

## E-COMMERCE

### UNIT- I & II

#### E-COMMERCE

E-Commerce is the ability of a company to have a dynamic presence on the Internet which allowed the company to conduct its business electronically, in essence having an electronic shop. Products can be advertised, sold and paid for all electronically without the need for it to be processed by a human being.

Due to the vastness of the internet advertising and the website can be exposed to hundreds of people around the world for almost nil cost and with information being able to be changed almost instantly the site can always be kept up to date with all the latest products to match with consumers demands.

The biggest advantage of E-Commerce is the ability to provide secure shopping transactions via the internet and coupled with almost instant verification and validation of credit card transactions. This has caused E-Commerce sites to explode as they cost much less than a store front in a town and has the ability to serve many more customers.

In the broad meaning electronic commerce (E-Commerce) is a means of conducting business using one of many electronic methods, usually involving telephones, Computers (or both). E-Commerce is not about the technology itself, it is about doing business using the technology.

#### DEFINITION OF E-COMMERCE

"Electronic commerce (e-commerce) is often thought simply to refer to buying and selling using the Internet; people immediately think of consumer retail purchases from companies such as Amazon. But e-commerce involves much more than electronically mediated financial transactions between organizations and customers. Many commentators refer to e-commerce as all electronically mediated transactions between an organization and any third party it deals with. By this definition, non-financial transactions such as customer requests for further information would also be considered to be part of e-commerce."

"When evaluating the strategic impact of e-commerce on an organization, it is useful to identify opportunities for buy-side and sell-side e-commerce transactions. Since systems with different functionalities will need to be created in an organization to accommodate transactions with buyers and with suppliers. **Buy-side e-commerce** refers to transactions to procure resources needed by an organization from its suppliers. **Sell-side e-commerce** refers to transactions involved with selling products to an organization's customers. So e-commerce transaction between organizations can be considered from two perspectives: sell-side from the perspective of the selling organization and buy-side from the perspective of the buying organization."

#### DEFINITION OF E- BUSINESS

"E-business (e'biz'Nis) – the transformation of key business processes through the use of Internet technologies". The key business processes referred to in the IBM definitions are the organizational processes or units in the centre. They include research and development, marketing, manufacturing and inbound and outbound logistics. The buy-side e-commerce transactions with suppliers and the sell-side e-commerce transactions with customers can also be considered to be key business processes.

The majority of Internet services are available to any business or consumer that has access to the Internet. However, many e-business applications that access sensitive company information require access to be limited to qualified individuals or partners. If information is restricted to employees inside an organization, this is an **intranet**. If access is extended to some others, but not everyone beyond the organization, this is an **extranet**. Whenever you log-on to an Internet

service such as that for an e-retailer or online news site, this is effectively an extranet arrangement, although the term is most often used to mean a business-to-business application

## **BENEFITS OF E-COMMERCE**

### **Access to A Global Market**

The internet allows companies to have access to a global market rather than just the potential customers in the surrounding area of their physical location. Due to the fact that the website is open 24-hours a day (more below) time differences between countries are no longer a problem, you wouldn't have to get up early in America to order something in England anymore.

### **Cutting Out The Middleman**

Businesses can sell direct to the consumer rather than having to sell to a supplier and then them sell it on, this means the company can usually offer the product at a discount compared to their retailers because only one company has to make profit rather than two or more.

### **A Level Playing Field**

A small business can compete and show itself as a professional company as much as large ones as budgets for setting up a professional site are relatively cheap to the amount of return you can get on them.

### **Open 24 Hours a Day**

With fully automated payment and order processing systems your site need never be closed even if your office/warehouse is. Orders can be dispatched during opening hours while orders can be taken 24 hours a day, this has great advantages for people who might be at work or busy during normal working hours of some shops.

### **Greater Customer Satisfaction**

An E-Commerce website can be a powerful tool for building customer loyalty if it is effective enough, a well designed website puts the customer in charge of the relationship, they can buy, browse, ask for help or track the progress of order they have placed where they want and when they want.

### **Reduced Marketing Costs**

Word of mouth can be incredibly powerful on the Web through e-mail recommendations and search engine rankings. You can achieve a great deal through growth by treating customers well, keeping them informed about your activities and benchmarking yourself against competitors. Also with the internet advertisement being relatively cheap you can reach many more people at a cheaper cost than using convention advertising methods.

### **Better Customer Information**

You can quickly and easily analyze your customers by location and area as well as the products they buy as you will have to request a customer's name and address from them when processing a transaction. As well as you being more informed about your customers, your customers are also more informed as generally on E-Commerce sites there is more information on a product including reviews etc to help customers choose the right product for them. This works in the best interest for the site as it cuts down on the amount of returned goods.

### **Security**

Most E-Commerce suits offered by companies come with built in security in the software and with the purchase of a decent SSL certificate and some good server configuration you can safely know that all the details of your customers will be safe and secure.

You can get approved certificates to show that your site is secure and meets up the certain standards; this lets your customers know that they are safe to shop at your site and the data will not end up in the wrong hands. Also sensitive information such as credit card numbers are usually automatically processed so do not require any staff at the company to see them, making purchasing online even more secure.

## E-COMMERCE ADVANTAGES

E-commerce provides many new ways for businesses and consumers to communicate and conduct business. There are a number of advantages and disadvantages of conducting business in this manner.

- **Being able to conduct business 24 x 7 x 365.** E-commerce systems can operate all day every day. Your physical storefront does not need to be open in order for customers and suppliers to be doing business with you electronically.
- **Access the global marketplace.** The Internet spans the world, and it is possible to do business with any business or person who is connected to the Internet. Simple local businesses such as specialist record stores are able to market and sell their offerings internationally using e-commerce. This global opportunity is assisted by the fact that, unlike traditional communications methods, users are not charged according to the distance over which they are communicating.
- **Speed.** Electronic communications allow messages to traverse the world almost instantaneously. There is no need to wait weeks for a catalogue to arrive by post: that communications delay is not a part of the Internet / e-commerce world.
- **Market space.** The market in which web-based businesses operate is the global market. It may not be evident to them, but many businesses are already facing international competition from web-enabled businesses.
- **Opportunity to reduce costs.** The Internet makes it very easy to 'shop around' for products and services that may be cheaper or more effective than we might otherwise settle for. It is sometimes possible to, through some online research, identify original manufacturers for some goods - thereby bypassing wholesalers and achieving a cheaper price.
- **Computer platform-independent.** Many, if not most, computers have the ability to communicate via the Internet independent of operating systems and hardware. Customers are not limited by existing hardware systems.
- **Efficient applications development environment** - 'In many respects, applications can be more efficiently developed and distributed because they can be built without regard to the customer's or the business partner's technology platform. Application updates do not have to be manually installed on computers. Rather, Internet-related technologies provide this capability inherently through automatic deployment of software updates.
- **Allowing customer self service and 'customer outsourcing'.** People can interact with businesses at any hour of the day that it is convenient to them, and because these interactions are initiated by customers, the customers also provide a lot of the data for the transaction that may otherwise need to be entered by business staff. This means that some of the work and costs are effectively shifted to customers; this is referred to as 'customer outsourcing'.
- **Stepping beyond borders to a global view.** Using aspects of e-commerce technology can mean your business can source and use products and services provided by other businesses in other countries. This seems obvious enough to say, but people do not always consider the implications of e-commerce. For example, in many ways it can be easier and cheaper to host and operate some e-commerce activities outside Australia.
- **A new marketing channel.** The Internet provides an important new channel to sell to consumers. Peterson et al. (1999) suggest that, as a marketing channel, the Internet has the following characteristics:
  - ✓ The ability to inexpensively store vast amounts of information at different virtual locations.
  - ✓ The availability of powerful and inexpensive means of searching, organizing, and disseminating such information.
  - ✓ Interactivity and the ability to provide information on demand.
  - ✓ The ability to provide perceptual experiences that are far superior to a printed catalogue, although not as rich as personal inspection.
  - ✓ The capability to serve as a transaction medium.
  - ✓ The ability to serve as a physical distribution medium for certain goods (e.g., software) relatively low entry and establishment costs for sellers.

