ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com
International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 3, Special Issue 22, April 2016

EFFICIENT TRACKING MECHANISM ON MOBILE NETWORK FOR MOVING GROUPS VIA SELF-GOVERNING SAFE REGION

K.GOWTHAMKUMAR,
PG Scholar,
Department of Computer Science and Engineering,
Arunai Engineering College, Thiruvannamalai, India.
kvngowtham@gmail.com

B.RUBADEVI,
Assistant Professor,
Department of Computer Science and Engineering,
Arunai Engineering College, Thiruvannamalai, India.
rubaruba@gmail.com

***Abstract*— In applications the social networking services like online games,online solving apps and multiple moving users form a group and wish to be continuously notify the best meeting point from their locations. We propose a novel monitoring problem, Efficient Notification of Meeting Points for moving user given a set of moving user U, a set of points of interest (POI) P, ENMP check continuously reports the optimal meeting point po ∈ P to users in U such that their maximum distance of the meeting point is to minimized.It motivated to the client to communicate with each other and it contain many client which is communicating to the server. We propose novel solutions based on circular safe region and tile based safe technique. Safe regions are a set of two regions such that if each user stays inside own, the result will remain the same, thus avoiding the high communication between users and the server.**

***Keywords;* Efficient notification of meeting point(EMNP),Point of interest (POI)y,Locality Sum- optimal meeting point(SOMP)**

I. Introduction

Data Mining is an analytic process that to designed and explore a data.The overall goal of the data mining process is to extract information from a data query and to transform it into an understandable process.The ultimate goal of the date mining is easily identified is also called as prediction .So the predictive data mining is one of the most common type of data mining and are the most common direct business applications and Notified the best meeting point from their locations.Now first we examine that the shapes of safe region for our problem's context and propose feasible approximations for them. Design efficient algorithms for computing these safe regions. To study a variant the problem of the safe region is called the sum-optimal meeting point and that to extend our solutions to solve this type of variant. In this project we are using data mining why means more number of data have to stored in the database for the users purpose. Whole process are done by the server only. It's going to done by the app.In this project we are using two types of region they are circular based safe region and tile based safe region. In circular based Approximate the Maximal Safe Regions Of users by circles due to simplicity. For Circular Safe region we are using the algorithm called Divide and Conquer. Designing the circular safe regions which are efficient to compute. In the safe region the shape zone is defined by so-called guard objects its used to find effective safe zone. In guard objects once the upper bound value is constant then the upper bound value is constant we won't considered In the initial value the R is not efficient so we are finding with K On query processing the safe zone the query processing output will be the same inside the safe region may be 1. In the tile's, the tile can be easily represent the underestimated shape and thus serves as a clear approximation of maximal safe regions. Developing tile-based safe regions that focus on minimizing communication cost. R< ||p ,uj||sum - ||p0 ,ui||sum/2m safe region both tile and circular..

II. RELATED WORK

Feifeili , Bin Yao ; Kumar ,P.[1] In this the proposed algorithm Given a set of points P and a query set Q, a group enclosing query (Geq) which fetches the point p* ∈ P such that the maximum distance of p* to all points in the Q is minimized. This problem is equal to the Min-Max case (minimizing the maximum distance) ofthe nearest neighbor queries for the spatial databases.The solution implemented are this work is to first design the new exact solution by exploring in new geometrical are insights, such as minimum enclosing ball, the convex hull, and the furthest voronoi diagram of the query group. To further to reduce the query cost, especially when in the dimensionality increases, we are turn in to approximation algorithms. Ourmain aim for the approximation algorithm has a worst case √2-approximation ratio if one can find the exact and nearest neighbour for the point. In practice, its approximation ratio never exceeds 1.05 for a large number of data sets its up to six dimensions. We also discuss how to extend it to higher dimensions and so that it has a very good approximation quality (still close to 1) and low query cost. In fixed dimensions, √2-approximation algorithm is used to get a approximate solution for the Geographically problem. Both approximation algorithms have a query cost in any fixed node, where N and M are the sizes of the data set P and query group Q. External experiments are done on both synthetic and real data sets, up to 10 million points and 74 dimensions, confirm the efficiency and usability of the proposed algorithms,

ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com
International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 3, Special Issue 22, April 2016

especially their significant improvement over the state-of-the-art method.

