

A Web Based Billing and Payment Release System

Alka D. Aswar¹, Diksha M. Chhipane¹, Dipali C. Sontakke¹, Pallavi P. Onkar¹, Snehal S. Helonde¹, Dr. S. V. Sonekar²

¹BE, Department of Information Technology, J.D. College of Engineering & Management, Nagpur,
Maharashtra, India

²Associate Professor, Department of Information Technology, J.D. College of Engineering & Management,
Nagpur, Maharashtra, India

ABSTRACT

The Web based Billing and payment release system is used to overcome the entire problem, which the government faces during the accounting of the bills generated by training partners and releasing the payments. Our approach makes the system completely automated billing and invoicing system. We need such system because, currently organizations have been compelled to change the manner in which they lead business to react to the ongoing changes occurring both at the worldwide, provincial and at the national dimension. The motivation behind this examination was to explore through an overview the electronic billing and payment framework.

Keywords: Electronic Billing, Payment System, E-Billing, Online Payment

I. INTRODUCTION

In Information and Communication Technology, the progressions are quick. The fast changes in payment frameworks are making a wide exhibit of new business openings and difficulties. Organizations have been compelled to change the manner in which they direct business to react to the ongoing changes occurring both at the worldwide, territorial and at the national dimension. This is unavoidable as organizations that rush to receive to change are well on the way to get by in future. As it states, "On the off chance that you don't care for change, you will like superfluity even less" Some of the progressions saw in various establishments program, rebuilding, cost-cutting, expansion and the adjustment of Information and Communication Technologies (ICTs).

In our project, we create a secure and transparent online bill and payment release system. This will be accessible to all authorized training partners. The approach is to provide facility to the training partner after successful completion of ESDM examination, training partner raise bills by online claim format along with hardcopy SC/ST/EWS certificate and ESDM certificates without moving to social welfare office.

By using our system we deal with the method of payment can be made faster and easier. Our system is an internet based computerized approach towards bill payment. Now a days the billing process is done manually which is very time consuming and risky process. The manual process takes more time to complete and there are chances of data loss. All these hardcopy documents provided by training partners are manually checked and verified by consultants and

a file is prepared for payment, which is highly time-taking and critical process.

This payment file passes through different touch-points for verification, which ultimately delays payment process. Need process reengineering, followed by automation of workflow. Our Project provides comprehensive electronic fund transfer and payment solutions that enable thousands of ESDM training partners transferring their funds online. By using our system you can also enhance the convenience of transferring funds online by receiving your bills electronically, checking statuses of pending bills and viewing the statements can possible with this system. You can do this from one secure online location, in just a few minutes.

II. Review of Literature

Billing frameworks are key aggressive weapons for media communications organizations [9]. A billing framework is a mix of programming and equipment that gets call detail and administration use data, gathering this data for explicit records or clients, produces solicitations, making reports for the board, and recording (posting) payments made to client accounts. Billing frameworks are made out of interfaces (Network, Marketing, Customer Care, Finance, and so forth.), PCs, programming projects and databases of data. PCs are the equipment (PC servers) and working frameworks are utilized to run the projects and procedure. System interfaces are the equipment gadgets that assemble bookkeeping data (utilization) from various systems, convert it into point by point billing records, and pass it on to the billing framework.

Billing framework use databases to hold client data; utilization call detail records, rate tables, and billing records that is prepared to be invoiced. The key practical parts of a billing framework incorporate making use records, occasion handling, charge

figuring, client care, payment preparing, charge rendering and the board revealing. Notwithstanding the fundamental billing framework capacities, billing frameworks share data with numerous different business capacities, for example, deals, advertising, client care, account and activities.

Billing charges are controlled by occasions that happen in a correspondence framework. Billing occasions can begin from numerous sources: a media door, a media server, a substance aggregator or a visited accomplice's system and they should be changed over into a standard organization. An average billing process includes gathering use data from system hardware, (for example, media servers, get to gadgets and set best boxes), deciphering and arranging the utilization data into records that a billing framework can comprehend, exchanging these records to the billing framework, doling out charge expenses to every occasion, making solicitations, accepting and recording payments from the customers[10].

