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Fast Data Transfer System Using Neighbor Discovery Node Selection

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Abstract:

In most sensor network the nodes are static . Subject to changes because of disruptions in wireless communication , transmission power changes, loss of synchronization between neighboring nodes.Process we call continuous neighbor discovery during sensor network initialization and continuous neighbor discovery.

Keywords — ***Sensor, Disruptions, Synchronization, Network Initilization, Continuous Neighbor Discovery.***

I. INTRODUCTION

A sensor network may contain a huge number of simple sensor nodes that are developed at some inspected site.
The sensor nodes act as routers , forwarding messages from one of their neighbors to another.
Two neighboring sensors to communicate, both must be in active node.
Sensor networks with low and irregular traffic , a special neighbor discovery schemes should be used.

II. EXISTING SYSTEM

Initial neighbor discovery is usually performed when the sensor has no clue about the structure of its immediate surroundings.

Such a case , the sensor cannot communicate with the gateway and is therefore very limited in performing its tasks.

DISADVANTAGES OFEXISTING SYSTEM

- In networks with continuously heavy traffic.
- Long-term process.
- Greater expense of energy than required in our scheme.

III. PROPOSED SYSTEM

Sensor network initialization and continuous neighbor discovery. We focus on the latter and view it as a joint task of all the nodes in every connected segment.
Sensor employs a simple protocol in a coordinate effort reduce power .
The time required to detect hidden sensors.

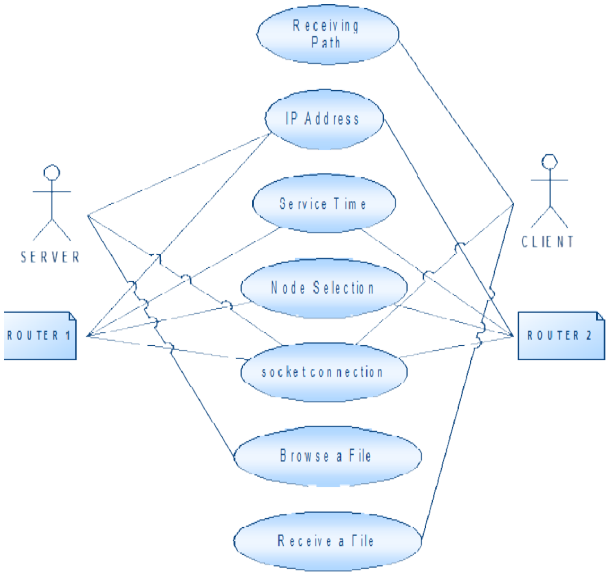
IV. ADVANTAGES OF PROPOSED SYSTEM

- Detect their immediate neighbors.
- Message does not collide with another.
- Every node discovers its hidden neighbors independently.
- Detect their immediate neighbors.
- Message does not collide with another.

V. Data Flow Diagram / Use Case Diagram / Flow Diagram

The DFD is also called as bubble chart.
The Input Data To The System, Various Processing Carried Out On These Data, And The Output Data Is Generated By The System.

VI. USE CASE DIAGRAM



VI. MODULES

- ✓ Client – Server
- ✓ Detecting all hidden links Inside a segment
- ✓ Detecting all hidden links Outside a segment
- ✓ Neighbor Discovery Model

CLIENT – SERVER

Client – Server computing is distributed access.
Server accepts requests for data from client and returns the result to the client.
clients and servers communicate over a computer network on separate hardware.

HIDDEN LINK PARTICIPATE INSIDE A SEGMENT

The discovering node issues a special SYNC message to all segment.
This SYNC message is distributed over the already known wireless links of the segment.

HIDDEN LINK PARTICIPATE OUTSIDE A SEGMENT

A random wake-up approach is used to minimize the possibility of repeating collisions between the HELLO messages of nodes in the same segment.
The HELLO transmission time is even shorter, the probability that two neighboring nodes will be active at the same time.

NEIGHBOR DISCOVERY MODEL

Neighbor Discovery is studied for general ad-hoc wireless networks.
The goal is to determine the HELLO transmission frequency, and the duration of the neighbor discovery process.

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