- ✓ No other existing marketing channel possesses all of these characteristics.

## DISADVANTAGES

- **Time for delivery of physical products.** It is possible to visit a local music store and walk out with a compact disc or a bookstore and leave with a book. E-commerce is often used to buy goods that are not available locally from businesses all over the world, meaning that physical goods need to be delivered, which takes time and costs money. In some cases there are ways around this, for example, with electronic files of the music or books being accessed across the Internet, but then these are not physical goods.
- **Physical product, supplier & delivery uncertainty.** When you walk out of a shop with an item, it's yours. You have it; you know what it is, where it is and how it looks. In some respects e-commerce purchases are made on trust. This is because, firstly, not having had physical access to the product, a purchase is made on an expectation of what that product is and its condition. Secondly, because supplying businesses can be conducted across the world, it can be uncertain whether or not they are legitimate businesses and are not just going to take your money. It's pretty hard to knock on their door to complain or seek legal recourse! Thirdly, even if the item is sent, it is easy to start wondering whether or not it will ever arrive.
- **Perishable goods.** Forget about ordering a single gelato ice cream from a shop in Rome! Though specialized or refrigerated transport can be used, goods bought and sold via the Internet tend to be durable and non-perishable: they need to survive the trip from the supplier to the purchasing business or consumer. This shifts the bias for perishable and/or non-durable goods back towards traditional supply chain arrangements, or towards relatively more local e-commerce-based purchases, sales and distribution. In contrast, durable goods can be traded from almost anyone to almost anyone else, sparking competition for lower prices.
- **Limited and selected sensory information.** The Internet is an effective conduit for visual and auditory information: seeing pictures, hearing sounds and reading text. However it does not allow full scope for our senses: we can see pictures of the flowers, but not smell their fragrance; we can see pictures of a hammer, but not feel its weight or balance. Further, when we pick up and inspect something, we choose what we look at and how we look at it. This is not the case on the Internet. If we were looking at buying a car on the Internet, we would see the pictures the seller had chosen for us to see but not the things we might look for if we were able to see it in person.
- **Returning goods.** Returning goods online can be an area of difficulty. The uncertainties surrounding the initial payment and delivery of goods can be exacerbated in this process. Will the goods get back to their source? Who pays for the return postage? Will the refund be paid? Will I be left with nothing? How long will it take? Contrast this with the offline experience of returning goods to a shop.
- **Privacy, security, payment, identity, contract.** Many issues arise - privacy of information, security of that information and payment details, whether or not payment details (e.g. credit card details) will be misused, identity theft, contract, and, whether we have one or not, what laws and legal jurisdiction apply.
- **Defined services & the unexpected.** E-commerce is an effective means for managing the transaction of known and established services, that is, things that are everyday. It is not suitable for dealing with the new or unexpected. For example, a transport company used to dealing with simple packages being asked if it can transport a hippopotamus, or a customer asking for a book order to be wrapped in blue and white polka dot paper with a bow. Such requests need human intervention to investigate and resolve.
- **Personal service.** Although some human interaction can be facilitated via the web, e-commerce can not provide the richness of interaction provided by personal service. For most businesses, e-commerce methods provide the equivalent of an information-rich counter attendant rather than a salesperson. This also means that feedback about how people react to product and service offerings also tends to be more granular or perhaps lost using e-commerce approaches.
- **Size and number of transactions.** E-commerce is most often conducted using credit card facilities for payments, and as a result very small and very large transactions tend not to be conducted online. The size of transactions is also impacted by the economics of transporting physical goods. For example, any benefits or conveniences of buying a box

of pens online from a US-based business tend to be eclipsed by the cost of having to pay for them to be delivered to you in Australia. The delivery costs also mean that buying individual items from a range of different overseas businesses is significantly more expensive than buying all of the goods from one overseas business because the goods can be packaged and shipped together.

## **IMPLICATIONS OF E-COMMERCE**

When using the Internet and E-Commerce it is important to remember that there are many legal, moral and ethical issues to consider.

### **Ethical & Morel Implications**

Businesses entering the e-commerce world will be facing a new set of ethical challenges. It is easy for businesses to become sidetracked in the technical challenges of operating in this way and to pay little attention to the ethical implications.

There are many ethical implications for businesses to run into that would normally be addressed when doing business face to face, for example selling tobacco and alcohol to an under age minor over the internet, this is impossible to regulate easily and affectively as it would be if the person walked into a store, not only is this unethical but it is also illegal.

Another case of this was a case when a community pharmacy decided to start up an E-Commerce site, of course here there was plenty of Morel and Ethical decisions to be made here, as Pharmaceuticals are different from other items of commerce, particularly in that they should only be used as and when they were required.

Obviously there any a list of items that have Morel & Ethical decisions to be made about them being sold online such as Weight Loss Pills, which could be flown in from America and taken by someone with a high risk of heart attacks and suffers from one. You could say that cases like these the person shouldn't be so stupid, but then again isn't it unethical and immoral to sell these items on the bases that you know that could happen?

### **Legal Implications**

The central issues of E-Commerce and the law include the development of E-Commerce, the role of consumers and regulation of e-commerce in regards to consumer protection-commerce is a new way of conducting business that takes place on the Internet, it has become an important way in which consumers purchase goods across the world as well as due to internet technology progressing rapidly in the last few years. Although E-Commerce has a big effect on the global trade, governments also have a large effect on the growth of E-Commerce on the internet by regulating is accordingly. As Governments set regulations for E-Commerce organizations managers are starting to worry if the regulations will be too tight or may reduce the market in the online trade.

### **Security Implications**

There are a few security implications that come about when setting an E-Commerce website, especially when handling sensitive information such as credit card information and personal details such as address. Many parts will have to be protected well including communication between the customer and the website server and the server itself from any hacker trying to intercept information or from trying to retrieve existing information from databases.

### **Customer & Server**

to secure data between the customer and the web server there is a system called SSL (Secure Socket Layer) which encrypts the information between them so no one else can read it. The theory of it is quite basic and uses the following steps:

User want to send data to the server, before it leaves it is encrypted with a unique key for the session. The server receives this information then encrypts the information one more time this time using its own unique session; this is completely different from the user's unique key. It then sends back the data.

The users' computer now unlocks the data with the key it locked it with earlier; the data is still encrypted but now only with the server's key. The user's computer then sends the data back. The server then receives this information and unlocks it with its key and now has the unencrypted data of what the user was sending to the server. This type of encryption comes in different strengths depending on the SSL certificate you purchase for your server, you can get certificates from 40-bit encryption up to 256-bit encryption.