Media transmission organizations need a viable and precise billing framework to almost certainly guarantee their income. Billing frameworks process the utilization of system gear that is utilized amid the administration use into a solitary Call Detail Record (CDR). The billing procedure includes getting billing records from different systems, deciding the billing rates related with the billing records, ascertaining the expense for each billing record, totaling these records intermittently to create solicitations, sending solicitations to the client, and gathering payments got from the client. Billing framework is perplexing beginning from system components that produce use to the billing framework to utilization gathering, intercession, rating, and invoicing [11].

Electronic billing is one of the quickest developing advances for corporate law divisions. Ongoing reviews show that around 15 percent of corporate

lawful divisions require electronic bills from their law offices, and another percent are thinking about it. On the off chance that the individual is a law office with corporate customers, the individual have most likely observed increasing speed in the quantity of solicitations from customers who need their bills submitted electronically. Picking electronic billing and matter administration frameworks are among the most critical innovation choices that a law division can make, with huge potential outcomes both positive and negative [12].

The idea of electronic billing isn't new. Since the appearance of the Internet, few purchasers have been utilizing this electronic medium to pay bills online subsequent to accepting standard paper solicitations by means of customary Postal Service. What's happening in the electronic billing field is the idea of electronic bill presentment. With electronic bill presentment, organizations that send charges (billers) present customers' announcements on the Internet, empowering purchasers to see the announcements and make e-payments [1].

With consistently expanding spread of Internet, Bill presentment and payment is turning into another sort of administration territory for occasional billers like Telephone Companies, Electricity and so forth. Web based bill presentment and payment framework changes over billing focuses from cost focuses to income focuses and for clients (payer) the framework is a customized administration. Web based bill presentment and payment framework gives direct customized correspondence channel among Billers and Payers, opens another income channel by strategically pitching commercials. Uncommon decrease of costs that are related with paper based billing framework. For clients or payers, accepting bills to payment of bills at one window through a Personal Computer, figure1 appear on-line billing framework.

Figure 2 Depicts by and large work process of the framework venture by step:

1. Client gets an Electronic Check Book (e-Check Book) from his/her bank.
2. Client sends enrolment ask for web based billing through biller's World Wide Web website.
3. Biller confirms accreditations of the application and awards a membership for web-based billing and sends client id and secret word through email or promptly when qualifications are submitted. This empowers the client to view and pay bills.
4. Client signs in to his/her internet-billing record of the biller's site, confirms the bill subtleties and pays with an electronic check (produced from the e-Check Book). The electronic check or e-check is sent to the Biller.

