

Review paper on Electronic payment system

Gurpreet kaur

Assistant Professor in P.G Dept. of Computer Science & Applications

Swami Ganga Giri janta girls College ,Raikot

gurpreet.litt07@gmail.com

Abstract

E-payment is a method in which a person can make Online Payments for his purchase of goods and services. One can make electronic payments at any time through the internet . Electronic Payment Systems have been improving individuals' quality of life through providing ease of payment for online transactions .Internet-Based payment system such as e-cash, Credit Card, Debit Card, Smart Card .In this paper ,an overview of electronic payment methods and systems is given.The success of electronic commerce depends upon effective electronic payment systems. The Internet and on-line businesses are growing .Due to this, electronic commerce on the Internet uses various electronic payment methods that can deliver various functionalities of applications.

Keywords:E-paymet,creditcard,Debitcard,Smartcard

Introduction

In Commercial business e –commerce has considerable portion and has been developing .E-Commerce provides the capabilities of buying and selling products ,information over the internet.The merchant sell the goods to customer and customer pay the price with the help of e-payment system in online mode. In offline mode the payments are made with cash or through cheque.

Types of E-payment system

There are various types of e-payment system .which are discussed below.

- Credit card
- Debit card
- Smart card
- Electronic cheque

Credit card:

A credit card is a payment card that is issued by a financial company to cardholders .A credit card is a piece of plastic and a magnetic stripe that holds a machine readable code .when he or she is using a credit card to payment transactions then the verification in the form of authorizing the credit card checked through a personal Identification Number(PIN).credit card is a efficient substitute for cash .The credit card have a maximum amount limit.

Customer/Cardholder: The consumer doing the purchase, using a credit card that has been issued by its financial company.

Issuer: The financial institution (i.e. bank) that issues the card to the cardholder(cosumer). The issuer guarantees payment for authorized transactions.

Merchant: The merchant offers the goods and services, and has a financial relationship with the acquirer.



Fig:1: Example of Credit card

Debit card

Debit card is a mode of payment and is also known as ATM card. Debit card is a plastic card that can be used instead of cash when making purchases . when a person open a bank account then; bank gives a debit card with a personal ID,PIN . when a person used a debit card then these PIN number is used for verification that debit card is used by a authorization person .



Fig:2: Example of Debit card

Acquirer: The financial institution of the merchant. The acquirer processes credit card authorisations and payments.

Smart card

Smart card is plastic card with embedded microprocessor chip used for information storage and authentication. In many cases smart cards have replaced old magnetic cards because they can handle more functionality. Smart cards are now used in many industries.



Fig:3: Smart card

Electronic cheque

An e cheque also known as electronics cheque. An electronic cheque is a form of payment mode over the internet. The e cheque has all capabilities of a conventional paper cheque. The electronic cheque can be processed in fewer fields such as number, coding key, payment's banking details and payee's banking details, amount and date of payment. These fields are different from country to country's rules and regulations. It has more security features than traditional paper cheque including authentication, public key, cryptography, digital signature, encryption.

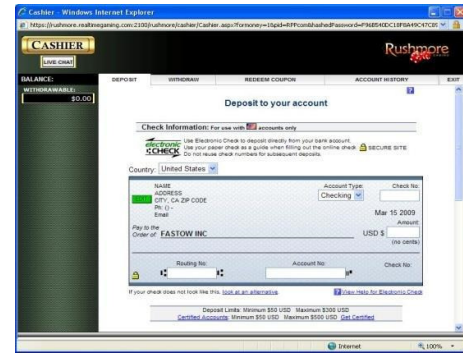


Fig:4: Example showing electronic cheque

Need of E-cheque instead of paper cheque

Over the twenty years, financial institutions have been trying to change their customer behavior from the paper cheque to electronic transactions with limited success.

1. **Safe:** E cheque has a ability to conduct bank transactions safely using internet.
2. **Reduce the risk of frauds :** Due to security reasons like authentication ,authorization ,PIN these facilities reduce the risk of frauds .
3. **Instant payment:** Customer payment is acknowledged and approved instantly.
4. **Easy access:** In world wide the availability of e cheque is possible through a network .
5. **Additional information:** - electronic cheque also provide additional information about the transaction as compared to paper check.
6. **Availability of Service:**Service is available for e-payment is 24/7.
7. **Time saving:-**Using e cheque is much more efficient instead of paper cheque .
8. **Digital signatures:-** The consumer that involved in online payments ,transactions should use digital signature in order to ensure authentication of transactions .

Components of effective e-payment system

1. **Consumer and browser :-** A user communicate with the browser through a internet .A consumer(user) first of all access a shopping mall and then uses the hyperlink from the mall to access the merchant home page .
2. **Shopping mall:-**A shopping mall is where most consumer first visit for a shopping free .
3. **Merchant system:-** It consists of home page and related software to manage the business.
4. **Banking network:-** banking network has a several components that a bank process the online financial transaction for the given



merchant the bank maintain the account for the merchant authorize and process the payment .

Electronic transactions vs payments

We make a difference between electronic transaction protocols and electronic payment protocols. While e-payment deals with the money transfer, electronic transaction protocols deals with the transactions as a whole. This includes: service delivery, service acceptance, confirmation of payment, receipts, etc. Both are important for electronic commerce systems.

. An electronic transaction either fails or all of its operations are carried out . If a transaction fails partially completed results will be not done. All transactions that complete successfully can not be undone, and the results of these transactions are not lost . The results of transactions that are carried out concurrently will be the same as if they were carried out serially (serializability).. For example, if a merchant pays for a service with digital cash, but cannot prove afterwards that the service was actually paid for, the system will not be very secure for individuals.

Conclusion:-Mode of payment which does not include physical cash or cheques is called e-payment.it includes debit card ,credit ,smart card,etc. In electronic payment system reduce the risk of frauds .using e-payment make the transactions speed fast and all transactions are secured due to its security reasons .

References

- [1].[https://www.investopedia.com/terms/e/electroniccheck. asp](https://www.investopedia.com/terms/e/electroniccheck.asp)
- [2].<https://www.investopedia.com/terms/c/creditcard.asp>
- [3]. Mamta, Prof. Hariom Tyagi,Dr. Abhishek Shukla, “ The Study of Electronic Payment Systems “,
International Journal of Advanced Research in Computer Science and Software Engineering Research
Volume 6, Issue 7, July 2016 ISSN: 2277 128X
- [4].<https://www.payhubpayments.com/single-post/2016/11/02/The-Advantages-of-Electronic-Checks>
- [5].[https://www.researchgate.net/publication/303329794_A
Payment Systems A Review of Literature](https://www.researchgate.net/publication/303329794_A_Payment_Systems_A_Review_of_Literature) [doption of e-](#)



[6]. Princewill Aigbe “Analysis of Security Issues in Electronic Payment Systems”

[7]. Paul J.M. Havinga, Gerard J.M. Smit, Arne Helme
“SURVEY OF ELECTRONIC PAYMENT METHODS AND SYSTEMS”

BIOGRAPHY

Author Name: Ms. Gurpreet Kaur

Designation: Assistant Professor Department

Post Graduate Department of Computer Science and Applications

Qualification: B.C.A., M.SC-IT