### **Server Security**

As well as security between the consumer and server there is also security needed on the server(s) as well, especially if sensitive information is stored under customers accounts, such as credit card information and other personal information.

Servers will have to be protected to withstand any hack attempts to retrieve the information that is stored. Prevention measures such as firewalls, checking for root kits, antivirus systems and others should be put in place, as well as encryption of the data if possible so should a hacker gain entry the information he see's is useless to him or her.

## **MOBILE COMMERCE**

M-commerce (mobile commerce) is the buying and selling of goods and services through wireless handheld devices such as cellular telephone and personal digital assistants (PDAs). Known as next-generation e-commerce, m-commerce enables users to access the Internet without needing to find a place to plug in. The emerging technology behind m-commerce, which is based on the Wireless Application Protocol (WAP), has made far greater strides in Europe, where mobile devices equipped with Web-ready micro-browsers are much more common than in the United States.

Using Bluetooth technology, smart phones offer fax, e-mail, and phone capabilities all in one, paving the way for m-commerce to be accepted by an increasingly mobile workforce.

As content delivery over wireless devices becomes faster, more secure, and scalable, there is wide speculation that m-commerce will surpass wire line e-commerce as the method of choice for digital commerce transactions. The industries affected by m-commerce include:

Financial services, which includes mobile banking (when customers use their handheld devices to access their accounts and pay their bills) as well as brokerage services, in which stock quotes can be displayed and trading conducted from the same handheld devices. Telecommunications, in which service changes, bill payment and account reviews can all be conducted from the same handheld devices. Information services, which include the delivery of financial news, sports figures and traffic updates to a single mobile device.

## **E-COMMERCE IN LEGAL ASPECT**

### **Trademark**

The trademark act, or "Lanham Act", 18 USC Sec. 1051 etc. is meant to ensure that consumers can correctly identify the sources of goods or services. A trademark is a word, phrase, symbol or design, or combination of words, phrases, symbols or designs, which identifies and distinguishes the source of particular goods. A service mark is the same as a trademark, except that it identifies and distinguishes the source of a service rather than a product.

Normally, a mark for goods appears on the product or its packaging, while a service mark appears in advertising for the services. A "tm" on a product indicates unregistered (common law) trademark rights, and an "®" indicates a registered mark. It is illegal to place an "®" on a mark that does not have national registration. As your domain name and you're branding is valuable, you should think in terms of trademark registration. This can be done later in the business

process once you have more revenue available, but it is important to consider it upfront in choosing your domain name, company name, and product and/or service name.

You don't want to use a name which is someone else's trademark, as they could sue you to stop your use, including taking the domain name. At the minimum, go to [www.uspto.gov](http://www.uspto.gov) and run a trademark search for the names you're considering -- at least to get an idea of how many other folks there are who could possibly have a claim to the mark you intend to use.

Be aware that getting few or no results does not mean that you're in the clear, due to the complexities of trademark law, and the fact that the USPTO database runs a year behind. However, taking these steps will still lower your risk.

When trying to determine whether you've picked a good name in relation to others' marks, remember that the point of trademark law is to prevent consumer confusion about the source of goods or services. Ask yourself whether a consumer would confuse your name with that of another product, service or company.

### **Copyright**

Copyright can be important when you obtain content for your site, and in the protection of your site's content. The owner of a copyright has the exclusive right:

- to copy the work
- to modify the work (create "derivative works")
- to distribute the work
- to perform the work publicly
- to display the work publicly

Copyright arises upon the creation of a copyrightable works (typically substantial text, images, music, etc.). Facts, titles, recipes, form designs, alphabetical lists and other items do not have the required "originality" to merit copyright protection.

You are not required to register works to have copyright protection, however if you do register your materials, you preserve the fact that they are yours as of the date of registration, and you gain more rights under Copyright law, such as being able to win attorneys' fees and, sometimes, higher damages. The term "Public Domain" does not mean that everything in public or on the Internet is freely usable. It refers to items that either does not qualify for copyright protection under the law, or for which the protection has expired.

When you buy content for your Website or business, the best approach is to obtain a warranty from the seller or licensor stating that the seller owns all the rights in it and agrees to indemnify you (i.e. pay you for the costs) if someone else sues you for using the content. Large content providers should be willing to do this, and many small ones will be also. If not, you'll have to hope for the best and take the risk. If you create content, be sure to have your creator sign a contractor agreement with the language required under the Copyright Act so that you own the work product. If you don't, the creator will own the copyrights to the works.

### **Incorporation**

Why Incorporate? Incorporation means that your company is a separate legal and financial entity from yourself. It even has its own social security number for tax purposes, called a Federal Tax ID. Most people incorporate to limit their personal liability so that their personal assets are not at

risk for debts of the corporation. For example, if your incorporated company was sued and lost the suit, the winner could not take your personal car or home.

Plus, of course, incorporating makes you look more professional, and often helps with your taxes. Also, if you plan to receive investment in your company, have employees, and grow to be more than a one-person show, incorporation is an important step that helps promote these future goals. While incorporation protects you in many regards, it does not protect you from any criminal charges by you or the corporation, which can come into play if, for instance, you run an adult or gambling business on the Internet.

### **E-COMMERCE IN TAXATION**

The development of electronic commerce (herein after referred to as EC) can be said to be the greatest event in the history of mankind, next only to the Industrial Revolution of the early 20th century. Whereas Europe and United States were the main beneficiaries of the industrial revolution, there are clear indications that India along with United States and China would be the major beneficiaries of the EC Revolution. The huge pool of technological manpower is at the basis of this indication.

The development of EC modifies the way of doing business. For centuries, traditional business around the world has been based on two concepts:-

#### **1. Physical presence**

#### **2. Physical delivery of goods and services**

Today physical presence is no longer necessary to perform activities (i.e., commercial transactions are no longer defined by geographical boundaries) and physical transactions are replaced by bytes of data. Since EC can be conducted virtually instantaneously around the globe and around the clock, the question where the profits should be taxed becomes crucial. Taxing the Internet is a topic that makes global headlines, everyday. The lure of setting out national tariffs for every byte of data that follows and taxing every product traded hopes to herald a new economy for the taxman. Most governments are alarmed at the extreme growth of the internet, and they should be, as the Net is the largest free information system the world has ever seen.

### **E-COMMERCE IN SECURITY**

A secure system accomplishes its task with no unintended side effects. Using the analogy of a house to represent the system, you decide to carve out a piece of your front door to give your pets' easy access to the outdoors. However, the hole is too large, giving access to burglars. You have created an unintended implication and therefore, an insecure system.

In the software industry, security has two different perspectives. In the software development community, it describes the security features of a system. Common security features are ensuring passwords that are at least six characters long and encryption of sensitive data. For software consumers, it is protection against attacks rather than specific features of the system.

Your house may have the latest alarm system and windows with bars, but if you leave your doors unlocked, despite the number of security features your system has, it is still insecure. Hence, security is not a number of features, but a system process. The weakest link in the chain determines the security of the system.

Confidentiality allows only authorized parties to read protected information. For example, if the postman reads your mail, this is a breach of your privacy. Integrity ensures data remains as is from the sender to the receiver. If someone added an extra bill to the envelope, which contained your credit card bill, he has violated the integrity of the mail. Availability ensures you have access and are authorized to resources. If the post office destroys your mail or the postman takes one year to deliver your mail, he has impacted the availability of your mail.