Lubke. R .Schuster .D,Schill .A.[2] In this proposed system are the Location which are restrictions in Mobile Social Networks are to be often used to realize the notion of places as well as for proximity-based friend or interest matching.The solution implemented are we extend this by the ability to create and manage groups with location and time restrictions with their visibility and ability to be joined. Its main contribution is the design and reference implementation of the reusable Mobile Groups service as part of the Mobile platform, an XAMPP-based service environment for the developers of an mobile social software. Location-based group formation further more links the physical and the virtual world by creating incentives at a certain place within certain time and complements the two approaches mentioned above.

Yu Zheng [3] In this proposed system which are the paper is an abstract of a tutorial on location-based social networks (LBSNs) the concept, unique features and research. The slide deck of this tutorial can be found on.And the solution implemented are the design and implementation of DARPA. I proposed an active authentication program aiming to overcome the problem of the point-to-point entry technique by utilizing bio-metric techniques to continuously assess user identity. Behavior profiling technique, which utilizes historical application usage to verify mobile users in a continuous manner. It uses two types of application behavior (standard application, extended application). By using the combination of a rule-based classifier, a dynamic profiling technique is been used.I propose a novel profiling framework that enables a user's identity through their application usage in a continuous and transparent manner.

Muhammad AamirCheema, LjiljanaBrankovic, Xuemin Lin, Wenjie Z [4] In this proposed system are Given a positive value r, a circular range query returns the objects that lie within the distance r of the query a particular place or position. In this paper, we study the circular range queries that continuously change their locations. And the solution are present an efficient and effective technique to monitor such moving range queries by utilizing the concept of a safe zone. The safe zone of a query is the area with a property that while the query used inside it, the results of the query remain unchanged. Hence, the query does not need to be differently unless it leaves the safe zone. The shape of the safe zone is defined by the so-called guard objects. The evaluate of checking whether a query lies in the safe zone takes k distance computations, where k is the number of the guard objects. The contributions are as follows.
1) We propose a technique based on powerful pruning rules and a isolated access order which efficiently computes the safe zone and minimizes the I/O cost.
2) To show the effectiveness of the safe zone, we mean to evaluate the probability that a query leaves the safe zone within one time unit and the expected space of a query moves before it leaves the safe zone. The queries that have diameter of the safe zone is less than its expected value spread by a constant, we also give an upper bound on the expected number of guard objects. This upper hurdle turns out to be a constant, that is, it does not depend either on the radius r of the query or the density of the objects.Extensive experiments are done by using analysis. 3) Our thorough experimental study demonstrates that our proposed system gives an optimal solution.

Douglas M. Blough, Senior Member, IEEE, G. Resta, and P. Santi [5] The proposed system are classical problem of link scheduling in wireless networks under an accurate interference model, in which correct packet reception at a receiver node depends on the sigma-to-interference-plus-noise ratio (SINR). While most previous work on wireless networks has addressed the scheduling problem using simplistic graph-based or distance-based interference models, a few recent papers have investigated scheduling with SINR-based interference models. However, these papers have either used approximations to the SINR model or have ignored important aspects of the problem. And the solution are We study the problem of wireless link scheduling under the exact SINR model and present the first known true approximation algorithms for transmission scheduling under the exact model.We also introduce an algorithm with a proven approximation bound with respect to the length of the optimal schedule under primary interference. As an aside, our study identifies a class of "difficult to schedule" links, which hinder the derivation of tighter approximation bounds. Furthermore, we characterize conditions under which scheduling under SINR-based interference is within a constant factor from optimal under primary interference, which implies that secondary interference only degrades performance by a constant factor in these situations.

