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Easy Shopping by Electronic Credit

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***Abstract*—**In this paper we suggest a method for setting electronic credits for the customers. In this method banks and market-sites help each other to make doing large shopping through internet so easy. By developing this system, the people who have less money to buy most of the things they want, become able to buy all of them just through a credit. This credit is given by market-sites through a banking control on it. The method suggested can stop being imprisoned because of banking debts.

***Keywords*—**E-Business, E-Credit, Market-site, Buy-site, Bank, E-Commerce.

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I. Introduction

INTERNET is going to be the best way for doing usual and daily jobs indoors. If all jobs could be done by using such facilities, then no one would go outdoors except for entertainment. E-business is a part of job that can play a great role in human's life [1, 2].

A customer may look for an object from different shops to buy, but can't find it. Nowadays e-business solves this problem so much. Customers can search their desired products on internet and find and buy them easily [3]. But here is another problem facing to some people. They can find the object, but they don't have enough money to pay for it.

Drawing checks seemed to be helpful but every one can't own a check book. What's more so many prisoners are kept just because they couldn't pay off their debts. Here, in this paper, such problems are surveyed and some solutions are presented.

A. Terminology

Electronic Business is buying and selling, providing customer services, collaborating with business partners, and conducting electronic transactions within an organization [4]. Electronic commerce is a part of e-business, which focuses on the electronic commercial transactions between and amongst organizations and individuals. In other words, e-commerce is electronic transactions conducted by business partners [4, 5, 6].

Buy-sites are designed for dealing with the suppliers and customers by generating lists and catalogues of products and the people in touch. Enabling B2B e-commerce, e-procurement solution, web-based internet application and centralized, comprehensive suite of e-procurement functionality connected to world's largest B2B marketplace are some of the capabilities we can mention for buy-sites [7].

Market-sites are designed for transaction management and value-added services. The jobs such as buying, saving, logging, verifying and so on, are done in market-sites [7].

Credit is called to the validity of banking accounts and buying rules. Market-sites can set a credit for a customer, if he is a true buyer and he can pay off the debts in the appropriate period.

B. The Problem

The overall problem addressed in this paper is:

In developing countries most people are young and have their youth problems. In order to shape an independent life for themselves, they look for an appropriate house and its furniture. These people can rent a house and monthly pay for it and in some countries they can rent one with complete furniture; but what about other countries? These people may not be able to find houses with such equipments at every city? Some people may not desire to use the house furniture, some one else has used before.

So many people, mostly including the youth, don't have enough money to buy all they want in one or two years. They have to wait for years till they become able to buy the things they want or even they like. This is a real problem that can be solved buy e-business strategies.

C. Solution

In this paper we give a solution to the problem mentioned above. Digital identification is going to be popular in most countries. By having a bank account in any bank, in any kind, every one can produce an electronic credit and do his buying through it, with no need to any international or at least national cards or special accounts. Although there must be some rules to avoid deceiving the buy-site principals but again this theory seems to be so helpful to develop e-commerce and reduce the inflation in societies.

D. The Claim

We claim that such a solution does exist. By allocating an

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e-credit to customers, they can easily buy whatever they need and pay off their debt periodically. Banks can help market-sites in verifying bank accounts which are guaranteed by other accounts. After proving the validity of the accounts, buying job can be done so simply and securely.

E. Objective

Using e-credit in business solves an important problem which is lack of enough money at the time one needs. Every one can buy every thing every time he wants. This claim develops e-business and e-commerce to a great deal specially in developing countries. It can be a good guide-line for undeveloped countries to set their business job in correct and secure manner. Imprisoning because of check drawing will be stopped through generalizing the method suggested in this paper.

F. Paper Outline

This paper is organized in four sections. In Section 1 we started the problem, an idea solution to the problem and our claim regarding the solution. In Section 2 we present a brief survey of the previous work, their strength and weaknesses, and the areas, requiring further improvements. In Section 3 we present our work under the title of E-Credit in payment and describe how the job can be done. Finally we conclude the paper in Section 4 with an evaluation of our work and some future topics of research.

II. Previous Work

A. Customer Relationship Management

The importance of customer relationship potential is often forgotten in the business model approaches that are mainly focused on products, value creation processes and exchange patterns between different actors. All customer information and knowledge, a company can gather and exploit in order to discover new and profitable business opportunities and customer segments and to improve their relationships with their customers are referred as getting a feel for the customer. These insights can be used throughout marketing and sales, and especially for customer relationship management (CRM) [8].

B. Relationship Marketing

The most significant difference between traditional marketing (both consumer and industrial) and relationship marketing is the perception of consumption. Industrial companies have primarily been production-and product-oriented where the focus has been on single transactions and outcome consumption. Relationship marketing has a different view, which is based on the understanding that services are produced and consumed simultaneously in an ongoing process [9]. There is no gap between production and consumption that needs to be closed as a separate activity or function. There is no room for marketing's traditional bridge-building role in this situation [10].

Relationship Marketing is a strategy used to learn more about customer's mood and behaviors in order to develop stronger relationship with them [11]. If an e-shop knows that customer visits the site and checks the prices but is not able to pay for them, what can it do not to miss him? In buy-site feedbacks may be read that the prices are high. It is better to interpret such feedbacks that the prices are not high but the possessions of the customers are low.

C. E-Consulting Web-Site

E-consulting web-sites are designed to help customers and e-shop owners to do their buying and selling job in the right and best manner. Customers can refer to those sites to get information about the products and their prices. Experts working with those sites can help customers in deciding what is better to buy.

Some other information can be gained through e-consulting web-sites. The period of price payment is an important case informed by them. Then before choosing the products from buy-sites and reject the requests from market-sites, every one can take advantage from the experts' guidance [12].