## UNIT - IV

### **MEANING OF ELECTRONIC CASH**

what is electronic cash, or what is digital cash is a question that many are not clear on. Let's take a look at a simple explanation of this. A few decades ago people used to go to bank and stand in a line to deposit or withdraw money from their bank accounts. Today, it is possible for anyone to access money in their bank account with the help of a computer. This is possible because the monetary value of your bank balance is stored electronically on the computers of your bank. This electronic form of money is referred to as electronic cash or digital cash. Electronic cash boosts your purchasing power by making your money available to you 24x365. One can spend this digital money by accessing it online or offline.

### **ONLINE USE OF ELECTRONIC CASH**

Electronic cash technology uses computers, local area networks, and the Internet for the transfer of money paid in exchange of services obtained. This process involves 3 entities: the buyer, the seller, and the service provider. Using this technology, money can be transferred online or offline. There are certain organizations such as Eagle Cash Technology (E-Cash), Octopus Card System, etc. which facilitate a secure transfer of money over the Internet between the seller and buyer. This enables one to do Internet shopping and enter in a transaction over the Internet while sitting in his house or office, in fact, from anywhere in the world. This saves time and physical efforts that one has to put in while physically going out and buying a ticket for air travel or for a movie, etc.

Within the Internet, dedicated local area networks and computers control the flow of digital or electronic cash between the entities or the bank accounts of the same person - this form of money exists as bits and bytes inside computers memory. Electronic cash transfer systems depend on cryptology and the use of private and public keys for the encryption and decryption of the information that represents one's demand for transfer of money. It also uses digital signatures to verify the authenticity of source of demand.

### **OFF LINE USE OF ELECTRONIC CASH**

can you recall when you last visited your bank personally? If you remember the day when you queued to deposit a check or withdraw some money from your bank account, then most probably you don't use a debit or credit card. These cards have a microchip embedded in them that stores the user's latest bank account information. Whenever a user makes use of credit or debit card to pay for his or her purchases, information in the chip is updated offline. Use of these cards have liberated people from carrying physical or paper money, and for this reason the term 'plastic money', was coined to describe electronic cash used through these cards. Use of these smart cards makes written checks, and withdrawal and deposit slips redundant. Automatic Teller Machines (ATMs) are important for the off-line use of electronic cash and using which one can use his credit or debit cards to withdraw money.

### **ADVANTAGES OF ELECTRONIC MONEY**

- **Online Electronic Money**
  1. Anonymity and intractability can be maintained: User Ids are kept highly confidential.
  2. No issues regarding "Double spending": Real-time checking of all transactions makes the possibility of multiple expenditures negligible.
  3. No requirement of additional secure hardware: Existing POS (point of sale) hardware can be updated and used.
- **Offline Electronic Money**
  1. Portable: This system is fully offline and portable.
  2. Anonymity unless double spending: The user is anonymous unless he commits a double expenditure.
  3. Detection of Double Spender: The bank can effectively detect a double spender.

## DISADVANTAGES OF ELECTRONIC MONEY

- **Online Electronic Money**
  1. Communication Overheads: Security and anonymity cost become a bottleneck of the system. This can happen at times during real-time verifications.
  2. Massive Databases: The bank will have to maintain a detailed and confidential database.
  3. Synchronization: The bank needs to synchronize its server every time transaction is made. It would be insanely impractical to maintain.
- **Offline Electronic Money**
  1. Prevention may not be Immediate: Double spending may not be prevented effectively and immediately.
  2. Implementation Expenditure: The required additional hardware is quite costly to install.

There is another con to consider. E-transactions depend a lot on technology. Hence, power failure, unavailability of internet connection, undependable software and loss of records could be a hindrance in your way.

**Online digital cash** means interacting with a bank, either via a modem or network, in order to transact with a third party. **Offline digital cash** lets consumers complete a transaction without involving a bank directly. **Offline anonymous digital cash** is therefore the most complicated type of digital cash as it may be very easy to copy, and then spend both the original and the copy. Real digital cash systems must prevent this duplication; otherwise we could all get rich quickly!!

Online systems require that merchants **must** contact the bank's system with each sale. The bank stores information on all digital cash that it has handled and can therefore indicate whether a piece of digital cash is still 'good'. If the bank finds that the digital cash has already been spent it will alert the merchant who can then refuse the sale. This system has similarities to credit card verification systems.

There are currently two ways in which offline digital cash systems can help prevent duplication of the e-cash. The first is to produce a tamper-proof smart card which keeps track of the digital cash spent and will detect any attempt to duplicate digital cash and not allow it. If this smart card is tampered with, it would permanently damage the card. The second way is to encrypt the digital cash duplicated to identify the individual by the time the digital cash reaches the bank.

The difference between offline anonymous digital cash and **offline identified digital cash** is that the anonymous digital cash can only be traced if the digital cash is duplicated and spent. If this is not the case then the original spender cannot be determined. However, with identified offline digital cash, the trail can always be traced and the bank will always know who bought what, where, and when. And if the bank knows - the tax man does too.

## SECURITY FOR E-CASH

E-Cash is a payment system designed and implemented for making purchases over open networks such as the Internet. We review some of the main cryptographic techniques used throughout The ecash system. Behind the scenes banks, credit-card companies, and other financial institutions have been processing transactions electronically for several decades now. Two Important developments that will open up the field of electronic payment systems are now

taking place. First, the prospect of electronic commerce over the Internet is creating a large demand for electronic payment methods for open Networks. Second, the introduction of nation-wide electronic purse schemes is Creating many more places and situations where smart cards can be used for Cost-effective off-line payments.

Electronic coins possess similar properties as metal coins, among which is the unique feature that a payment transaction leaves no trace about? The identity of the payer. Currently, ecash technology is used by a number of banks around the globe. These banks issue ecash to their customers, who can then spend it at affiliated merchants on the Internet.

Payment by instruction vs. prepaid electronic cash in so-called payment by instruction type of systems, a payer basically orders the bank to move a sum of money from her account into a payee's account. Examples in this category are Credit and debit cards as well as many forms of cheques. The moment at which the money is actually moved from the payer's account into the payee's account Depends on the system, but at all times banks and credit card companies will Try to prevent discrepancies between accounts.

The central security aspect in these systems is to ensure that only legitimate Account holders are able to issue payment instructions. Of course, digital Signatures are the solution for doing this over a large, open network such as The Internet.

Prepaid systems are conceptually close to electronic equivalents of cash. Telephone Cards, smart card based systems, as well as ecash fall into this category. The user's account is debited as soon as the card or device is reloaded with Electronic cash. During payments the electronic cash is released again and only then the payee's account will be credited. In the mean time the issuer keeps a Float corresponding to the outstanding cash.

The central security aspect in this type of system is to ensure that cards or representations of cash cannot be forged. When forgery happens, the float will ultimately be insufficient to credit all of the payees' accounts for received Payments. Of course, it should also be ensured that only legitimate account Holders can reload cash from their accounts. However, this security aspect is now limited to the infrequent withdrawal protocol, and is no part anymore of the more frequent payment protocol.

