Context-aware Transaction Management for Mobile Cyberspace System

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Abstract— Development in pervasive and mobile cyberspace which provide a structure for service in different domain such as engineering, education and entertainment at Anywhere/anytime as Growth in wireless network, advance in software system. To continuously access information and conduct online transaction. These services provide users to freely move between geographical areas. For example, failure of transactions when users move from one area (cell) to another because of the unavailability of sufficient bandwidth. A transaction model dynamically adapts that to the user's needs and execution environments. Reliable execution of context-aware transactions during mobility and seamless connectivity is secured by existing mobility management scheme of users. The planned system Location-based advertising (LBA) is new forms of marketing that integrate mobile Advertising with location-based services. The technology is used to identify Client location and provide location-specific advertisements on their mobile devices.

Keywords: Transaction management (TM), Mobility management, Location based advertising (LBA), Mobile Cyberspace, context-aware.

I. INTRODUCTION

The recent progress in mobile technologies, such as wireless connections networks ,hand held equipments & facility standards allows peoples to access info & gather facilities in an exceeding ever present manner.fr ex- Google mobile providers users with access to range of forces from their mobile phones, starting from the basic internet pages through product price to driving direction. Widely knowledge & facilities presently available to users are through read-only questions line new bulletin, weather data, & product price. Consider, for a while, a scene of insurance faculty which may be implemented accessible to users (drivers & insurance staff) through mobile devices.

The drivers will use their mobile phones to form claims & request for the recovery facility in case of associate or automobile breakdown. Company need to complete multiple of different processes like searching info regarding the automobile & its driver, police, reports, accidents info,& site of accident or breakdown to method such things. To supply the value insurance claims, in some case the employees need to physically visit the location & examine the break automobile. As it has potential to easily manage the info & facilities in terms of read0only as well as update capacities the transaction management plays an important role in mobile cyberspace. The operation & execution in sequence is represented by the TM. Through TM we can ensure that about the information held in an enterprise's databases is maintained to provide a truthful and consistent record of the state of the enterprises, that transactions are correctly executed. "Any information that can be used to describe the situation of people, resources, and services in a service-oriented environment" is defined as context. Relevant information that can be considered communication between user & service. The context information can be either obtained from the web service description language or obtained by using external services. In context aware transaction some important & challenging problems. In such circumstances a system must provide concurrent movement to user between different geographical places while all together executing context aware transaction& accessing faculties without any interpretation of connections.LBS –location based services which manage the location of phone device user this service any so several technologies for the king where the network user is geographically located.

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II. RELETED WORK

A transaction system for ever presented execution which is based on concept of neighbour constantly. Higher throughput in terms of successful completion of transaction this system guarantees data consistency using active & epidemic voting protocol. In pervasive computing the first model interesting model was created for TM. It neither context the address the issue of mobility management [9].The system that was proposed for time-out based commit protocol, two-phase commit protocol (2PC) for mobile transaction, the 2PC fallows basic ACID property and improve performance and throughput of mobile transaction [2].Mobile & ever presented services for In an adaptive context-aware transaction model. This work develops a performance management system. However this work does not consider the "context" unlike our approach as forts class right property of transaction. Using the combination of conservative & aggressive concurrence control protocols of an intelligent transaction scheduler. The scheduler is claimed to be context aware in the since that it automatically identifies changes in the calculation scene & takes to the concern continuous protocol. This approach has been given a limitation to the classical centimes & commits protocol & does not consider the context info such as location & time [6]. distributed paradigm by which people can get online access while travelling from one place to another, by sharing computing, communication and information service at anytime anywhere a high commit mobile transaction is used to improve to commitment rate of mobile transactions, the mobile and ubiquitous computing [6].in fulfilling the vision of mobile cyberspace as it has potential to reliably manage information during transaction the transaction management technology plays an important role. . Ensuring consistency and presentation play very important role in such business. Handover process management changes its access point to the wireless network & maintain network connection. In general, a handover process includes three phases [5]. In the first phase, the handover process initiates whenever a user moves or the network condition changes. In the second phase, the wireless network system identifies new channels in order to process the handover of requests. In the third and final phase, the data are delivered from the previous location to the new location. An enhanced scheme for the mobility Management and handover processes. The novelty of the proposed scheme lies in the combination of different queuing systems. An efficient scheme for the mobility management of context-aware transactions. The contributions of the proposed scheme are the following:

1. Between different geographical areas while processing context aware transactions; provide a seamless movement of users
2) By reducing the drop rate of transaction requests during the handover process; maximize the throughput of context-aware transactions
3) To decrease the jamming probability of context - aware transactions during the association of users from one area to another; and
4) Process by minimizing the processing overhead improves the efficiency of the mobility management.

During the whole session of a transaction it is very crucial that mobile service providers provide users with continuous connections transactions are required to be handed over faultlessly from one cell to another without loss of information and service disruption. This is managed by a network-based handover control instrument that redirects the transactions at an appropriate moment to the new mobile node. After the victorious entrust process, the user communicates through the BS in the new cell. However, in order to design a mobility management for transactions some crucial desires must be taken into account. For instance, if no channels are available during the handover process a transaction can be blocked. Blocking of an ongoing transaction can have negative effect on the performance of a system. A regular handover request can cause network overhead, but if the request is delayed for too long, then transactions may forcefully be terminated. Thus, an efficient handover scheme is required in order to reduce the overcrowding of communication but at a minimum network overhead. A new scheme for the mobility management of context aware transactions which is based on a combination of different queuing models. Such scheme provides an efficient and reliable execution environment where users can freely move from one cell to another while processing context-aware transactions [1].

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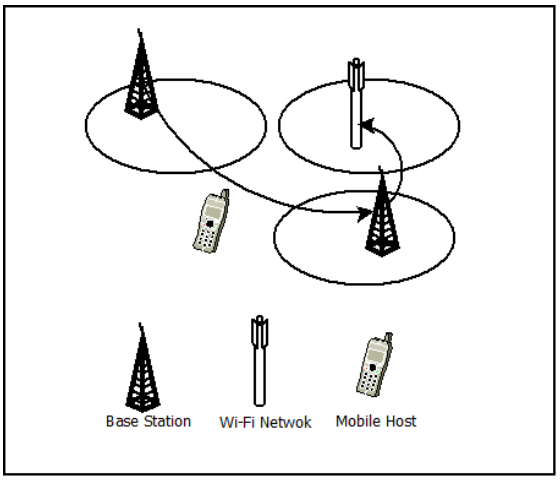
III. PROPOSED SYSTEM

Where the user is moving in geographical area our system is based on context-aware transaction management. The user location will vary time to time if he is drifting, the user will have Smartphone that will used for our position based facility in which we are going to develop a system that will cause multiple commercial based on the different position. The system will have location based advertisement that will generated when user is moving from one region to another, these advertisement will be suppose, a user will get advertisement of a shopping of product from a shopping mall within that section, and if he want to perform a operation based on those commercial, in that case he is travelling in the region and suppose he left the section that he was suppose joined with Wi-Fi network and he travel along and the Wi-Fi network is loss then he will loss the important transaction that might be suppose to loss in money operation.

So by using our system he will able to switch from Wi-Fi to group phone network (GPRS/UMTS) i.e. data relation that will help to complete the operation and user will complete his transaction without any loss.



A) System architecture.

The above is system for our proposed work, where we shown two different regions and network like Wi-Fi and Cell tower (base station) .Mobile user is moving from one region or area to another where it will change his network from Wi-Fi to Cellular service (GPRS/UMTS).

Algorithm (context-gather phase)

CAt={cst1,cst2,…,cstn}
Context [n];
Count =0;
n:number of csi and csti
FS: log necessary information about CAt
FS: collects context information from csi
For i=1,2,…n
FS: sends context-req_i to cs_i
CS_i: process context-req_i
{
get ($context_i$)
If $context_i$=success
Send context-req_i (success) to FS
Else if $context_i$!= success
Send context-req_i (error) to FS
}
End For
FS: receives context-req_i from cs_i
For i=1,2,….n
If context-req_i = success
Context[i]=success;
Count =count+1;
Else if context-req_i != error
Context[i]=error;
Cancel CAt
Terminate CAt
End For

The components of this algorithm are,
Fixed station (FS), component service transaction (cst_i), context aware transaction (CAt), component station(CS).