III. E- Credit in Payment

In shopping electronically, customers should have at least one bank account; they should decide and select what they want to buy. In order to set an e-credit, banks should give them some services. The points are described below.

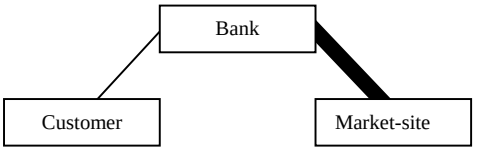


Fig. 1(a) Logic model of marketing by e-credit



Fig. 1(b) Interface of marketing by e-credit

A. Opening a Banking Account

Banks can give some services and make e-shopping job very easy, but some steps should be followed. As done in some countries, the request for opening an account should be accompanied with another account belonging to any one else or a current account of the requester, as a guarantee. This should be taken in consideration that if "A" guarantees "B", "B" cannot guarantee "A" again. Obviously the current accounts are guaranteed with an institute or a company. This reassures the sellers that the debt will be paid off.

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B. Whole Buy from an E-Shop

By adjusting bank accounts to the style presented, each market-site can set a credit for each customer and let him select what he wants from different buy-sites, that market-site supports. After choosing the goods, the customer informs his decision to buy the things chosen and gives his bank account. The market-site system checks the account to see if it is proper and secure. If so, it sets the credit and lets the customer to choose the ways he can pay for the products. Then the customer declares that he can pay the whole price in that time or in a month or a fraction of a year or even more.

The market-sites which support dynamic commerce for price negotiation can easily develop program to time negotiation and accept or reject the conditions that the customer has suggested. Other market-sites that don't support dynamic commerce can use special programs or facilities for this job; expert system is one of them. They can also limit the time periods and automatically make the customer choose one of the existing conditions.

After reaching to an agreement on the payment period, the market-site does the transactions related to taking money from the customer's account and settling it to the company's account. This job may be done alternatively according to the time agreed.

C. National Banks with an International Interface

There are differences between national and international banks. All of intra-country banks cannot transact internationally; but almost all of them can do B2B jobs between each other inside a country. In order to develop e-credit theory to all bank accounts, it seems better if international banks support baking jobs of the banks which are related to them in intra-country communications. By this method all even small banks can do banking jobs internationally and the ones, who have account in that bank, don't need to change their bank to do e-shopping.

D. Some Points to Be Taken under Consideration

The first point is that the guarantee information of intra-country bank accounts should be available by all the banks in that country and a program should make sure that there is no guarantee loops between accounts. The bank accounts can guarantee each other if at one point they are backed by a current account.

Actually it is known that how much money is settled to the current account in a year. So if the amount of money settled to the current account in a year is M and the last time period acceptable with the company is Y then the maximum range of the credit shouldn't be more than M*Y. This calculation should be done by the market-site system before starting the transaction and let the customer eliminate some products if the sum of prices is higher. By using this limitation in credits we will have no prisoners caught for being on debt.

If the sum of prices is S which is less than M*Y, then the other accounts are only guaranteed to M*Y-S amount of money and not more.

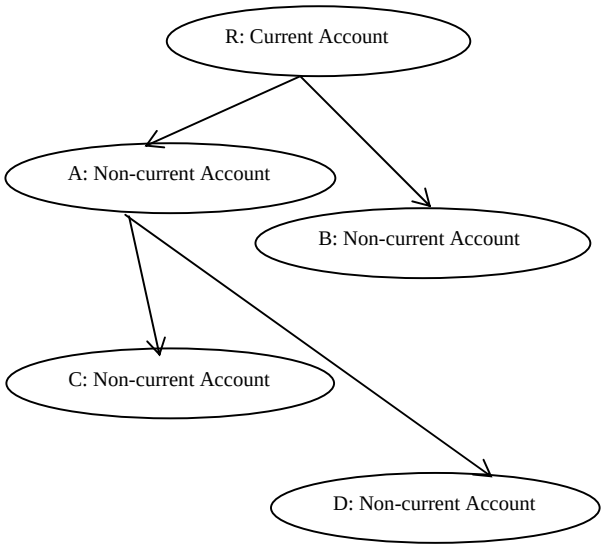


Fig. 2 One current account guarantees four other accounts. The account "D" might not know whose account is that current account

If we imagine the figure above as a tree, so the heads can be deleted. If the leaves are deleted, then the accounts loose their security in setting a credit. If a father is deleted then not only it looses its security but also the children should request for guarantee. If grand father doesn't accept then they should be deleted.

If the root wants the amount M*Y for itself then it can either delete itself from the tree or reserve the amount for itself that requires development in market-site system. It should be taken under consideration that the current accounts are not permanent and they are secure until the time they are active. So Y mustn't be more than their secure time.

As an example, if "D" doesn't pay off its debt, the market-site sends an email to "D" and "A". If "D" doesn't pay in a few days then "A" has to pay for it. If again "A" doesn't pay after a few days then again an email will be sent to its father. If this job continues till they reach to "R", the money will be taken from "R" monthly. In [13] some the customer equity is studied and explained widely.

IV. Conclusion

As it is explained in section three, by setting e-credit to bank accounts, in any kinds, one can refer to an e-shop and buy all the objects he needs in one time and pay for them alternatively. The period of time for paying is agreed by both groups and the products are bought from different buy-sites. Using the e-credit helps people to reach what they want easily and the limitations avoid buying objects using checks that we will never be able to pay for them.

A. Future Work

The method we presented in this paper sets the stage ready for an interesting topic of research:

- **Market-Sites Communication: A New Approach**

As the banks have communications with each other, market-sites can also have communications between each other. Then great e-malls come to existence that no one leaves there without finding what he wants.

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