On-line vs. off-line in the field of electronic payment systems, the notions online and off-line refer to a specific property of the payment protocol. Although the payment protocol is functionally a protocol between two parties (payer and Payee) many payment systems require that the payee contacts a third party.

(E.g. The bank or the credit-card company acting as an acquirer) before accepting a Payment. If that is the case, the system is called an on-line payment system; the Communication between a payee and its acquirer may be using any communication Medium (not necessarily the Internet). If such a contact with a third party is not required during the payment protocol, the system is called off-line. In an off-line system payees are required to contact their acquirer on a regular basis for clearing all received payments.

Withdrawal By means of the withdrawal protocol, users are able to convert money from their ecash accounts into ecash coins. Access to the ecash account is only possible if the user is able to sign the withdrawal request, where the signature is checked against the public key registered with the ecash account.<sup>1</sup> The coins obtained in a withdrawal are stored on the user's hard disk. By default the coins are stored in a password-encrypted manner to prevent them from being stolen (copied).

Payment to pay a certain amount, a set of coins is selected such that the values add up to the required amount. In the on-line ecash system, this set of coins is then encrypted for the bank, using the bank's public key, to prevent that the shop or anybody else can steal (copy) the coins. The shop deposits the payment at the bank, who credits the shop's ecash account if all coins are valid and none of the coins has been spent before. Accepted coins are added to the database of Spent coins so that double-spending will be detected.

Payment deposit in the on-line ecash system this protocol is part of the payment protocol as executed by the shop. In an off-line ecash system this protocol is executed at a later moment, preferably in batch mode. An important property of the payment protocol is that the payment deposit is made specific to the payee. That is, a payment deposit for a specific payee cannot be deposited to any other account than the account of the specified payee.

### **DEFINITION OF E-WALLET**

An encrypted storage medium holding credit card and other financial information that can be used to complete electronic transactions without re-entering the stored data at the time of the transaction. The main objective of e-Wallet is to make paperless money transaction easier. The electronic wallet (e-Wallet) is just like a leather wallet as it does the same, in terms of e-cash.

In today's life where monetary value and security both, go hand in hand, it is difficult to satisfy customers using the routine cards. The main idea behind this topic is to bring in a cheaper, more versatile and much more easily usable kind of a card.

### **FEATURES OF E-WALLET**

More than 40 years of data retention.  
 Firewall encrypted security logic.  
 Compatible with many supporting hardware.  
 No separate card reader is required to access our card.  
 Polarity reversal indicator is pre-built in our card.  
 Reusability of our card is unlimited.  
 Multiple card features are incorporated in the same card.  
 External complexities are less.  
 Example for transaction.  
 Refillable  
 Infinite lifetime  
 Current balance can be stored and read  
 User authentication is provided  
 Universal access  
 Maximum possible cash  
 cannot be duplicated

### **ADVANTAGES OF E-WALLET**

Withdraw or deposit value by telephone.  
 No signature required.  
 Immediate payment.  
 In the future, access points may include mobile phones.  
 Accessibility and convenience  
 Cash machines and telephones give more access points to funds in bank account.  
 Available 24 hours / 365 days.  
 Cash machines and telephones cannot run out of electronic cash.  
 Flexibility  
 Transfer value by telephone.  
 Pay person to person.  
 For low or high values.  
 Multi-currency capability.  
 No age limit, so suitable for all the family.  
 Safety and control  
 spend only what you have.  
 Read your balance.  
 Load value at home.  
 Lock your card or wallet.  
 Keep track of what you have spent and where Customer is traceable if a lost card is found.

## MICROSOFT.NET PASSPORT

Also called the Passport Network, Microsoft Net Passport is a Web-based service that lets users of participating Web sites sign in using a single e-mail address and password. It removes the need for users to remember multiple login IDs and passwords. Windows Live ID also works with Passport Network sites.

NET Passport provides you with personalized access to Passport-enabled services and Web sites by using your e-mail address. Passport implements a single sign-in service that allows you to create a single user name and password. Once you have a Passport, you will have only one name and password to remember, and you will be able to use all NET Passport-enabled services.

You can store information about yourself in your sign-in profile, so you will not have to retype it when you use .NET Passport-enabled services. NET Passport helps protect your information through the use of powerful encryption technology and comprehensive privacy practices, and you are always in control of the services that have access to your personal information, including your e-mail and mailing addresses, as described in the .NET Passport Privacy statement. .NET Passport also takes steps to help protect your privacy on public or shared computers. You can obtain a passport through the .NET Passport Wizard in User Accounts. Open the .NET Passport Wizard.

## MICRO PAYMENT MECHANISM

A **micro payment** is a [financial transaction](#) involving a very small sum of money and usually one that occurs [online](#). [Pay Pal](#) defines a micro payment as a transaction of less than 12 [USD](#) while [Visa](#) prefers transactions under 20 [Australian dollars](#), and though micro payments were originally envisioned to involve much smaller sums of money, practical systems to allow transactions of less than 1 USD have seen little success.

One problem that has prevented their emergence is a need to keep costs for individual transactions low, which is impractical when transacting such small sums even if the transaction fee is just a few cents. Micro payments were initially devised as a way of allowing the sale of online [content](#) and were envisioned to involve small sums of only a few cents. These transactions would enable people to sell content on the Internet and would be an alternative to advertising revenue.

During the late 1990s, there was a movement to create micro transaction [standards](#), and the [World Wide Web Consortium](#) (W3C) worked on incorporating micro payments into [HTML](#), even going as far as to suggest the embedding of payment-request information in [HTTP error codes](#). The W3C has since stopped its efforts in this area. And micro payments have not become a widely used method of selling content over the internet.

## STORED VALUE CARDS

A stored value card (SVC) is a credit card-sized plastic card with an integrated circuit embedded in it. This embedded circuit allows the card to store information and perform certain transactions when inserted into special devices designed to read and process the cards. Transaction security can range from low to high, depending on the pre-determined application of the card. Although stored value cards can be used to support a variety of applications and perform a variety of functions, the ones supported by the U.S. Department of the Treasury are used primarily to perform financial transactions.

### **MAGNETIC STRIP CARDS**

The magnetic stripe reader is a point-of-sale (POS) device that interprets data encoded on a Magnetic stripe card, usually a credit card, debit card, or gift card. About a hundred characters of Information can be stored on a magnetic card, depending on whose formatting system is used.

Millions of magnetic stripe and check reader devices are used worldwide, mostly for security and Financial transactions but also in financial institutions, retail stores, telecommunication companies, Kiosks, gaming, transit companies, schools, clubs, and sports and recreation facilities for Identification and transportation purposes.

Magnetic stripe readers come in different models and sizes. A magnetic stripe reader is designed to Read credit card information directly into a POS program. They also come in various interface Formats, such as RS-232, USB, and proprietary keyboard interfaces.

Magnetic stripes, also called magnetic stripes, come in two types: high-coercively and low-coercively. High-coercively magnetic stripes are harder to erase and are consequently appropriate for cards that are used frequently and must be durable. Low-coercively magnetic stripes require less magnetic energy to record and the card writers are cheaper than machines that record high-coercively magnetic stripes.

A card reader can read either type of magnetic stripe, but a high-coercively card writer can write only high-coercively cards and a low-coercively card writer can write only low-coercively cards. The magnetic stripe in most cards is contained in a plastic type of film 0.375 inches (9.52 mm) wide Located 0.223 inches (5.66 mm) from the edge of the card.

