International Journal of Engineering Applied Sciences and Technology, 2017
Vol. 2, Issue 5, ISSN No. 2455-2143, Pages 200-204
Published Online March-April 2017 in IJEAST (http://www.ijeast.com)

DYNAMIC GEOLOGICAL MEETING RECOMMENDATION ON LOCATION BASED SERVICES WITH USER INTEREST

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***Abstract* - In applications similar like a social networking services and online games, multiple moving users form a group and wish to be continuously notified with the best meeting point from their locations. We intend a novel monitoring problem, Efficient Notification of Meeting Points (*ENMP*) for multiple moving users: given a group of moving users *U*, a set of points of interest (*POI*) *P*, *ENMP* continuously information the optimal meeting point *po* ∈*P* to users in *U* such that their maximum distance toward *po*is minimized. *ENMP* is motivated by many applications in social networks, location-based games and massively multi-player on-line games. We propose novel solutions based on *safe region* technique. *Safe regions* are a set of geographical regions such that if each user stays inside his/her own, the query outcome will keep on the same, thus avoiding communication between users and the server.**

***Keywords*—**safe region, efficient notification meeting points, point of interest, smart phone application.

I. INTRODUCTION

Smart phones and other mobile devices equipped with a location system, users can acquire various location-based services (LBS), including: services based on location checking such as navigation, route planning, service recommendation, etc.

With the wide availability of online services, and ease of connectivity, E-commerce has gained a significant portion of the consumer market in the past few years. Moreover with the wide availability of portable devices (i.e. mobile handsets, PDAs, etc.), another form of commerce, named Mobile-Commerce is gaining ground. One of the main services provided in M-Commerce is location based services in short LBS

The emergence of state-of-the-art location-detection devices, e.g., cellular phones, global positioning system (GPS) devices, and radio-frequency identification (RFID) chips results in a location-dependent information access.

Currently, numerous applications can produce location-based ratings that embed user and/or item locations. For example, location-based social networks allow users to "check-in" at spatial destination (e.g., restaurants, theaters) and rate their visit, thus are capable of associating both user and item locations with ratings.

II. RELATED WORK

In 2006 , Chi-Yin Chow ,et.al [1] when users have to report their exact locations to the database server in order to obtain their desired services. a peer-to-peer (P2P) spatial cloaking algorithm in which mobile users can think about location-based services without revealing their exact location information. The mobile user to entertain without the help of any centralized third parties. It can operate in two modes, on-demand and proactive. This algorithm, the mobile user can find the required number of peers to form a group and then she determines the minimum grid area that satisfies her privacy requirements.

In 2008, Amir Salar Amoli, et.al[2] To achieve an accurate service, it is important to use the mobile's accurate location. provide anonymity of location, for location based services, based on one time tickets regardless of the existence of any trusted third party. discovery of users' fraud, possible attacks on the protocol, and lasly computational evaluation of 2PLoc. A proposed 2PLoc, a protocol for preserving the privacy of the user's location, in m-commerce transaction.

Stavros Papadopoulos,et.al[3] authentic query processing enables the clients to verify the truth of query results. Describe REF technique that achieves correctness and temporal completeness but incurs false transmissions .CADS, which minimizes the processing and transmission overhead. CADS and REF are main memory-based in order to achieve real-time query evaluation and fast structure updating. A assume a service provider (SP) that constantly collects record updates from a data owner . The SP returns to the clients the query results, as well as authentication information necessary to establish their correctness.

In 2011, Moein Mohammadi,et.al[4] Ever increasing grows of mobile links and need to new technologies in many industries

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and other job like tourism. LBS is a common point including geographical information system 00000000(GIS) and internet and long distance communication system and NISTs. We could introduce LBS to development of many science, business, jobs and etc by attention to increasingly need of human. Human

Markets and even could be the causes of rescuing economical countries like we consider LBS discussion, such as general principle and their component and positioning.

S.Thirunavukkaras,et.al[5] The development of new applications that use the physical position of users to offer location-based services. Different obfuscation operators that, used individually or combination, the location information of users. It is a simple and intuitive way. Robust against a relevant class of de obfuscation attacks. We presented different obfuscation operators that protect the location privacy of users by changing their location information.

