**

**H/w & s/wcomponents:**

**Software Requirements:**

Language : C#.NET

Technologies : Microsoft.NET Framework,

ADO.NET

IDE : Visual Studio 2008

Backend : SQL Server 2005

Operating System : Microsoft Windows XP SP2 or LateVersion

**Hardware Requirements:**

**Processor : I**ntel Pentium or more

RAM : 512 M

Hard Disk : 40 GB