

NEW TRENDS OF E-COMMERCE IN SPAIN

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Abstract: eCommerce can be defined, in an ample sense, as any form of commercial transaction based on the remote data transmission on communication networks. In order to facilitate this process, the market at the moment offers an ample range of electronic payment systems that allow to make electronic purchases with simplicity and transparency, being helped to harness the sales and to manage them of efficient way. This article presents, in the first place, the current situation of the electronic commerce in Spain, detailing the state of the used technology, its real possibilities of use, the new methods of payment, the security used in the process and the influence that it has in the market. Secondly, is a proposal of virtual store in which different technologies are integrated to make the process of purchase software product. The designed website innovates in the implemented modality of payment, considers the effective legislation at the present time in Spain, and it makes agile and assures the process purchase with the activation of each product in an individual way.

1 INTRODUCTION

eCommerce constitutes a new form of enterprise strategy that is based on the use of the communication networks to develop commercial activities. In this new model of business transactions, the involved parts exclusively interact and make businesses through electronic way (Pastor, 2002).

Figure 3 shows the main places of purchase in Spain, extracted from the last study on electronic commerce B2C of AECE (AECE, 2004). The traditional store with Web is the one that greater uses, followed of the Web of the manufacturer. In addition, the use of sites dedicated exclusively to this service, at the moment is used moderately.

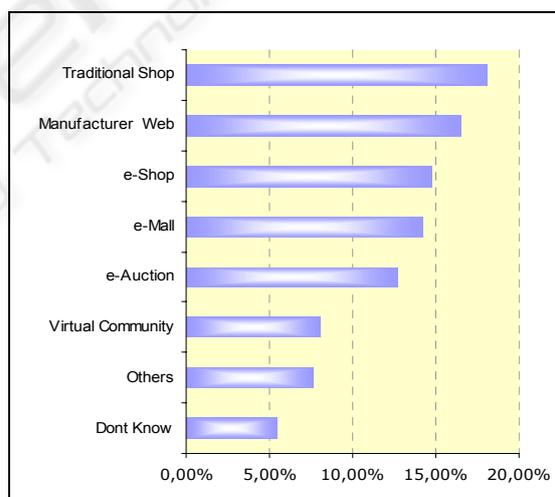


Figure 1: Purchase places classification in Spain

In Spain the main electronic payment, is still the credit card, on the contrary is losing use the payment by direct debit, as well as the cash on delivery, and appears the use for the first time of the card of the own establishment (AECE, 2004).

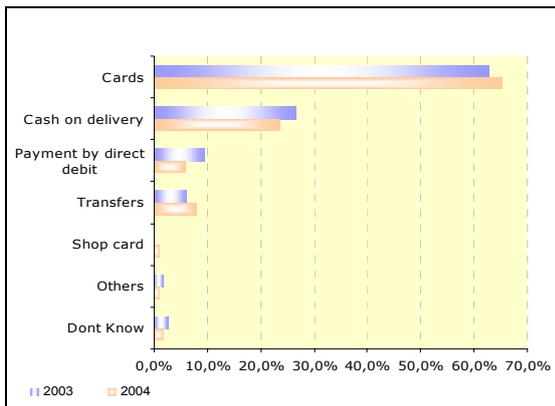


Figure 2: Electronic payment classification in Spain

2 ELECTRONIC PAYMENT SYSTEMS

The electronic payment par excellence actually through Internet is the card, as much of debit as of credit, and this has been possible thanks to the appearance of the electronic payment systems, that emulates of electronic form the normal transaction between merchant and client, guaranteeing the good aim of the operation.

The electronic payment systems or virtual points of sale terminal (POS), acts in Internet like the traditional payment systems of credit card (physical POS) allowing that their clients can pay their products through Internet using a credit card (Bartolome, 2002).

It is important to consider that the system of payment developed by the different banks does not provide an application of commerce in himself, they only implement a payment system. Anyone connected to this network can acquire these products, from any place and during the 24 hours of the day, having a personal computer and a connection to Internet.

The participants who take part in a transaction of this type are the following ones:

- Customer or client, is the one who initiates the transaction, details the content of the purchase and interact with the POS, specifying in a secure form the data of his card.
- Vendor or merchant, who recognizes the identity of the client to send the merchandise to him, once authorized the operation by the POS. It is necessary to stand out that the retailer does not have access to the economic data of the transaction, these confidential data are privatized between client and bank.

- Customer Bank or financial organization of the client, which receives the payment order, consults the identity of the card and notifies the viability of the operation
- Merchant Bank or financial organization of the retailer, which receives the money in its account.