In 2013, Blake Shaw,et.al[6] Despite the poor correctness of GPS on current mobile devices and the relatively high density of places in town areas .propose a novel spatial search algorithm and evaluate a variety of techniques and demonstrate that machine learning algorithms. constantly reporting a signal of latitudes, longitudes, and timestamps. Ademonstrated spatial search engine for mapping noisy location estimates from mobile devices points of interest.

Duong-HieuPhan,et.al[7] designing public-key broadcast encryption schemes with constant-size secret keys and cipher texts, achieving chosen-cipher text security. Cipher texts that are shorter than those of the previous CCA secure proposals .provides the functionality of both broadcast encryption and revocation schemes simultaneously using the same set of parameters. Very efficient broadcast encryption scheme. Considering the extended assumptions, our scheme is the first scheme to achieve constant-size secret keys and cipher texts and adaptive CCA security at the same time.

In2014, Mohamed Sarwat,et.al[8] Traditional recommender systems do not consider spatial properties of users nor items. three novel classes of location-based ratings, namely, spatial ratings for non spatial items ,non spatial ratings for spatial items, and spatial ratings for spatial .It is efficient, scalable, accurate. User partitioning and travel penalty. Both techniques can be applied separately or in concert to support the various types of location-based ratings.

Samta M. jain[9] Thus knowingly or unknowingly they loss their privacy. privacy-preserving algorithm for determining an optimal meeting location for a group of users. preserve user preference privacy, acceptable performance. implemented and evaluated the performance of our algorithms on real mobile devices. We extended the proposed algorithms to include cases where users have several prioritized locations preferences.

In2015,PericlePerazzo, et.al[10] Privacy protection is a major challenge for such services and related applications. UNILO-based obfuscation algorithms that offer multiple contemporaneous levels of privacy. Does not require a centralized and trusted obfuscator. We experimentally proved that UNILO outperforms state-of-the-art perturbation algorithms both in terms of utility and resistance against inference attacks.

III. PROPOSEDSYSTEM

First we have to create the application and register with the required users. Registration is followed by validation. Now user get authenticated and creates his own group of members. When an event is to be held, the location of the members are tracked using GPS and the location is fixed at a feasible distance to all.

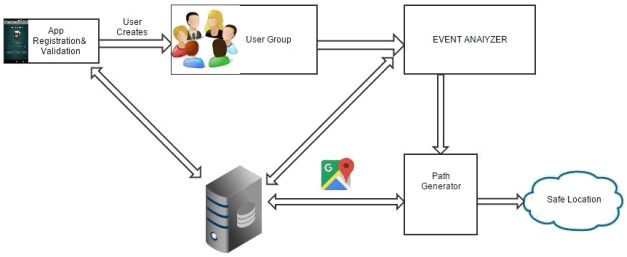

Fig 1: ARCHITECTURE DIAGRAM

The above figure represents the proposed system. The path is generated to everyone and the exact spot is informed to the members. The maximum time is chosen so that traffic is taken into consideration.

The proposed system has the following modules.

1) REGISTER APP & PHONE NUMBER VALIDATION:-

Create an account in our android application in your mobile, the user uses the account to verify the phone number for registration phase .Server sends an OTP for mobile number for verification and after entering the correct OTP user account is validated and created. Once account is created user can be able to add group and post events of his own choice.

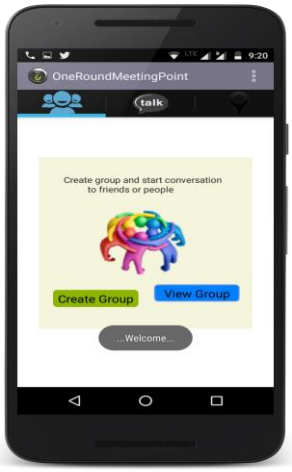

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Fig 1.1 Enter IP addresses and create or view group
Fig1.1 shows that the phone number is being registered and validated by each member of the group.