Magnetic stripe readers are used in high-volume mass transit applications, replacing paper tickets With either a directly applied magnetic slurry or hot foil stripe. Slurry applied stripe cards are less Expensive to produce but are of lower quality. These cards would not comply with the standards for Making payments or other cards discussed here.

Due to frequent use, cards suffer from damage. Consequently, the digital recording on the stripe is In a very low-density format and is often duplicated several times in case part of the stripe becomes Damaged. The magnetic Stripe Card can store up to 245 characters of information. The Magnetic strip is divided into three parts according to international standard (parts 2, 4 And 5 of ISO7811) each of which has been designed for different applications. One of the Tracks is designated a read and write track, with updated appropriate terminal equipment. The magnetic strip card has proven to be exceedingly successful over the years.

### **SMART CARD**

A Smart Card is a card incorporating a "CHIP" or (microprocessor) which is a type of tiny computer embedded in the plastic. The metal circle visible on the outside of the card is not the microprocessor itself, but rather a unit containing its outside connections.

The chip provides the card with these advantages:

A memory for greater storage than can be provided on magnetic stripes Intelligence for exploiting this increased data. The smart card participates directly in controlling transactions; i.e. it is active not passive like the magnetic card it cannot be reproduced, nor can its code be broken.

After three wrong codes have been tried, the chip blocks any further usage of the card, which is therefore more secure than a magnetic card it stores formula within its permanent (read-only) memory which enables it to verify the authenticity of the secret code typed in by the customer it registers and memorizes the number and frequency of all transactions effected.

Integrated Circuit Cards are known as Smart Cards. These cards follow the ISO 7816 Series Standard. The most important of this Stored Card is protecting against unauthorized access and tampering. Memory functions such as reading, writing and deleting can be linked to specific conditions, controlled by both hardware and software.

Smart Card may be equipped with three types of memory depending upon the usage.

**Read Only Memory (ROM)** – Non volatile memory containing information loaded at the manufacturing stage, which can not be altered.

**Random Access Memory (RAM)** – Volatile memory, which retains its contents only while power, is applied.

**Programmable Read Only Memory (PROM)** - non-volatile memory, the contents of which can be programmed depending upon the usage.

## UNIT- V

### **E-MARKETING**

Marketing has pretty much been around forever **in one form or another**. Since the day when humans first started trading whatever it was that they first traded, marketing was there. Marketing was the stories they used to convince other humans to trade. Humans have come a long way since then, (Well, we like to think we have) and **marketing has too**.

The **methods of marketing** have changed and improved, and we've become a lot more efficient at telling our stories and getting our marketing messages out there. E-Marketing is the product of the meeting between **modern communication technologies** and the age-old marketing principles that humans have always applied.

That said, the specifics are reasonably complex and are best handled piece by piece. So we've decided to break it all down and tackle the parts one at a time. This week we'll be looking at the **"what" and "why" of e-Marketing**, outlining the benefits and pointing out how it differs from traditional marketing methods.

By the end of the series we're pretty sure you'll have everything you need to tell better marketing stories. Very simply put, **e-Marketing** or electronic marketing refers to the application of marketing principles and techniques **via electronic media** and more specifically the Internet. The terms **e-Marketing, Internet marketing** and **online marketing**, are frequently interchanged, and can often be considered synonymous.

E-Marketing is the process of **marketing a brand using the Internet**. It includes both direct response marketing and indirect marketing elements and uses a range of technologies to help connect businesses to their customers.

By such a definition, e-Marketing encompasses all the activities a business **conducts via the worldwide web** with the aim of attracting new business, retaining current business and developing its brand identity.

When implemented correctly, the **return on investment (ROI)** from e-Marketing can far exceed that of traditional marketing strategies.

Whether you're a "bricks and mortar" business or a concern operating purely online, the Internet is a force that cannot be ignored. It can be a means to reach literally millions of people every year. It's **at the forefront of a redefinition** of way businesses interact with their customers.

### **BENEFITS OF E-MARKETING**

E-marketing gives businesses of any size access to the mass market at an affordable price and, unlike TV or print advertising, it allows truly personalized marketing. Specific benefits of e-marketing include:

**Global reach** - a website allows you to find new markets and trade globally for only a small investment.

**Lower cost** - a properly planned and effectively targeted e-marketing campaign can reach the right customers at a much lower cost than traditional marketing methods.

**Track able, measurable results** - web analytics and other online metric tools make it easier to establish how effective your campaign has been. You can obtain detailed information about how customers use your website or respond to your advertising. See our guide on [measuring your online marketing](#).

**Personalization** - if your customer database is linked to your website, then whenever someone visits the site, you can greet them with targeted offers. The more they buy from you, the more you can refine your customer profile and market effectively to them.

**Openness** - by having a social media presence and managing it carefully, you can build customer loyalty and create a reputation for being easy to engage with. See our guide on [online business networking and social networking](#).

**Social currency** - e-marketing lets you create engaging campaigns using different types of rich media. On the internet these campaigns can gain social currency - being passed from user to user and becoming viral.

**Improved conversion rates** - if you have a website, then your customers are only ever a few clicks away from completing a purchase. Unlike other media which require people to get up and make a phone call, or go to a shop, e-marketing can be seamless and immediate. Together, all of these aspects of e-marketing have the potential to add up to more sales.

## E-MARKETING MIX

---

Traditionally the marketing mix is co-ordinate so efficient product, price, promotion and place strategies are developed for products purchased over the counter. The internet is changing the way we sell our products and services. That's a fact. Consumers now use the internet to research and purchase products/services online. Organization now needs online strategies to attract and retain customers. The e-marketing mix considers the elements of presenting the marketing mix online.

### E-product strategies

We walk into a shop and see a product we like, we can assess it, touch it. Online, this immediate tangibility disappears. But, is that a disadvantage? Within the uk e-commerce sales are increasing at extremely high rates. Why? What does buying products online offer over one to one sales?

Firstly there are clear online facts about the product you are purchasing. The buyer knows immediately about product features, the facts, not sales persons assumptions. [www.comet.co.uk](http://www.comet.co.uk) a UK electrical store offers clear information on products and their specification, consumers know what they get if not there is a customer service number where they can find out more.

The buying process is also customized for returning visitors, making repeat purchases easier. Organizations can also offer immediately ancillary products along with the main purchase.

For example, the chance to buy extra printer cartridges along with your purchase of your printer online. The product can also be customized to consumers needs. [www.nike.com](http://www.nike.com) offer customized trainers to users online. Users can design and see their trainers online before they order!

### **E-price strategies**

As mentioned in our marketing mix section, pricing is always difficult to do and must take into account many considerations. Traditionally pricing was about finding about your costs, discovering how much consumers are willing to pay, taking account competition pricing then setting your price. The internet has made pricing very competitive. Many costs i.e. store costs, staff cost have disappeared for complete online stores, placing price pressures on traditional retailers.

The internet gives consumers the power to shop around for the best deal at a click of a button. Website such [www.kelkoo.com](http://www.kelkoo.com) compares products from different websites informing consumers of where the best deal is. Such easy access to information helps to maintain prices within the online world.

