ELECTRONIC COMMERCE ON THE INTERNET FACING THE NEW MEDIA

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ABSTRACT

This paper will be present the success of using the World Wide Web as a platform for electronic commerce and explain the necessary security mechanisms for it, Also we will propose a new approach dealing with pre and post sales support activities by using the electronic media as integral and very important parts of the business process that can be implemented to our Iraqi small and medium enterprises.

الخلاصة

يتناول هذا البحث طرق وتقنيات أستخدام صفحات الويب (WWW) كقاعدة لتطبيق تكنلوجيا التجارة الألكترونية والأستفادة من كل ما توفره من خدمات للمستخدمين. وكذلك سيتم مناقشة وأختيار أهم الأليات الأمنية الضرورية من أجل تطبيقها مع هذه التكنلوجيا مما يتيح للعديد من المؤسسات التجارية تبني هذه التقنيات من خلال استخدام شبكة الأتصالات العالمية (الأنترنت) كبنية تحتية سريعة وقليلة الكلفة. وأخيرا سيتم طرح طريقة لأستخدام التجارة اللألكترونية دون الحاجة لتطبيق كافة المتطلبات الضرورية لها من خلال أستخدام الأنترنت في عمليات ما قبل البيع وعمليات ما بعد البيع وبأسلوب يساعد على تطبيق هذه التكنلوجيا في المحيط الحالي للعراق.

KEY WORD

Electronic Commerce, WWW, Internet, Pre-Sales activity, Post-Sales activity, EC security.

INTRODUCTION

The Internet as an infrastructure for electronic commerce was recognized some years ago and some successful experiments have been carried out so far. The first experiments were simple nowadays; however, we face large and serious market trials of electronic commerce on the Internet (Justyna L., 2001). Many companies are taking this into account, but the Internet still has some unsolved problems preventing companies from adopting electronic commerce on such an infrastructure.

The trends in the development of Internet application are directed towards enabling secure and reliable commerce, companied by all other business activities. One of the most effective platform is the World Wide Web (WWW), which is based on hyperlinks of documents and information servers. Some security mechanisms were added to the WWW services and thus, in addition to other security measures to enabled the successful start of electronic commerce. Now a days many companies are aware of the possibilities the Internet provide but they are afraid to use it as a medium for doing

business. Almost all phases and activities of the business process today are made possible by means of the Internet that provides to the vendors and customers (G. I. Doukidis, 1999).

Some of these activities are:

- Marketing (advertising, offering products, goods, services and information, etc);
- Ordering (including simple requests for additional information, requests for pro-form invoices, placing bids, etc.);
- Trading (buying-selling);
- Post-sales activities (technical support, maintenance, etc.).

USING WWW AS A FRAMEWORK FOR ACCESSING THE INTERNET

One of the most effective applications on the Internet is the World Wide Web. It is based on a combination of hypertext and multimedia (in such a way building a hypermedia environment). The information and information servers are linked together to form a large information base, no matter where the information actually resides. This is accomplished by using hypertext transport protocol (HTTP). There are many remarkable benefits of the WWW as an application, which supports business on the Internet (Davenport T. 2000) such as:

- Hyperlinks, since there is no batch processing and links it point directly to the information that is up-to-data as possible.
- Support for multimedia, efficient presentation is made using not only images but other multimedia elements (voice, video, etc).
- Ease of use, through very simple navigation mechanism built into the WWW clients. Such applications are highly appropriate for widespread usage.
- Support for almost computer platforms, there are servers for almost all UNIX systems and NT-environments and clients exist for any other computer platforms Interactivity a user does not only search for information and click the keywords, but has the possibility to enter some input as well.
- Interoperability, the WWW servers not only have links to other servers but can also run external scripts (programs) and consequently enable access (through gateways) to large databases built in security mechanisms.

With all these advantages there are also some drawbacks, which prevent wide adoption of WWW (and the Internet) as a medium to conduct business. The most important factor is the lack of standards (even though HTTP is standardized in some way, there are differences among servers and among clients). Some of them don't support all the options, thus resulting in incompatibilities at least at the visual level and, more critically, at the security level (Dic Ramman, 1995). This is the main reason why (no matter how popular the Internet is today) commerce on the Internet will be somewhat delayed, Especially in Iraq with the lack of information about EC, WWW, Internet.

NEW APPROCH TO USE THE INTERNET IN PRE SALES ACTIVITIES

Although all security techniques are not available and standardized yet, companies have many opportunities to run their business over the Internet in Iraq. First of all through marketing activities, this can be performed regardless the level of the media security. Security is not a major issue until ordering, buying and financial transactions be performed through such media.

Putting the product catalogs and prices lists on the Internet results in fewer phone calls from potential customers and less paperwork to run a business. The customers can browse through an electronic catalog much faster and more efficiently than through printed ones, especially by the hypermedia environment. It provides customers with the ability to focus on a single product in a much better way when compared to the standard forms. The product here can be presented very efficiently, for example, short videos about the product features can be run and it could be seen from all sides even it can opened to be seen from the inside.

Having a prices list on the screen (when selecting the desired product) supported by some form for choosing the selection products, allows the user to calculate easily the total price and determines the optimal price selection. The problem nowadays for the Iraqi companies can be seen by the absents of the essentials infrastructure that many potential users for this kind of business still don't have the possibility to use the Internet. This situation has expected to be changed soon.

