Journal of Applied Science and Engineering Methodologies,Volume.1,No.1, 2015, Page.124-130

SMS BASED MULTI RECHARGING USING LONG CODE

P.Jeevitha[1], G.Kalpana[2]
PG- Scholar[1],Assistant Professor[2],
SNS College of Technology, Coimbatore, India

ABSTRACT

Multi recharging using virtual number(long code) is a dynamic approach for online recharge system. Multi recharging app is to overcome the limitations with possible outcomes and to minimize the waiting time and to make it comfortable for both the mobile users and mobile recharge service providers. Using this application we can recharge our prepaid mobile, post-paid bills, DTH bills, Data card recharge etc. Such an application would be available to mobile user on a single touch, and the user can recharge their mobile simply by sending recharge SMS to the recharge providers number, so that mobile user need not login into respective provider's site every time. This project uses GPRS (high-speed packet data technology allows for the sending and receiving of data at much higher speed than available today), Long code (10 digit virtual number which is a reception mechanism used by business people to receive text messages). This application is mainly to provide long term relationship with the customer.
Index Terms: Mobile, Service provider, Multi recharge.

INTRODUCTION

In the history of mobile communication technology, Wireless network is the fastest growing one. For cell phone users, there are two types of services such as prepaid and post-paid offered by the mobile phone operators. Prepaid service is commonly used among the people. In case of prepaid service, cell phone users have to maintain a certain balance of money to use some facility. Here comes the idea of mobile phone recharge. People often find it difficult to recharge because of lack of recharge centres, the user need to travel for a long distances to buy a recharge card etc.

Nowadays, with the development of web services people gets varieties of services sitting home. Mobile recharge is one of the most frequent demands for most of the people, hence this service also helps the service provider for gaining some profit. In the existing system, people should send a request to the recharge service provider using webpage by providing the details such as country code, mobile number and payment using credit card. But recharge service providers should recharge the mobile phones by physically and they have to wait for certain time, which is occasionally not acceptable. So here we are creating an app called multi recharging in which the user can recharge to their mobile by sending SMS. Our aim is to overcome the limitations with possible outcomes and to reduce the waiting time and make it comfortable for both the customer and mobile recharge service providers.

Impact of mobile phones on welfare

Mobile telephony has had an impact mainly by allowing for agents in information restricted areas to occupy in finest arbitrage. The acceptance of mobile phones by traders resulted in a dramatic reduction in price distribution, the complete removal of waste, and a near-perfect loyalty to the law of one price. Both customer and manufacturer welfare were got increased. Mobile payments can have a positive impact on welfare by easing operational aspects and related charges of cash-based transactions related to cash management, loading and transfer, and by providing a strong platform for financial inclusion.

Mobile Recharge Payments

The post-paid mobile phone is a mobile phone for which service is provided by prearrangement with a mobile network operator. The user's usage will be billed according to the use of mobile phone services at the end of every month. Typically, the mobile phone customer's agreement requires certain limit or "payment" of minutes, text messages etc., and the mobile phone customer will be billed at a flat rate for any usage equal to or it will be minimum than that payment. Any usage above that limit acquires more charges. Ideally, the user in this state has no boundary on the use of mobile services and, as significance, limitless credit. This service is improved for people with a protected income.

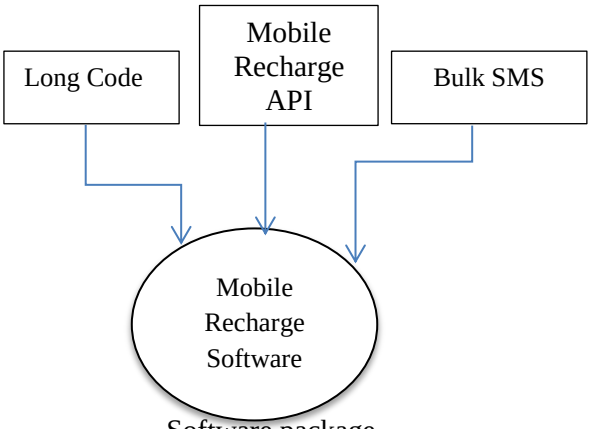
Post-paid service mobile phone typically requires two essential components in order to make the 'post-usage' model viable:

1. Credit history/Contractual commitment: This is the basis on which the service provider is able to trust the customer with paying their bill when its due and to have legal recourse in case of non-payment
2. Service tenure: Most post-paid providers require customers to sign long term (1-3 year) contracts committing to use of the service. Let-down to complete the time would make the customer likely for early termination fees.

The bill itself is an important component of the services which acts as an ambassador of the service provider and at times as suggestion of the service itself. The bill needs to be clear; understandable as well as artistically attractive for the subscriber to be involved enough to see details further than the bill amount. A prepaid mobile phone (also commonly referred to as pay as the customer go, pay as the customer talk, pay and go, prepaid wireless) is a mobile phone for which recognition is purchased in early payment of package use. The acquired recognition is used to pay for mobile phone services at the point the package is accessed or paid. If there is no accessible credit then contact to the requested package will be denied by the mobile phone network. Mobile phone customers are able to recharge their praise at any time by using any type of payment instruments.