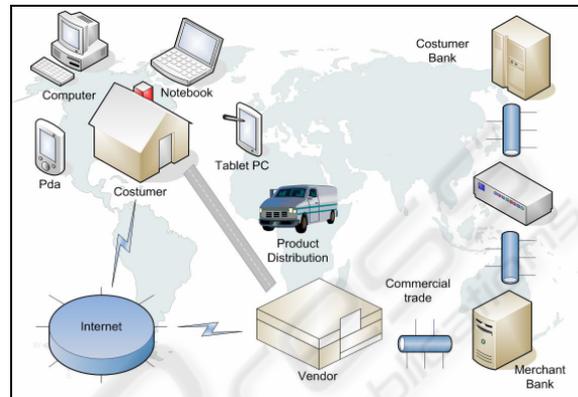


Figure 3: Electronic purchase process participants

3 E-COMMERCE LEGISLATION

In Spain, the product sale and services through Internet are basically regulated by the European directors on electronic commerce and by Law 7/96 of Arrangement Commerce Retail (MAP, 1996).

To legal effects, the sale by Internet is governed by the criteria that the remote sale and, therefore, it has the same treatment that the sale by telephone, catalogue or mail. The norm on the remote sale gathers the possibility that the transactions of purchase are rejected made by two reasons:

- Disagreement of the buyer with the acquired product.
- That the purchase has been made with credit or debit cards by non-authorized people or who they are not his holders.

In order to assure the transaction, the companies that commercialize their products or services by Internet, must obtain and verify all the possible information about the buyer the data before deliver the product. The more important basic norms that they are applied to the electronic commerce and transactions by Internet in Spain at the present time are (Casas, 2003):

- Law 7/96 of Arrangement of Retail Commerce.
- RD 1906/99 of 17/12/1999 to regulate the general conditions of telephone or electronic hiring.
- Director 200/31/CE of ecommerce.

- Law 34/2002, Services of the Society of Information and electronic commerce (LSSI) of 11/07/2002.
- Law of Protection of Personal character Data of 13/12/1999 (LOPD).
- RD 994/1999 that establishes the measures of control of security of the automated files.
- RD 195/2000 that establishes the time to implement the measures of control of security of the automated files.
- Director 1999/93/CE on digital certification.

4 E-COMMERCE CHARACTERISTICS

In a system of electronic commerce the following characteristics are due to guarantee (Reynolds, 2000): anonymity, trazability, confidentiality, authentication, data integrity, non repudiation and reliability. Finally to comment that in addition to the previously commented requirements of security, exists other directed to make the mechanisms more effective: low cost, independence of the hardware and operating systems, scalability, effective mechanisms of auditation, confidence on the part of the consumer.

5 BARRIERS IN THE DEVELOPMENT OF ELECTRONIC COMMERCE

It is a fact that the electronic commerce has not experienced the growth nor the acceptance that the initial enthusiasm foretold for the immediate future. Several factors act of brake to the expansion of the commercial activity in Internet, being the main ones (Meseguer, 2003):

- The privacy: The end users feel threatened their privacy, if they do not know if the personal data that they provide to a servant of electronic commerce will be dealt with confidential form.
- The authentication. The users doubt if the person with whom they communicate he is truely who claims to be.
- The global security. The users fear that the technology is not sufficiently robust to protect as opposed to attacks and illegal appropriations of confidential information, specially in the payment process.

These fears have their real foundation and its solution is not trivial. In the first case, the

technology, and in concrete the cryptography, offers the necessary tools for the protection of stored information in corporative databases. In the second case, the immediate solution that it offers the cryptography comes from the hand of digital certificates. As far as the third fear, the modern cryptography and the products of security provide the solutions to the problems again. Therefore, it is possible to be affirmed that the true barriers to the electronic commerce are not as much technological as human, since the technology has been able to surpass the difficulties that have been appearing to assure the process of electronic purchase.

6 SOLUTION PROPOSED

In the article we present the designed and implemented prototype. One is a virtual store, in which a electronic payment system has been integrated that allows the commercialization of software for mobile devices. This type of applications has a great importance in the present market since they facilitate mobility, increase to the range of users and the possibilities of use.

The created system includes a series of interesting new features, first of them is the method of electronic payment chosen to make the product purchases in the site. In Spain the method payment par excellence are the credit card (AECE, 2004), being this including in most of sites. In our case we have chosen a novel form to realize these operations, for it the clients must associate the data of their credit cards or current accounts with a resource that allow the direct communication with us, in this case the electronic mail or the mobile telephone. When doing this, the client creates a payment portfolio that only can be managed through the resource chosen, allowing making payments and taking a detailed control of the realized operations.