Not only in a commodity business, but to the same or even larger extent, the same benefits are also seen in more specialized environments as well, for example, in information technology and the similarly sophisticated equipment markets. The potential customer can find the same information on a vendor's Web as they can in a printed catalog, they can even use electronic mail to ask for additional questions and get responses for it.

At the highest level of commerce on the Internet customers can place orders and pay for the goods they order. While The new approach we suggested is to use the Internet solution as the possibility of placing requests using the same forms for selection product and perform invoices only while the further steps (except post-sales support) are done later in a conventional manual way.

By this approach we force the Iraqi companies to use the Internet as a new electronic media replacing the old paper environment way. With respect to the security, it is important to mention the privacy of the business partners and their customers as well so in order to enable secure commerce on the Internet in all phases, it is necessary to provide one of these security mechanisms:

- Transaction security;
- Authentication;
- Prevention from repudiating the original message, order, etc.

USEING THE INTERNET IN POST SALES ACTIVITIES

An important phase in the business process is the post sales support (technical customer support, maintenance, service, etc.). When considering the possibilities of providing customer support over the Internet, it is important to stress the benefits and drawbacks of it and discuss the minimal security mechanisms required to implement stable services to authorized users.

The possibilities of using the Internet as a medium to support post sales activities are numerous for both customers and vendors. In Iraq as the whole world customers can use the Internet to read and search on-line manuals, supported by multimedia, instead of browsing through large quantities of paper material. They can notify support centers of any problems encountered and ask for help in a fast and efficient way. Every day new Web sites emerge to provide customers with the beast possible support from sending a company's news to enabling software upgrades over the Internet.

Vendors providing support to customers' need some control over their web sites so that, many web sites implement some sort of authentication to make sure the user is a real customer. It must be pointed out that a large portion of the information residing on vendors servers are proprietary and should not be revealed to users other than authorized customers. Many web servers today enable access control over directories or over every single document as well.

PUTTING EVERYTHING TOGETHER

When a company establish its own Web server it needs to plan carefully their connect, access policies and consequently all the necessary resources (hardware, software and people) needed to implement the service. Some general rules have to be considered by the Iraqi companies explained with the following points:

- Carefully plan the service and evaluate all the aspects, because it is very hard to correct mistakes in an open environment such as EC application.
- Build the service. Web sites are judged by the usefulness of its information and by its accessibility.
- Monitor all the activities and make analyses, this is the only way to improve the weaknesses and to keep the quality of service at a desired level.

And in case the company does not have enough resources to be present 24 hours a day on the Internet or to establish an appropriate firewall to be protected, it is still possible to Lease disk space from service / content providers, which is very usable in the following cases:

- When a company does not need direct access to the Internet (for some small companies e-mail is sufficient in the first phase of connecting to global networks), but they wants to permanently present information some sort of e-mail connective is required in this case to be able to receive comments, information request, etc. from visitors to the company's web.
- When a company has information which is expected to be accessed very often, but its resources don't offer the required throughput and response. The only problem is how to automate the updates of the information, the information is interesting only if it is up-to-data and changes often, but this poses the problem of updating it on the provider's computer.
- When a company doesn't want to have direct contact to the Internet because of security reasons, but its provider has all the mechanism already implemented.

One issue which should not be overlooked is the content management. This issue is important both when a company operates its own server and when it leases pages on a service provider's server. Content management includes methods for easy and efficient management of information and procedures stored at the server. The effectiveness of content management reflects in the quality of service provided by a company's server. The content management is crucial in environments where there is:

- A large number of users and access to the server is (partially) restricted-management of usernames, passwords, logging of activities etc. requires very efficient, secure and robust procedures.
- Content which changes rapidly and dependent on many information sources-procedures should be highly automated.

The companies must implement a firewall to ensure that servers on a privet network are safe from unauthorized access (from public networks). The best and only solution, which is safe enough, is to set up a separate Local Area Network (LAN) for public accessible servers. On the border of a privet network and publicly opened a router must be placed and the necessary filters set up. Another router, sometimes called a firewall or a screening router, separates the publicly opened network from the Internet and implements another set of filters.

Another mechanism regarding firewalls is proxy's servers, which run a host on a publicly opened LAN. A proxy prevents clients on a privet LAN from directly accessing the Internet, this is especially important when clients also act as servers. When a publicly opened LAN is accessible through dial-up lines, additional mechanisms must be used, just like authentication using passwords or another suitable mechanism.

The only secure way to connect to the Internet is to implement a combination of all the security mechanisms we mentioned. The level of the security depends on the transaction volumes of a business, which uses the Internet, and on the possible threats expected. When the Internet is used as a medium for company presentation and free informational service, the security level can be a bit lower. With real commercial use of the Internet the most importantly all the mechanisms should be implemented in standardized way.

CONCLUSION

There is only one fact companies must be aware when considering the Internet as a medium for commerce to be ready and plan its business taking into consideration that the Internet will be an integral part of its future activities. Although the paper has talked about using the Internet as a support mechanism in pre and post sales phases of the business processes, it is important to mention that one relatively secure and useful way for using the Internet as a medium explained by connecting private LAN in order to build virtual privet network, in such case it is possible to implement all security mechanisms, including encryption, and ensure interoperability among

members of the virtual network. This paper has presented the possibilities that the Iraqi companies face when introducing new electronic media supported their commerce, paying particular attention to the Internet as an infrastructure.

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