The growth of online auctions also helps consumers to dictate price. The online auction company [www.ebay.com](http://www.ebay.com) has grown in popularity with thousands of buyers and seller bidding daily.

E-pricing can also easily reward loyal customers. Technology allows repeat visitors to be tracked, easily allowing loyalty incentives to be targeted towards them. Payment is also easy, Pay Pal's, or online credit cards use allows for easy payments. However the downside to this is internet fraud, which is growing rapidly around the world.

### **E-place strategies**

One of the biggest changes to the marketing mix is online purchasing. Consumers can purchase direct from manufacturers cutting out retailers totally. The challenge for online retailers is to ensure that the product is delivered to the consumer within a reasonable time. Location is important within our place strategy.

Online location can refer to where links are placed on other websites. Placing a link on [www.google.com](http://www.google.com) home page would generate high consumer traffic for you. Knowing your customer and knowing where they visit should help you understand where to place your online links and advertisements.

### **E-promotion strategies**

Promoting products and service online is concerned with a number of issues. Having a recognizable domain name is first stage towards e-promotion. Organization such as [egg.com](http://egg.com) has successfully positioned the brand on the online world as an online bank. Most organizations today have some form of webpage used in most if not all advertisements.

Placing banner advertisements on other WebPages is a common form of e-promotion. Banner ads must be placed where potential customers browse. Web public relations (WPR) are another approach to promoting online. News worthy stories based on product or service launches can be placed on the company's webpage, or WPR articles sent to review sites for consumers to read.

Hopefully this form of online promotion will pull the consumer in. Direct email is a popular and common form of e-promotions, although slowly becoming the most hated by many consumers. Organizations can send e-leaflets to hundreds and thousands of respondents, hoping a small percentage will reply. The problem is that for every 100 emails sent the response rate will be 1-2! Direct emailing is also known as SPAM which stands for Sending Persistent Annoying email. (SPAM). To summarize e-promotion includes:

- Banner promotions
- Web public relations (WPR)
- E-leaflets
- Having a domain name.

The e-marketing mix must work together and support each other if the company is to have a successful online marketing strategy.

## **RELATIONSHIP MARKETING**

It is a strategy designed to foster customer loyalty, interaction and long-term engagement. This customer relationship management (CRM) approach focuses more on customer retention than customer acquisition.

Relationship marketing is designed to develop strong connections with customers by providing them with information directly suited to their needs and interests and by promoting open communication. This approach often results in increased word-of-mouth activity, repeat business and a willingness on the customer's part to provide information to the organization.

Relationship marketing contrasts with transactional marketing, an approach that focuses on increasing the number of individual sales. Most organizations combine elements of both relationship and transaction marketing strategies.

**Relationship marketing** was first defined as a form of marketing developed from direct response marketing campaigns which emphasizes customer retention and satisfaction, rather than a dominant focus on sales transactions.

As a practice, relationship marketing differs from other forms of marketing in that it recognizes the long term value of customer relationships and extends communication beyond intrusive advertising and sales promotional messages.

With the growth of the internet and mobile platforms, relationship marketing has continued to evolve and move forward as technology opens more collaborative and social communication channels. This includes tools for managing relationships with customers that go beyond simple demographic and customer service data.

Relationship marketing extends to include inbound marketing efforts, (a combination of search optimization and strategic content), PR, social media and application development. Relationship marketing is a broadly recognized, widely-implemented strategy for managing and nurturing a company's interactions with clients and sales prospects.

It also involves using technology to organize, synchronize business processes, (principally sales and marketing activities), and most importantly, automate those marketing and communication activities on concrete marketing sequences that could run in autopilot, (also known as marketing sequences).

The overall goals are to find, attract and win new clients, nurture and retain those the company already has, entice former clients back into the fold, and reduce the costs of marketing and client service.

Once simply a label for a category of software tools, today, it generally denotes a company-wide business strategy embracing all client-facing departments and even beyond. When an implementation is effective, people, processes, and technology work in synergy to increase profitability, and reduce operational costs.

**Online marketing** or internet marketing is a relatively new, but rapidly expanding and fundamentally important aspect of strategic implementation. Indeed in many organizations, it may be regarded as a functional aspect of marketing strategy and certainly of the business model.

Final Touch Inc considers online marketing very different from ordinary business marketing and brings six categories of organic benefit: costs are reduced, capability is increased, communications are refined, control is enhanced, customer service is improved and competitive advantage may be achieved depending on the competitor's reaction.

### **Analysis**

Online marketing processes include not only e-marketing and sales, but supply chain and channel management, manufacturing and inventory control, financial operations and employee's workflow procedures across an entire organization.

Essentially e-business technologies empower customers, employees, suppliers, distributors, vendors, and partners by giving them powerful tools for information management and communications.

Online marketing or e-marketing is always confused with e-commerce. Any business marketing using online media is known as e-marketing, while on the other spectrum, if there is financial transaction involved with the electronic process using internet technologies, it is e-commerce.

Since a web presence is essential for a business to grow in all dimensions, a dynamic website, blog and social media activity, is the best way to develop sell your products and services to prospective local and international clients.

Customer satisfaction is the most important aspect of business development through e-marketing. There are certain online marketing tips that can truly enhance the worth of your business.

The website needs to show complete contact information, this will help customers to rely on the company that if something goes wrong, someone will be there to listen to them.

Impressive profile of products or services search engines is great idea of marketing business through online sources. Data warehousing to map customer needs that is FAQ's, auto replies, built in call back facility and queries recording is also essential in this regard. Customer relationship management CRM needs to be focused separately.

E-branding, that is, to make your site attractive through animations and slide shows inclusion.

### **EMAIL MARKETING**

It is a form of direct marketing which uses email as a means of communicating commercial or fund-raising messages to an audience. In its broadest sense, every email sent to a potential or current customer could be considered email marketing. However, the term is usually used to refer to:



Sending email messages with the purpose of enhancing the relationship of a merchant with its current or previous customers, to encourage customer loyalty and repeat business,

Sending email messages with the purpose of acquiring new customers or convincing current customers to purchase something immediately,

Adding advertisements to email messages sent by other companies to their customers and  
Sending email messages over the Internet, as email did and does exist outside the Internet.

### **ADVANTAGES**

An exact return on investment can be tracked ("track to basket") and has proven to be high when done properly. Email marketing is often reported as second only to search marketing as the most effective online marketing tactic.<sup>[2]</sup>

Advertisers can reach substantial numbers of email subscribers who have opted in (i.e., consented) to receive email communications on subjects of interest to them.

Almost half of American Internet users check or send email on a typical day, with email blasts that are delivered between 1 a.m. and 5 a.m. outperforming those sent at other times in open and click rates.

### **DISADVANTAGES**

You have heard of email marketing repeatedly on the internet, at conferences and during marketing strategy meetings. They say email marketing enriches business communications, targets specific key markets, and is both cost-effective and environmentally friendly. But what exactly is email marketing and how does it work? How is an email more effective than a radio spot or television advertisement and why should a business spending the time to maintain an email list?

Email marketing occurs when a company sends a commercial message to a group of people by use of electronic email. Most commonly through advertisements, requests for business, or sales or donation solicitation, any email communication is considered email marketing if it helps to build customer loyalty, trust in a product or company or brand recognition. Email marketing is an efficient way to stay connected with your clients while also promoting your business.