Sudhir Kumar, Mohit Kumar Singhy and Rajesh M. Hegde [6] proposed system which are Vehicular ad-hoc networks (VANET) is a creation of creation of a wireless network for data exchange and Mobile sensor Network (MSN) which vehicles in the road of a city of mobile sensor nodes. vehicles are communicate to the base-station positioned alongside of the road via 802.15.4 protocol. The Base-station can be both mobile or actual distribution of a node, depending on its mobility. To construct a smart city, VANET plays a important role for enhanced facility and safety of the commuters. Then the solution finding are In this paper, a distributed and range-free algorithm to track vehicles is discussed. Range-free provides a connectivity along with audible anchor locations are used in tracking the vehicles. Also, this method is cost cutting on GPS systems in the cars with a small public investment to install the anchors all over the city.This Experiment results of the proposed algorithm in a simulated smart city show improved performance when compared to the typical methods.

ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com
International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 3, Special Issue 22, April 2016

Kyriakos Mouratidis, Man Lung Yiu [7] proposed system to increasing availability of location-aware mobile devices has given rise to a mobile analytic of location-based services (LBS). Due to the nature of spatial queries, an LBS needs the user direction in order to process her requests. On the other hand, revealing exact user locations to a (potentially untrusted) LBS may exact point their identities and breach their privacy. To address this issue, spatial anonymity techniques unclear user locations, forwarding to the LBS a sufficiently large region instead. Existing methods explicitly target the Euclidean space, and do not apply when proximity to the users is defined according to network distance that is driving time through the roads of a city. The solution definition are A user's profile was dynamically updated on a daily basis are is more robust and more secure approach. Christo Ananth et al. [10] discussed about a system,the effective incentive scheme is proposed to stimulate the forwarding cooperation of nodes in VANETs. In a coalitional game model, every relevant node cooperates in forwarding messages as required by the routing protocol. This scheme is extended with constrained storage space. A lightweight approach is also proposed to stimulate the cooperation.

III. SYSTEM ARCHITECTURE

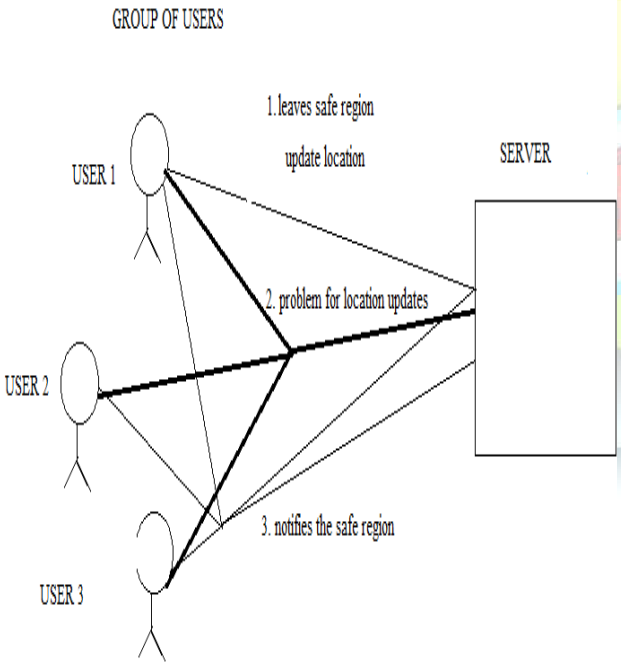

Fig1:System Architecture

A. REGISTER APP & PHONE NUMBER VALIDATION

Create an account in meeting point using android app in your mobile, a user have an one account and to verify the phone number for registration phase .server send an OTP for mobile number verification after enter the correct OTP user account is created. Once account is created user can able to add group and post event in group member.

B. USER CREATION & FINDING THE SAFE LOCATION

Creating a group using mobile contact number, once user creates a group he/she can post any event in group. Group admin/member post event they can receive the common point for meeting location, and then he/she choose the particular place for meeting in common point. After choosing the place Event shares the all group members. The group are receive the post and identify 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.

C. PATH FINDING AND SAFE REGION SETTING

To know the current location for the moving user with the help of Google map ,after receiving the event from group member admin to know the path for destination .our meeting point provide the source to destination path for road map its useful for user to reach the location shortly. ENMP to reduce the communication cost for client and server and provide the independent safe region for moving users. The group are receive the post and identify 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.

Algroithm1:Context aware finding

Require: start resource r1, destination resource r2, start time t; free time window
graph GW = (W,EW)
Ensure: shortest-time, conflict-free route plan from (r1, t) to r2.

