

# **On Oblivious Neighbor Discovery in Distributed Wireless Networks With Directional Antennas Theoretical Foundation and Algorithm Design**

## **ABSTRACT**

Neighbor discovery, one of the most fundamental bootstrapping networking primitives, is particularly challenging in decentralized wireless networks where devices have directional antennas. Neighbor discovery algorithms should be able to guarantee discovery in this challenging environment in a fully decentralised manner without any prior coordination.

## **EXISTING SYSTEM**

In Existing System, Directional antennas have been widely used in emerging wireless networks given the capability in limiting interference, enlarging transmission range and hence boosting network capacity and reducing energy consumption. For example, direction antennas are particularly attractive in the 60GHz networks to ensure high transmission quality and acquire sufficient link budget to cater Gbps data rate. As another example, in some wireless item tracking systems, devices are attached with directional antennas allowing them to scan an area for specific items. Bounded and minimum worst-case discovery delay; Discovery oblivity, the capability of guaranteeing discovery regardless of the antenna beam width and the relative positions of nodes. This requirement is particular in the neighbor discovery with directional antennas.

## **DIS ADVANTAGES**

- Lack of performance guarantee in terms of discovery delay.
- It provides guaranteed upper-bound on the worst case discovery delay.

## **PROPOSED SYSTEM**

In Proposed System, we study the following fundamental problem, which we term oblivious neighbor discovery: How can neighbor nodes with heterogeneous antenna configurations discover each other within a bounded delay in a fully decentralized manner without any prior coordination or synchronization? We establish a theoretical framework on the

oblivious neighbor discovery and the performance bound of any neighbor discovery algorithm achieving oblivious discovery. Guided by the theoretical results, we then devise an oblivious neighbor discovery algorithm, which achieves guaranteed oblivious discovery with order-minimal worst case discovery delay in the asynchronous and heterogeneous environment.

## **ADVANTAGES**

- Boosting network capacity and reducing energy consumption.
- Acquire sufficient link budget to cater Gbps data rate.

## **SYSTEM REQUIREMENTS**

### **H/W System Configuration:-**

Processor	-	Pentium –III
RAM	-	256 MB (min)
Hard Disk	-	20 GB
Key Board	-	Standard Windows Keyboard
Mouse	-	Two or Three Button Mouse
Monitor	-	SVGA

### **S/W System Configuration:-**

Operating System	:	Windows95/98/2000/XP
Application Server	:	Tomcat5.0/6.X
Front End	:	HTML, Jsp
Scripts	:	JavaScript.
Server side Script	:	Java Server Pages.
Database	:	MySQL 5.0

Database Connectivity : JDBC

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