

# **LoDPD A Location Difference-based Proximity Detection Protocol for Fog Computing**

## **ABSTRACT**

Fog Computing is a paradigm that extends Cloud computing and services to the edge of the network, which has little latency and without intermittent connectivity, especially in the Social Network as well as the Crowd sourcing Systems. Their high speed Internet connection to the cloud, and physical proximity to users enable real time applications and location based services, and mobility support. In particular, with the great developments of mobile smart terminal, Location-based Services (LBS) have been great popular over the past years. Specially, proximity detection service is a typical application of the LBS or the content sharing services.

## **EXISTING SYSTEM**

In Existing System, Proximity detection is one of the most common location-based applications in daily life when users intent to find their friends who get into their proximity. Studies on protecting user privacy information during the detection process have been widely concerned. First, the protocol only dealt with convex polygons that may be not sufficient in practice, because the proximity region of Alice was an arbitrary polygon region in many applications. Second, Alice and her friends had to interactive with each other for several times to achieve privacy, which led to the high communication costs especially the complicated proximity area. Moreover, because of processing the large amount of encrypted data for every edge of the proximity region, the PPD protocol should result in high computation cost as well, which was hard to implement in the resource-constrained devices such as a smart phone or a tablet.

## **DIS ADVANTAGES**

- Decrease the detection accuracy but be easy to hurt users' privacy.
- Higher requirement on user's mobile phones because of a high communication costs.

## PROPOSED SYSTEM

In Proposed System, we first analyze a theoretical and experimental analysis of existing solutions for proximity detection, and then demonstrate that these solutions either provide a weak privacy preserving or result in a high communication and computational complexity. Accordingly, a location difference-based proximity detection protocol is proposed based on the Paillier cryptosystem for the purpose of dealing with the above shortcomings. The analysis results through an extensive simulation illustrate that our protocol outperforms traditional protocols in terms of communication and computation cost.

## ADVANTAGES

- Too simple and inflexible to specify the vicinity region of interest.
- Detect whether they were in her proximity region.

## 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