Adverto: A Location Based Advertising System

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Abstract: Advertisements are utilized to draw in clients and for giving rebates. A significant number of them utilize instant messages, publications for this reason. Promotion on cell phones is requirement for the present situation. In this paper, merchants are permitted to alter commercial as well as to distribute the promotion to clients as indicated by the enthusiasm of client. This is a powerful system as computerized ad in huge business shopping centers should be possible with ease. For achieving wide scope of target Wi-Fi is utilized as merchants distribute ad on client's cell phones as indicated by their advantage. For discovering area of merchants and getting more data in regards to bargains with no additional endeavors QR codes are utilized which gets to be distinctly simpler for sellers to draw in clients by computerized promotion. It additionally turns into the efficient action for clients by getting every one of the arrangements and areas of merchants with no additional cost by filtering QR codes on their cell phones. For distributing promotion to the clients this framework is helpful for merchants which brings about ease. What's more, for clients the utilization of android application was productive for them to shop effortlessly and discover area of merchants by following them. Subsequent to visting and meeting merchants and clients they have positive reaction for receiving the versatile promotion application and the notice show time is additionally low as gadgets associated with the get to point which has minimal effort when contrasted with the present notice framework.

1. Introduction

In nowadays, time is vital thing; to use it legitimately we need to plan our everyday exercises. Typically merchants spend around 5% of their economy in promotion by method for notices, media, magazines and so forth. Clients likewise invest more energy in looking the merchandise they need to purchase in the shopping center because of absence of item learning To cook these kind of issues taking after approach is utilized To permit client to alter and distribute ad on clients cell phone To give new offers and arrangements to client and to give the area of seller of which he wishes to visit .For distributing notice to the clients three types of promotion are utilized i.e. content, pictures and URL. Joining for Global Positioning System (GPS),Wi-Fi. Contingent upon the momentum area of client it will look for the goal. This seeking of area should be possible by examining QR codes. Ordinarily portable promotions are for the clients with remote gadgets like android telephone. It likewise gives the subtle elements of the merchants offer by distributing commercial on their cell phones to the client. In Location promotion frameworks, android application has been actualized, to see pictures URL, message in the application which is stage autonomous and simple to use for every one of the clients which gives them commercials of the considerable number of merchants they visit.

2. Related Works

A Sistla, O. Wolfson, and B. Xu, “Opportunistic data dissemination in mobile peer-to-peer networks,”[1].to begin with, we gadget a numerical model for scattering of data about simply worldly assets and test break down the dispersal of data about absolutely fleeting resources. Concepts like tattling and nullification are connected to a mobile distributed system. The limitation of paper is it leads to packet loss, it has communication module sleeping for power reservation, it has limited connection time between highly mobile objects.

Matthew Sharifi, Terry Payne and Esther David. “Public display advertising based on blue-tooth device presence”[2], describes that framework is fit for enhanced commercial choice for open displays. Interact with nature in non-nosy way essentially supporting introduction of their proprietors to new adverts. It demonstrates that blue-tooth is suitable method for deciding the current audience. The confinement is choice instrument is not that much efficient. User profiles are not adapted so it diminishes importance of substance displayed. It likewise neglected to took in the movement example of clients.

Juan-Carlos Cano, Carlos T. Calafate and Pietro Manzoni. “Building a research prototype to provide pervasive services in hospitals”[3], this paper gives setting mindful data and area based services. System recovers information from patients in crisis and
recuperation wards data to clinicians. It concentrate on vitality consumption, throughput and request delay. It demonstrated that blue-tooth offers a generally enduring throughput up to 10m. The impediment is it might undermine security as the omnipresent framework assembles a lot of touchy individual information so they confront such a variety of legal, technical, ethical challenges. If PC framework gets to be distinctly unavoidable in all part of life it powers individuals to draw in without assent.