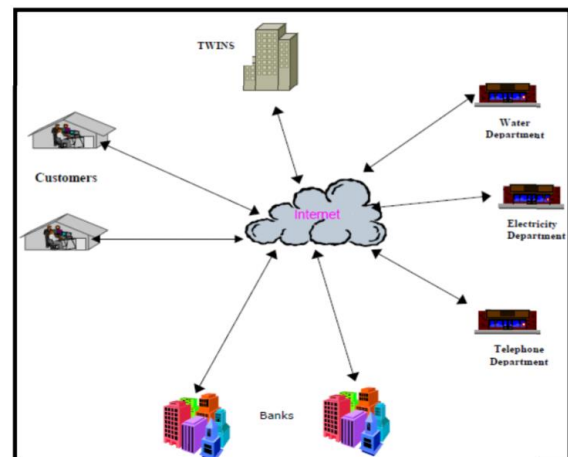


Figure 1. The substances engaged with on-line billing framework

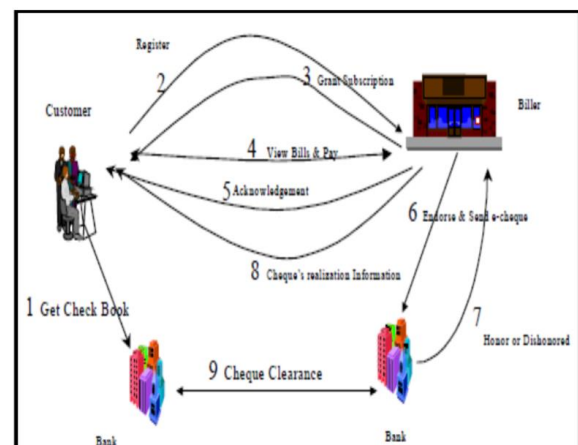


Figure 2. Internet billing framework work process

5. Biller framework gets e-check and sends an affirmation for the got e-check.
6. Biller checks for legitimacy of electronic checks (got from clients), embraces, and sends them to bank for handling.
7. Bank (Biller's) approves the got e-checks and sends them to the Customer's bank for leeway. Respected or shamed data is sent to the Biller.
8. Biller's billing framework refreshes the client billing information dependent on check freedom status (as got from the bank) and sends fitting data to the client through electronic mail. The means 1-3 above are improved the situation enlistment, which is a one-time action for a given client, while stages 4-8 are utilized for review/paying bills, which is a continuous action [4].

III. CONCLUSION

In this paper, we implemented Internet billing system; by construction of virtual banks which perform the processes of banks. Some of the concepts of security have been applied in this system to protect the system from unauthorized access. The security issue is implemented via; encrypted passwords using hash function (MD5), the hash function (MD5) and CRC32. These functions are used to generate the card number; the amount of money transferred cannot exceed a certain imitation. Users can do their payment via E-bank any time anywhere, in which access time is reduced as possible.

IV. REFERENCES

- [1] Assimakopoulos Nikitas A., Anastasis N. Riggas & Giorgos K. Kotsimpos, "A Systemic Approach for an Open Internet Billing System",2003,
- [2] Ghosh Anup K., "E-commerce Security": Weak Links, Best Defenses, Wiley Computer Publishing,1998.
- [3] Singh Abhishek, OM Shankar, Vikash Kumar and Tapanray," Risk in E-Banking", CC BY-NC 3.0,2009, available at 16,2011.
- [4] NN Murthy, BM Mehtre, KPR Rao, GSR Ramam, PKB Harigopal, and KS Babu, "Technologies For E-Commerce: An Overview", CMC Center-R&D, CMC Limited Old Mumbai Highway, Gachibowli Hyderabad – 500 019, Andhra Pradesh ,2000.
- [5] Sumanjeet Singh," Emergence of Payment Systems In The Age Of Electronic Commerce : The State Of Art ", Global Journal of International Business Research Vol, 2, No, 2, 2009.
- [6] Chan Henry, Raymond Lee, Tharam Dillon and Elizabeth Chang ,"Ecommerce Fundamental and Applications", Baffins Lane, Chichester, West Sussex, PO19 1UD, England,2001.
- [7] Watson Richard T. , Pierre Berthon,Leyland F. Pitt and George M. Zinkhan, "Electronic Commerce :The Strategic Perspective", Creative Commons Attribution 3.0 License, 2007.
- [8] Media Abdul Razak Ali,M.Sc ,In a computer and software engineering department of the University of AL-mustansiriya, "Design and Implementation of SET Enabled E-commerce System",2005.
- [9] Crookes J ,"Multiservice Billing System - a platForm for the future", BT Technol JVol 14 No 3 July 1996.
- [10] Harte Lawrence, "Internet TV Billing Systems", Althos publishing,2011, <http://www.althos.com/tutorial/Internet-TV-station-tutorial-BillingSystems.html>.
- [11] Mostafa hatem, "Billing System : Introduction", codeproject, 2005, <http://www.codeproject.com/KB/architecture/billing.aspx#Introduction>
- [12] Thomas Rob, "Choosing an E-Billing System", published in I L T A - December, 2005. <http://www.serengetilaw.com/news/serengetimeasuretwice.pdf>.
- [13] Bo Yang,Liu Dongsu and Wang Yumin, "An Anonymity-Revoking Epayment System with a Smart Card", springer-verlag, Volume 3, Number 4, 4 December 2001