With email marketing, you can easily and quickly reach target markets without the need for large quantities of print space, television or radio time or high production costs. Thanks to effective email marketing software, you can maintain an email list that has been segmented based on several factors including the length of time addresses have been on the list, customers' likes and dislikes, spending habits and other important criteria.

Emails are then created and sent out to specifically target members of your email list, providing them with a personalized email detailing information that they are interested in or have requested. This helps promote trust and loyalty to a company while also increasing sales.

There are several examples of email marketing campaigns, starting with a welcome email that thanks that new contact for opting in to your subscription.

Welcome letters can not only give valuable information about your company, they can also request key information about your new client, helping you put the person in the correct categories for future marketing efforts. Additional email campaigns include sending out announcements on products or services, a newsletter regarding your company and/or products, coupons for future purchasing and much more.

Every email you send out should have company information on the bottom, giving potential clients a chance to learn more about your company as well as 'opt-in' to get future emails. Incentive programs that give members a 'promo code' to collect discounts on purchases also allow you to monitor the effectiveness of your campaign as well as what your contacts are interested in.

With the help of email marketing software, email marketing is an effective way to not only reach your target markets but also to stay connected with your purchasing base. Through efficient use of email marketing, you can retain current clients while also targeting new markets.

### **CUSTOMER DATABASE MANAGEMENT AND MARKETING**

It is a form of direct marketing using databases of customers or potential customers to generate personalized communications in order to promote a product or service for marketing purposes. The method of communication can be any addressable medium, as in direct marketing.

The distinction between direct and database marketing stems primarily from the attention paid to the analysis of data. Database marketing emphasizes the use of statistical techniques to develop models of customer behavior, which are then used to select customers for communications. As a consequence, database marketers also tend to be heavy users of data warehouses, because having a greater amount of data about customers increases the likelihood that a more accurate model can be built.

There are two main types of marketing databases, 1) Consumer databases, and 2) Business databases. Consumer databases are primarily geared towards companies that sell to consumers, often abbreviated as B2C or B to C. Business marketing databases are often much more advanced in the information that they can provide. This is mainly because business databases aren't restricted by the same privacy laws as consumer databases.

The "database" is usually name, address, and transaction history details from internal sales or delivery systems, or a bought-in compiled "list" from another organization, which has captured that information from its customers. Typical sources of compiled lists are charity donation forms, application forms for any free product or contest, product warranty cards, subscription forms, and credit application forms.

The communications generated by database marketing may be described as junk mail or spam, if it is unwanted by the addressee. Direct and database marketing organizations, on the other hand, argue that a targeted letter or e-mail to a customer, who wants to be contacted about offerings that may interest the customer, benefits both the customer and the marketer.

Some countries and some organizations insist that individuals are able to prevent entry to or delete their name and address details from database marketing lists.

### Customer Relationship Management (CRM) and Customer Database Management Software

---

Customer database management software stores, organizes, and analyzes customer information. That customer information can include:

Customer activity data – sales, promotions, customer support, surveys, website visits, interaction frequency

Demographic data – education levels, zip code, salary bands, age group, religious affiliation, home owner/renter, marital status, loyalty

Psychographic data (sometimes referred to as interest, attitudes, and opinions or IAO) – social class, lifestyles, behavior, opinions, values, hobbies

Customer database management software is critical to marketing professionals as they determine investments in product development, craft effective advertising messages, execute sales and marketing campaigns, understand customer satisfaction, discover trends, improve customer retention and lifetime value, and run loyalty programs.

Customer Database Management Software is part of the larger methodology of Customer Relationship Management (CRM). CRM is a strategy for managing the customer experience through the use of information about a customer, the customer's product or service experiences, and the history of interactions with the customer; the key factors in any successful CRM implementation are Data availability and quality.

## WEBSITE DESIGN ISSUES

### Page Loading Efficiency

The temptation to overload a page with graphics and frames should be resisted. A few well chosen graphics are fine but, too much on a page will lead to slow loading of the page and the visitor may become frustrated and they can move off to another website. So the web designers should review the load time from a rather slow internet connection, currently around 33.3bps. For the users with slow internet connections the web page must be designed with a **text-only option**, which displays text in place of graphics.

### Simplicity

If the business has a lot of information to convey, organize it well spread it out over multiple pages. The cost of advertising on a website is so low. Place so little information that user must advance to the next page after reading only 3 or 4 sentences. Also, avoid long pages that require a lot of scrolling.

### Use the Space Wisely

Make the statements which have some meaning and aim. The words which can have a direct meaning and easily understandable will the best impact.

### **Create a Reason to Return**

Once a visitor comes to the site, give him a reason to return. Suggest them to bookmark the site.

- Daily or weekly specials;
- Daily or weekly updates to the site that are clearly labeled, such as editorials, current events, projects, recipes, etc.;
- Frequent buyer programs;
- Contests and Events such as hosting a chat session with a guest celebrity or public figure;

### **Framing**

A frame is a section of the viewer's computer screen. A screen can be split into multiple sections that can load different web pages, even those from other sites. Framing is useful, for providing a directory of options in one frame and the contents of each option in another frame. It helps the visitor to know where they are, in a website. The drawbacks are that they slow the load time, not all browsers support frames and most search engines cannot read the hyper text links in the frames.

### **Tables and Fonts**

Tables are useful for providing structure to text that will not be lost due to the size of the visitors screen and the size of the viewing window, which is affected by the viewer's web browser. Always we have to avoid using the upper case letters. Use of fancy fonts may look good on the web designers screen, but the fonts displayed to visitor are limited to those that are available own their own computer.

### **Graphics**

Graphics can enhance a website when used properly. Attempt to use images that are no larger than 70K, or the load time may annoy the visitors. Depending on the importance of the graphic content being displayed we have to set the options like clicking on the smaller image will open the same image in a magnified manner. Advantage of this is that smaller images take less time to load the page when compared to larger image.

### **Colors and Contrast**

Most website designers agree that dark text on light backgrounds works best. The key is to have enough contrast between the text and the background. Some colors work together and some do not; a traditional colors wheel is useful for choosing contrasting colors.

### **Purchasing Information**

Sites that sell their products/services on line should clearly post policies in an easily found place regarding these items:

- Tax rate;
- Shipping rates;

- Shipping schedules;
- Return policy;
- Privacy of transaction; and
- Security of data that is transmitted.

Items selected for purchase should be easily reviewed at any point.

#### **Tracking data:**

In order to analyze the success of a site, certain data need to be tracked. Some useful information includes:

- Number of different visitors ;
- Number and frequency of repeated visitors;
- Location of site prior to visit, including the search engine used to locate the site, if applicable;
- Length of time of visit;
- Pages visited;
- Items examined by visitors;
- Domain names of visitors;
- Country codes of visitors; and
- Purchases made, if applicable.

#### **BUINESS MODELS OF E- COMMERCE**

- **Business to Consumer:** These are one where the business is made close to consumers, customers. In order to offer an attractive electronic market place where the products and services can be sold and purchased. This business is done by providing well designed websites which are like our normal shops in the market, with products and services to be sold, displayed with description and price. They help in generating revenue. Ex; shopping sites, home banking, entertainment services.
- **Business to Business:** It involves Internet enabling of existing relationships between two companies. A business to business extranet is a secured business network of several cooperating organizations typically operated through a VAN.