Another novel aspect is the necessity to activate the product before being able to use it in the movable device. Thanks to this, the system improves the scalability, personalization and availability in real time of the products, since at any moment the unloaded and activated copies of software can be known.

In summary, to be able to begin to use anyone of products, the clients must make the following process:

- Download his compatible version of software its device.
- Make the purchase of the product through a POS that use the electronic mail instead of the credit card.
- A purchase code is given back to the user.

- To activate the bought product
- The client must introduce the data of chosen software and the code of purchase obtained when paying
- The site sends to the client the code of activation to the specified email.

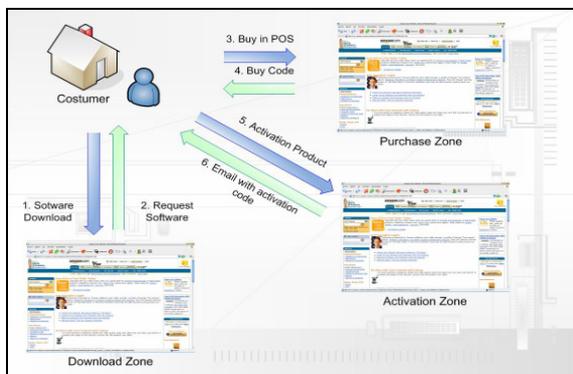


Figure 4: Purchase steps within the web site.

In order to assure this process unloading - sale - activation, the products of the site are sold in individual way giving back for each one of them a purchase code that allows its later activation. By this the concept of "shopping cart" has not been used, it is to say products are sold separately and by means of independent processes of purchase.

The data necessary to make the activation, information of products and the client are stored in a centralized data base. The architecture of the system therefore is structured in three levels, light client - servant of applications - database Server.

6.1 Personal data storage

The effective legislation in Spain, LOPD, establishes that it is necessary to notify in the Data Protection Agency all the files that contain personal character data (clients, suppliers, associate, personnel, etc) which they allow to identify physical people.

In the case of the created web site, the only data that is stored is the email of the purchaser, which by itself does not consider information that can cause lost or damages to the client. This single data is used to make the dispatch of the activation code, in this sense is recommendable, but no obligatory, to communicate the article 5 of the LOPD (MI, 1999), including a clause in the own electronic mail (of this form, a greater security about the origin of the data and the identity of the file owner is obtained).

If the purpose of the email stored was to make indiscriminate shipment of mails containing publicity or promotions, is due to consider that its prohibit from the approval of the LSSI (MITC, 2002). In this point LSSI, says that the Spam made

by Spanish companies or which they have an establishment in Spain is prohibited.

On the contrary, if they only want to send electronic advertising, it's necessary to obtain the express consent of the user (making click in a field specifically prepared for it), not being valid those abusive clauses that they suppose a consent no emitted specifically.

In the case of collecting more personal data, as for example the full name if it would be obligatory to register the data base used to store the data of activated products. To clarify in this point, that the data gathered in this form are not going to be provided to third parties and the user has the possibility of modifying them or of eliminating them through the contact section of the web site.

7 CONCLUSIONS

This paper make a revision of the aspects most important to consider in the processes associated to the electronic commerce. In this sense the electronic commerce is a useful tool to make businesses, but the existing distrust has put in doubt its development. Therefore a very important aspect, due to the type of information that is handled, is the relative one to the security necessary to guarantee the transactions.

Is an interesting fact that in all activity of purchase, which continues worrying is the operation of payment, that is to say, the moment in which the buyer faces the window where has introduced its credit card data and doubt at the time of pressing the button "Send". Therefore, one of the main conclusions extract is that the true barriers that restrain the ecommerce development are not as much technological as human. At the present time the existing technology is able to guarantee the privacy and the security of the made transactions.

As fundamental conclusion, the propose solution innovates no single in the implemented modality of payment, but that in addition considers the effective legislation and makes agile and assures the process purchase with the activation of each product in an individual way. When activating the product we improved the scalability, customisation and availability in real time of the same one, since at any moment it allows to know unloaded and activated copies of software. The developed system has been designed in such a way that in future new functionalities and improvements can be introduced easily and quickly. Among them, emphasizes the possibility of including in all the pages of the site compatibility with standard WAI (<http://www.w3.org/WAI>) and access multi device.

This would allow increasing the usability, accessibility and mobility of the site users.

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