1: if 9w [w 2 W | t 2 _entry(w) ^ r1 = resource(w)] then
2: mark(w, open)
3: entryTime(w) t
4: while open 6= ? do
5: w argminw02open f(w0)
6: mark(w, closed)
7: r resource(w)
8: if r = r2 then
9: return followBack Pointers(w)
10: texit g(w) = entry Time(w) + d(resource(w))
11: for all w0 2 {_(r, texit) \ closed} do
12: tentry max(texit, start(w0))
13: if tentry < entryTime(w0) then
14: back pointer(w0) w
15: entry Time(w0) t entry
16: mark(w0, open)
17: return null

Algorithm2:Path finding

This algorithm is used to find the exact path of the safe region.

ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com
International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 3, Special Issue 22, April 2016

```
1:procedure Dijkstra's(G) .
2:dist[s]   0
3:for all v 2 V − {s} do
4:dist[v]   1
5:end for
6:S   ø . S,
7:Q   V . Q,
8:while Q 6= ø do .
9:u   mindistance(Q, dist)
10:S   S [ {u} .
11:for all v 2 neighbors[u] do
12:   if dist[v] > dist[u] + w(u, v) then .
13:d(v)   d(u) + w(u, v) .
14:end if
15:end for .
16:end while
17:return dist
18:end procedure
```

IV. RESULTS AND DISCUSSIONS

In this project we have proposed efficient tracking on mobile networks to find optimize safe region. It specially done for reducing query cost dimension increase and cost decrease.And to introduce novel compression techniques for representing irregular safe regions in order to reduce their communication frequencies. And designed circular and tile based safe region which are efficient to compute. And discussed several optimizations to enhance the efficiency of the computation. Particularly this project we tried to reduce the time consuming process and high communication cost. For finding the location we are used Microsoft visual earth(bing maps).

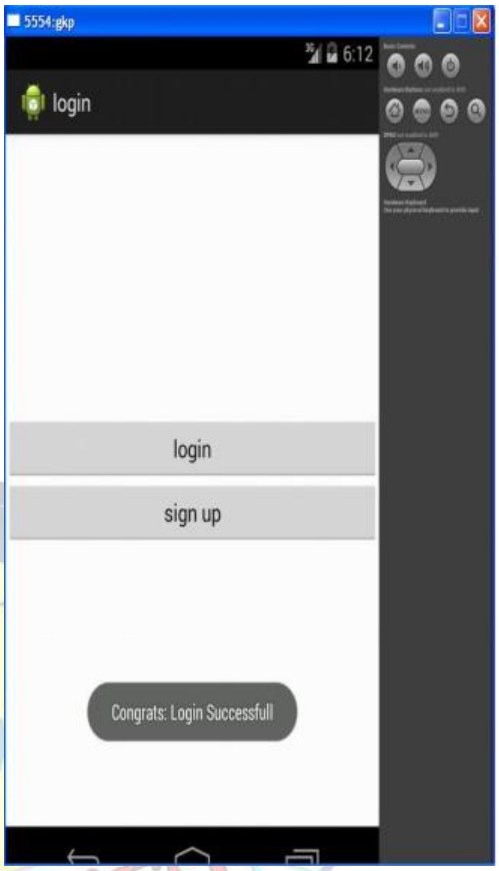

Fig2: authorized user login

In the authorized user login it means firstly the user have to install the application in the device.After installing the application the page start with login textbox then they have to register the app and then they go for the login page then they will get the new home page .Here they won't get any error . These application is very efficient for user once if they registered the application means they didn't to change the password.Once login successfully created means then ti will open the new page.

In the welcome activity, the user can see that separate In my android application, I want to design a Welcome Screen in the two point called source and destination which will be shown to the user and after the application is installed and opened. The application in which are question is in a database application and I would have to include some 3 - 4 screens to help the user create re-usable resources for use within the app and a few tips. They have to be show the Dialog Alerts with the welcome activity screen showing the message box .