B) GROUP CREATION & POST EVENT AND IDENTIFY SAFE LOCATION

Create group using mobile contact number, once user creates a group he/she can post any event in group. When group admin/member posts any event they can receive the common point for meeting location, and then he/she chooses the particular place for meeting in common point according to their preference. After choosing the place event is shared to all group members. The group receives the notification the user identifies the location using our meeting point application. A group can contain any number of user/person; user can have a friends or relative in group list. It doesn't have any restrictions

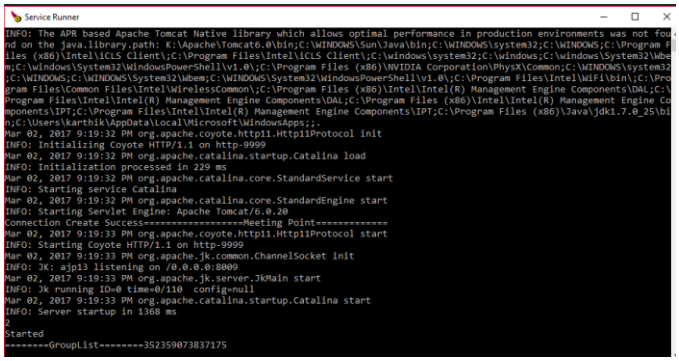

Fig 2.1 Tomcat server

Fig 2.1 shows the tomcat server acts as a server to all the users in the group.

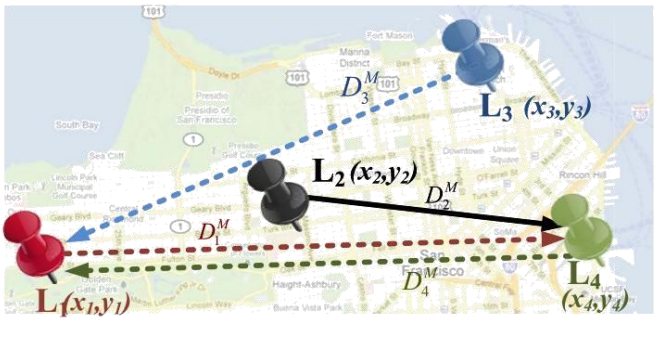

Fig 2.2 shows the optimal location of the event to be held. The optimal location is at a feasible distance to all the users. Group creation and Identify Safe Location.

C) PATH FINDING FOR SAFE REGION

To know the current location of a moving group using Google maps, after receiving the event notification from group member /admin, the path is generated which is at at a feasible distance for all the users. Now the safest region (preferred location) is chosen by the event organizer. ENMP reduces the communication cost for client and server and provides the independent safe region for moving group.

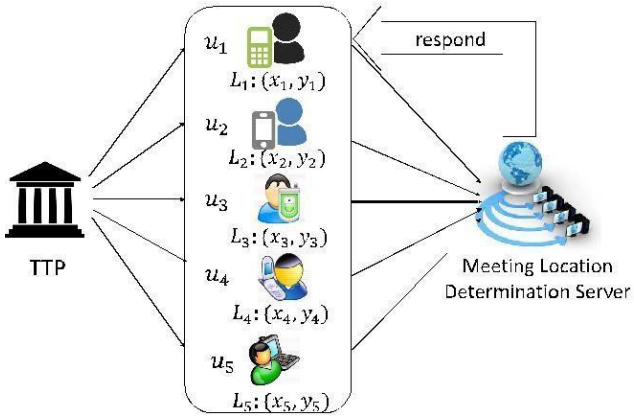

Fig 3.1 Path Finding
Fig 3.1 shows that the server responds to the users about the meeting location.

IV. CONCLUSION

We proposed an Efficient Notification of Meeting Points system among mobile device users, based on Safe Region method. This system has provided fairly accurate results for users spread across a certain region. Thus we designed, implemented and evaluated the performance of our algorithms on real mobile devices. We showed that our solutions preserve user preference privacy and have acceptable performance in a real implementation However, this system cannot take into account real life hurdles such as traffic conditions.

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