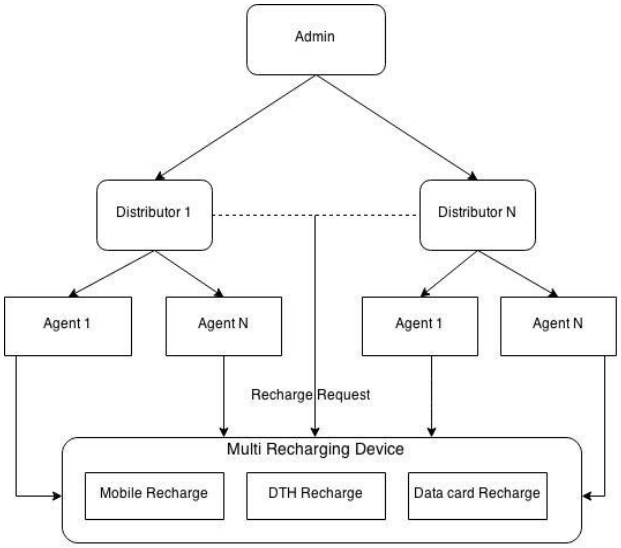
Long Code

A long code (for example, +44 8924 6755 in global representation or 875-772-5643 in U.S. representation), also called as a virtual mobile number, devoted phone number or long number, is a reception tool is used by businesses to receive SMS messages and voice calls. Just as like short codes, long number is 10 digits mobile numbers, where as you can get SMS from overall world while for Short Codes you get SMS only from India. Long Code is relatively cheaper than short codes. Major SMS Promoting is provided through which the customers can access the Long Code numbers. Here providing 10 digit mobile number as long code number in India.



Software package

The other billing technique (and what is commonly referred to as a cell phone contract) is the post-paid mobile phone, where a user enters into a long-term (generally lasting 12, 18 or 24 months) or short term (also commonly referred to as a rolling contract or a 30-day contract), billing arrangement with a mobile network operator or carriage service provider (CSP).Pay as the customer go, and alike terms are also used for other non-telephone facilities paid for in the same way.



EXISTING SYSTEMS

In the existing systems, Over the past several years if anyone wants to pay the mobile bills were need to go all the way till provider's store or by connecting to the net and accessing the official site to pay the bills and it is still somehow manual processing.

PROPOSED SYSTEM

This System is to overcome those problems and make it comfortable and quicker for user satisfaction an automated system is implemented to recharge mobile in online. A recharge center shopkeeper as well as a normal customer can upload customer mobile number, recharge amount in web page by giving the valid own username and password. Database server then stores the uploaded information and the customer will be notified about successful recharge completion through SMS. If not so, the mobile user can directly SMS send recharge request to the agent or distributor.

An online acknowledgement containing the transaction number of the successful recharge will also send to the requestor. If the user does not use android mobile the user can send recharge invitation through a simple SMS, the server will receive the message and the recharge will be done based on the request. By this scheme the service provider will be able to recharge from basic cell phone and also they may able to send recharge request to any network.

MODULE:

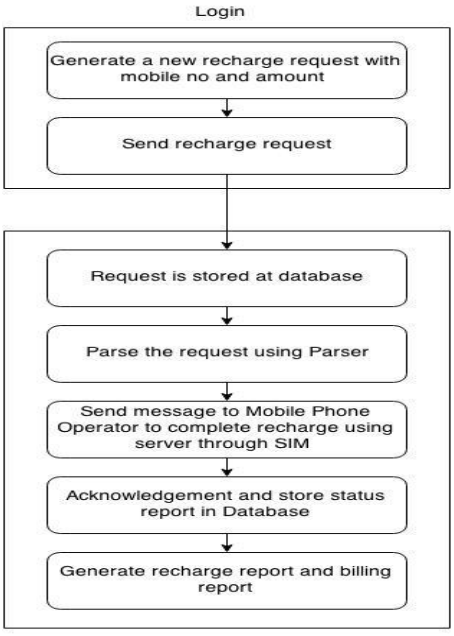
Admin Module:

Here admin maintains the overall functions. The admin can add n number of distributors for recharging to the mobile users also the admin can delete the distributors in case of any problem. The admin splits the money and gives it to the distributors for recharging purpose.

Distributors module:

The registered distributors can split the work and gives the work to agents. The registered distributors with the system can send recharge requests to the service provider through a simple SMS. Remote distributors do not need to maintain E-recharge SIMs or GPRS receivers. Recharge is carried out automatically by the system after receiving the requests and responses are sent back through SMS.

Registration of Agents: The Remote Agents registered with the system can send recharge requests to Customer Agent through a simple SMS. Remote agents do not need to maintain separate E-recharge SIMs or GPRS receivers. Recharge will be done automatically by the multi recharging system after receiving the requests the responses will be sent back through SMS.



Methodology of Proposed system

There are several advantages when compare to the existing system such as,

- Less cost when compare to the existing system.
- Recharge can be done easily.