IV. CONCLUSION

The following are the conclusion that we observed after the system completion,

1. The system is more useful in daily life for doing successful transaction in different network.

2. We find the solution for completion of transaction in geographical area with our system.

3. And the newly designed system will be better effective.

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REFERANCES

[1] Younas, M., & Awan, I. (2013). Mobility management scheme for context-aware transactions in pervasive and mobile cyberspace. Industrial Electronics, IEEE Transactions.

[2] V. Kumar, N. Prabhu, M. Dunham, and Y. A. Seydim, "TCOT—A timeout-based mobile transaction commitment protocol," IEEE Trans.Comput., vol. 5, no. 10, pp. 1212–1218, 2002.

[3] M. Lee and S. Helal, "HiCoMo: High commit mobile transactions," Distrib. Parallel Databases, vol. 11, no. 1, pp. 73–92, Jan. 2002.

[4] F. Tang, M. Guo, M. Li, and I. You, "An adaptive context-aware transaction model for mobile and ubiquitous computing," Comput. Inf., vol. 27,no. 5, pp. 785–798, 2008.

[5] I. Akyildiz, J. Ho, and W. Wang, "Mobility management in nextgeneration wireless systems," Proc. IEEE, vol. 87, no. 8, pp. 1347–1384,Aug. 1999.

[6] M. Holanda, A. Brayner, and S. Fialho, "Introducing self-adaptability into transaction processing," in Proc. ACM SAC, Fortaleza, Ceará, Brazil, Mar. 16–20, 2008.

[7] G. Zhao, K. Xuan, W. Rahayu, W. D. Taniar, M. Safar, M. Gavrilova, and B. Srinivasan, "Voronoi-based continuous κ nearest neighbor search in mobile navigation," IEEE Trans. Ind. Electron., vol. 58, no. 6, pp. 2247– 2257, Jun. 2011.

[8] W. Lee, C. Leung, and J. Lee, "Mobile Web navigation in digital ecosystems using rooted directed trees," IEEE Trans. Ind. Electron., vol. 58,no. 6, pp. 2154–2162, Jun. 2011.

[9] Perich, Filip, et al. "Neighborhood-consistent transaction management for pervasive computing environments."Database and Expert Systems Applications. Springer Berlin Heidelberg, 2003.

[10] H. Dong and F. Hussain, "Focused crawling for automatic service discovery, annotation and classification in industrial digital ecosystems," IEEE Trans. Ind. Electron., vol. 58, no. 6, pp. 2106–2116, Jun. 2011.

[11] A. Waluyo, W. Rahayu, D. Taniar, and B. Srinivasan,"A novel structure and access mechanism for mobile broadcast data in digital ecosystems," IEEE Trans. Ind. Electron., vol. 58, no. 6, pp. 2173–2182, Jun. 2011.

[12] R. Fantacci, "Performance evaluation of prioritized handoff schemes in mobile cellular networks," IEEE Trans. Veh. Technol., vol. 49, no. 2, pp. 485–493, Mar. 2000.

[13] A. E. Xhafa and O. K. Tonguz, "Dynamic priority queueing of handover calls in wireless networks: An analytical framework," IEEE J. Sel. Areas Commun., vol. 22, no. 5, pp. 904– 916, Jun. 2004.

[14] W.W. K. Lin, J. H. K.Wong, and A. K. Y.Wong, "A novel real-time traffic sensing (RTS) model to improve the performance of Web-based industrial ecosystems," IEEE Trans. Ind. Electron., vol. 58, no. 6, pp. 2147–2153,Jun. 2011.

[15] A.V.Patil, V.V.Kimbahune, " Survey on Context-Aware Transaction Management for Mobile Cyberspace" IJSR,Volume 4 Issue 6, June 2015

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