ISSN 2394-3777 (Print)
ISSN 2394-3785 (Online)
Available online at www.ijartet.com
International Journal of Advanced Research Trends in Engineering and Technology (IJARTET)
Vol. 3, Special Issue 22, April 2016

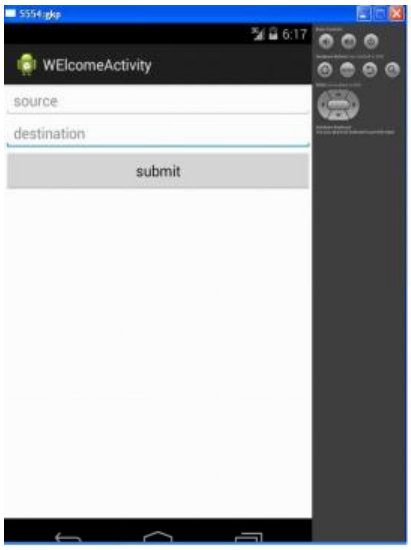

Fig3: user giving their locations

Fig4: wait for server message

This is the final page for the user once the user give the source and destination after submitting then the user get the notification from the server to user have to wait for the server message.It because the the server have to create the background database for the user's information after that only the server have to get the information from the google maps.Then the server reply the message to the user about the safe region continuously and the server tried to extend the meeting point or safe region.

V. CONCLUSION

Our techniques to the road network space. For Circle replace a circular region by a range search region over road segments. Develop a cost model for estimating the update frequency, the communication cost, and the running time of our methods. Focused on minimizing the communication cost for monitoring the optimal meeting point for a group of users. Secure application is created for this concept and this application is easily asses by the user. For this we are created the separate server to done the process. For the Data is getting from google map itself. Once login by user then server sends a safe region to the user.Trying to extend the user safe region in both circular and tile. Once the user login the app then the network or internet not disconnect from the mobile . This the main advantage for the user to using this app. Group of user also can use this application.

References

[1] Feifeili , Bin Yao ; Kumar ,P."Group Enclosing Query"ieee:2013

[2] Lubke. R .Schuster .D . ; Schill . A.." Mobile groups: location-based group formation in mobile social networks"ieee 2013

[3] Yu Zheng." Tutorial on location-based social networks"ieee 2013

[4] Muhammad AamirCheema, LjiljanaBrankovic_, Xuemin Lin, Wenjie Z "Multi-guarded safe zone: An effective technique to monitor moving circular range queries" ieee 2013

[5] Douglas M. Blough, *Senior Member, IEEE*, G. Resta, and P. Santi "Approximation algorithms for wireless link scheduling with SINR- based inteference" ieee transactions: 2013.

[6] J. Li, M. L. Yiu, and N. Mamoulis, "Efficient notification of meeting points for moving groups via independent safe regions," in Proc. IEEE Int. Conf. Data Eng., 2013, pp. 422–433

[7] E. Sarig€ol, O. Riva, P. Stuedi, and G. Alonso, "Enabling social networking in ad hoc networks of mobile phones," Proc. VLDB Endowment, vol. 2, no. 2, pp. 1634–1637, 2009.

[8] N. Gupta, A. J. Demers, and J. Gehrke, "Semmo: A scalable engine for massively multiplayer online games," in Proc. ACM SIGMOD Int. Conf. Management Data, 2008, pp. 1235–1238.

[9] C. Lampe, N. B. Ellison, and C. Steinfield, "A face(book) in the crowd: Social searching versus social browsing," inProc.20th Anniv. onf.Comput. Supported Cooperative Work, 2006,pp. 167–170.

[10] Christo Ananth, M.Muthamil Jothi, A.Nancy, V.Manjula, R.Muthu Veni, S.Kavya, "Efficient message forwarding in MANETs", International Journal of Advanced Research in Management, Architecture, Technology and Engineering

(IJARMATE), Volume 1,Issue 1, August 2015,pp:6-9

[11] K. Mouratidis, D. Papadias, S. Bakiras, and Y. Tao, "A threshold based algorithm for continuous monitoring of k nearest neighbors," IEEE Trans. K nowl. Data Eng., vol. 17, no. 11, pp. 1451–1464, Nov. 2005.

[12] Y. Tao, D. Papadias, and Q. Shen, "Continuous nearest neighbour search," in Proc. 28th Int. Conf. Very Large Data Bases, 2002,pp. 287-298.