- It is possible to recharge by SMS, so there is no need for internet connectivity here.
- Single SIM is enough to maintain for all type of network.
- Any type of mobiles can be used for recharging through SMS.
- It covers overall Recharging functions of Mobile (airtel/aircel/bsnl,…), DTH, Data Card,
- Single E-wallet.

Usage

Usage of prepaid cell phone service is common in most parts of the world. Around 70% of customers in Western Europe and China use prepaid phones with the figure rising to over 90% for customers in India and Africa. 23% of cell phone users in the United States were using prepaid service as of 2011, a share that's expected to rise to 29% by 2016. Prepaid SIM cards are also becoming a variation of the traditional prepaid cell phone plans. Instead of purchasing a new mobile phone, the existing phones can be used by simply exchanging the SIM card within the device.

Literature Review

The objective behind making this application was to bring the functionalities of a network service provider onto a handy mobile phone device. So while measuring as to on which platform or rather operating system the project has to be executed ,we selected android for the following reasons:

- Android is an open source platform
- Supports multifunction
- Affords rich tools to create an interactive application
- The software's required for creating the application are completely free

Market share of android which was mere 2.8% in 2009(initial stage), boosted to 48% till August, 2011 which is almost half the share of the total market. Our main aim is to make the application reach as many people as possible and this goal is achieved by implementing the application on android. Share of worldwide 2011 Q2 mobile smart phone deals to end users by O.S.

Hardware and Software Requirements for SMS based recharging:

- Basic mobile
- A server for controlling the request response

Hardware and Software Requirements for Online based recharging:

- A computer with JDK version
- Eclipse IDE or .Net Framework 4.5
- Android SDK
- The mobile phone communication with the server needs only minimum amount of net connection.

Use Case Diagram

CONCLUSION

The customer is the key importance because only relationships with customers provide profit for a company. Forming a good and long-term relationship with customers can take the form of the provision of benefits such as special prices and preferential treatment. By this application the needs of the customer will be satisfied and the main aim are to provide the customers services in an efficient and user-friendly manner. A one touch mechanism makes it easy for the customer to be aware for the services provided and also provides better way to full fill all the customer requirements like bill payment, recharge etc. The customers can pay their bills through this application anywhere and anytime. Also they can recharge their account also by sending simple SMS with amount they wish without having to worry to get to the nearest possible recharge store.

FUTURE WORK

The future work will include the examining of combined charging models and the resultant effect on the income of the Mobile network providers. Mobile recharge system is to built an automated system recharge a mobile either by online or by sending SMS. A recharge centre shopkeeper as well as a normal customer (mobile user) can upload customer mobile number, recharge amount in web page by using his own valid username and password. Database server stored the uploaded information; the customer will be notified about successful recharge completion through SMS. An online acknowledgement containing the transaction number of the successful recharge will also send to the requestor. The cost impact on different types of subscribers using the mobile networks will also be inspected. Recharging schemes decrease the overhead of the recharging and billing systems organization, as they tend to provide modest recharging schemes. This system gives the service providers more profit. A Responsive app is built for Mobile users for easy and simple recharge and to enable the banking transaction in a secure manner.

REFERENCE

[1] M. Satyanarayan, "Fundamental Challenges in Mobile Cloud Computing," Proceedings ACM Symposium Principles of distributed Computing, ACM Press, 1996.

[2] N. Tolia, M. Kaminsky, D. G. Andersen and S. Patil. An Architecture for Internet Data Transfer. In NSDI, 2006.

[3] A. Weiss. Computing in the Clouds. Net Worker, 11(4):16- 25,Dec 2007.

[4] A. Zahariev, " Goog le App engine," Helsinki University of Technology, 2009.

[5] Wikipedia, "Mobile phone – Wikipedia , the free encyclopedia, http://en.wikipedia.org/wiki/Mobile_phones.

[6] Gonzalo Huerta-Canepa, Dongman Lee , "A Virtual Cloud Computing Provider for Mobile Devices", ACM Workshop on Mobile Cloud Computing & Services: Social Networks and Beyond. MCS'10, 2010.

[7] J. Kangasharju, J. Ott, and O. Karkulahti, "Floating Content: Information Availability in Urban Environments," Proceedings of the 8th Annual IEEE International Conference on Pervasive Computing and Communications (PerCom) (WiP), Mannheim, Germany: 2010.

[8] A. Berl, H. Meer, H. Hlavacs, and T. Treutner, "Virtualization in energy-efficient future home environments," IEEE Communications Magazine, vol. 47, 2009, pp. 62-67. December 2009.

[9] Niroshinie Fernando, Seng W. Loke, Wenny Rahayu, "Dynamic Mobile Cloud Computing: Ad Hoc and Opportunistic Job Sharing", Fourth IEEE International Conference on Utility and Cloud Computing, Victoria, NSW: December 2011.

[10] M. Satyanarayanan. "Fundamental challenges in mobile computing." In Proceedings of the fifteenth annual ACM symposium on Principles of distributed computing, PODC '96, pages 1–7, New York, NY, USA, 1996.