S. Debroy, S. De, S. Das, A. Chakraborty, P. K. Das and S. Paul, “MyPULSE: Mobile Yellow Pages with User Interest and Location Sensing Ensemble”[4], this paper make productivity and upgraded control over the graphical client interface. Its application utilizes ongoing situating methods. The commercial database contains data about various business categories. The impediment of the paper is needed effortlessness or adaptability as far as normal area. MYPULSE frameworks just bolster pull based advertising. Privacy and security issues emerge in the event of outlining the framework.

M. Irfan, et.al “Management of Location Based Advertisement Services using Spatial Triggers in Cellular Networks”[5], in this paper LBS are named to be minimal effort and coefficient information service. It is valuable for the purchasers and also the network. This sort of use is pertinent to all kind of user. They are the great wellspring of producing income for the administration providers. The alteration required is to present following and nearness teller services. For the membership procedure the notice ought to be more down to earth.

Hamed Haddadi, “MobiAd: Private and Scalable Mobile Advertising”[6], the framework for personalized, localized and private yet versatile portable advertisement. Ads are locally communicate clients inside versatile calls, preserving the security and namelessness of the user. Provides open door for utilizing the limitless measure of data on clients advanced cell for focused promoting while ensuring privacy. In this paper such a variety of question emerges about the client privacy, scalability, user incentives, user profiling and data security.

3. Working

The use of GPS has some restrictions when it comes to small spaces like commercial shopping spaces. Using Wi-Fi instead of GPS considerably reduces the generality of space and increases the preciseness. Using QR codes gives an added bonus to this process as it relieves the Wi-Fi router and mobile devices of about 50% of the locating task. The idea of data dissemination [1] suggests that we can identify the distance of the device from the router by calculating the data transfer rate.

Consider the case of 4 Wi-Fi routers and a single device as shown in the figure. The device can move in both x and y directions. If at the beginning the device is closer to router 1, then the server can identify the mobile device using its mac address and conclude that this particular device is in the zone of router 1. Similarly, when the device moves towards router 2, it will latch on to router 2 as soon as it reaches its range.

Now we consider the same concept in commercial space where routers are usually fitted in a linear manner. The system employs a QR code placed at the beginning of every floor or corridor according to the architectural design of the space. The mobile devices are preinstalled with the android application that executes the system. The application will have a QR scanner embedded with it in order to scan the codes. On entering the Wi-Fi zone inside the commercial space, the device automatically latched with the central server. The next step involves the scanning of QR codes. Once scanned, the device will be informed of its precise position in the area.

After the initial scanning, the device holder is free to move through the Wi-Fi range. The server will automatically identify the hand-off process of the device from one router to another. It will then redirect the most relevant advertisements to the user as he/she moves around. Information like discounts, flash sales, etc. can be immediately brought to the notice of the customers.

4. Experimental Result

We tried running the program in a comparatively smaller scenario. We found out that in order to precisely calculate the distance of the device from a particular router, a more advanced algorithm and some hardware tweaks were required. But the system altogether delivers well enough to be used in a mass basis. The mobile devices must be compatible with the Wi-Fi frequencies in order to successfully use system. The most tedious job is to distinguish each router from one another. Each router must have
individual names or IDs that make them identifiable to the server system.

5. Future Scope

The paper is primarily an advertising system. But it has a vast set of utilities that can be incorporated to it. A much more advanced algorithm and optimized hardware will add precision to the system. The system can be upgraded into a mall communication system. This will considerably reduce the communication costs of the sellers and officials. Using a preinstalled Wi-Fi system has both monitorial as well as technical advantages compared to traditional telephony systems.

6. Conclusion

We proposed a location based advertising system for commercial spaces like malls, shopping centers, etc. that have preinstalled Wi-Fi systems installed. This system provides a cost effective and efficient method to advertise in large shopping spaces. The collaboration of QR codes as well as Wi-Fi routers ensures preciseness as well as the surety that the ads will reach the correct audiences at the correct time.

7. References


[7] Pornpen Ratsameethammawong and M.L.Kulthon Kasemsan, “Mobile Phone Location Tracking by the Combination of GPS, WiFi and Cell Location Technology”