**E-COMMERCE**

**UNIT-3**

**BCA-3rd Year**

**Automotive Network Exchange Overview**

The **Automotive Network Exchange** is the private extranet initially set up and maintained by the Automotive Industry Action Group, Telcordia, General Motors, Ford, and Chrysler. It was built as a private network for the auto industry in 1995 to provide consistent, reliable speed and guaranteed security for data transmissions between the automakers and their suppliers. The ANX Network allows trading partners to collaborate electronically on product design and development; solicit and process orders; and facilitate just-in-time manufacturing and post shipping schedules. In 1999 the Automotive Industry Action Group sold the ANX Network to the Science Applications International Corporation (SAIC). The overseer of the ANX Network became ANX. During the next six years, over 4,000 companies joined the ANX Network making it one of the largest extranets in the world. In 2006, the private equity firm One Equity Partners acquired ANX e-Business from SAIC.

**What is an Extranet?**

An **extranet**is a private network that uses Internet protocols, network connectivity, and possibly the public telecommunication system to securely share part of an organization’s information or operations with suppliers, vendors, partners, customers or other businesses. An extranet can be viewed as part of a company’s Intranet that is extended to users outside the company (e.g.: normally over the Internet). It has also been described as a “state of mind” in which the Internet is perceived as a way to do business with a pre approved set of other companies business-to-business (B2B), in isolation from all other Internet users. In contrast, business-to-consumer (B2C) involves known server(s) of one or more companies, communicating with previously unknown consumer users.

**Features of Extranet**

* The use of Internet technologies and standards
* The use of Web browsers
* Security
* Central Server/Repository

**Disadvantages of Extranet**

* Extranets can be expensive to implement and maintain within an organization (e.g.: hardware, software, employee training costs) — if hosted internally instead of via an ASP.
* Security of extranets can be a big concern when dealing with valuable information. System access needs to be carefully controlled to avoid sensitive information falling into the wrong hands.
* Extranets can reduce personal contact (face-to-face meetings) with customers and business partners.

**The Largest Extranet**

**Business Models of Extranet Applications**

**Extranet applications**

An extranet application is a software data application that provides limited access to your company’s internal data by outside users such as customers and suppliers. The limited access typically includes the ability to order products and services, check order status, request customer service and much more.

A properly developed extranet application provides the supply chain connection needed with customers and suppliers to dramatically lessen routine and time consuming communications. Doing so frees up resources to concentrate on customer service and expansion as opposed to administrative office tasks such as data entry.

**Architecture of the Internet, Intranet and Extranet**

**INTERNET**

A global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

The **Internet architecture** is based on a simple idea: ask all networks want to be part of carrying a single packet type, a specific format the IP protocol. In addition, this IP packet must carry an address defined with sufficient generality in order to identify each computer and terminals scattered throughout the world. This architecture is illustrated in Figure.



[**HYPERLINK "https://twitter.com/whatisdotcom"**](https://twitter.com/whatisdotcom)

**INTARNET**

An intranet is a private network contained within an enterprise that is used to securely share company information and computing resources among employees. An intranet can also be used to facilitate working in groups and teleconferences.

**Intranet software, Applications of Intranets**

The most popular intranet application is obviously inter-office e-mail. This capability allows the employees of a company to communicate with each other swiftly and easily. If the intranet has access to the Internet, e-mail can be accessed through the Internet connection. If the intranet is running without the Internet, special e-mail software packages can be bought and installed so that employees can take advantage of its many benefits.

An intranet has many other different applications that can be utilized by a company. These include the Web publishing of corporate documents, Web forms, and Web-to-database links that allow users to access information.

Phone directories are one of the most useful intranet applications. Again, this type of application cuts down on paperwork and the time and money it takes to produce hard copies of these

directories. Instead, employee names, titles, duties, departments, phone and fax numbers, e-mail addresses, and even photographs can be stored in an online directory.

Online polls or surveys are other useful types of intranet applications. As opposed to actual paper surveys (which have a low return rate because they are often considered a hassle), online polls allow employees to get opinions or information quickly with results that can be viewed instantly.

**Considerations in Intranet deployment**

* Designing an Intranet
* The Cost of Setting up and running an Intranet
* Managing an Intranet

**Intranet information architecture** (IA) is part science, part art. As it relates to the intranet, the IA is best represented by a site map or organization chart of the major information or content categories (parents) and the sub-categories (children) and how they all relate to each other. Intranet information architecture is generally defined as the content structure of a website or intranet, or the structure or framework for how content is categorized and labelled in relation to other content. In short, IA is the art and science of structuring, labelling and categorizing content.



**EXTRANET TECHNICAL STRUCTURE**

* Core System-Level Capabilities
* Application-Level Capabilities
* Interface Layers

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**ARCHITECTURE OF EXTRANET SYSTEMS**

Traditional systems for collaboration and document management are expensive and require licensed client-server networks, special client software and great data storage capacity. On the other hand, intranet technology provides inexpensive and universally available platforms for basic publishing of documents, so that many organizations use this solution.

There is extranet (extended intranet) enabling access to authorized users outside the organization such as suppliers, buyers, business partners etc. Intranet applications and information can be accessed only by authorized users or employees inside the organization. Intranet can be connected to public internet, but it is not necessary. An architecture of intranet connected to internet environment is presented on figure



**Electronic Payment Systems**

Electronic payment is an integral part of electronic commerce. Broadly de-fined, electronic payment is a financial exchange that takes place online between buyers and sellers. The content of this exchange is usually some form of digital financial instrument (such as encrypted credit card numbers, electronic checks, or digital cash) that is backed by a bank or an intermediary, or by legal tender.

Electronic payment systems are central to on-line business process as companies look for ways to serve customers faster and at lower cost. Emerging innovations in the payment for goods and services in electronic commerce promise to offer a wide range of new business opportunities.

Electronic payment systems and e-commerce are highly linked given that on-line consumers must pay for products and services. Clearly, payment is an integral part of the mercantile process and prompt payment is crucial. If the claims and debits of the various participants (consumers, companies and banks) are not balanced because of payment delay, then the entire business chain is disrupted. Hence an important aspect of e-commerce is prompt and secure payment, clearing, and settlement of credit or debit claims.

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Three factors are stimulating interest among financial institutions in electronic payments:

* decreasing technology costs,
* reduced operational and processing costs, and
* increasing online commerce.

**Protocols that are used in E-Payments**

**Types of Electronic Payment Systems**

* electronic funds transfer (EFT)
* Banking and financial payments
* Retailing payments
* Token-based payment systems
* Credit card-based payment systems
* Secure Electronic Transaction (SET) Protocol
* Electronic Wallet

**Security Schemes in Electronic payment systems**

* Confidentiality of Information
* Integrity of Information
* Consumer Account Authentication
* Merchant Authentication
* Interoperability

**Electronic Check System**

An **electronic check** is an **electronic** payment funded by the buyer's bank account. ... The information is then transferred **electronically** over to the ACH **system**, which takes the funds from the customer's account and deposits them into the merchant's account.

**Electronic** purses, which replace **money**, are also known as **debit cards** and ... such as debit, credit, investments or **stored value** for **e**-**cash**, on one **card** or an ... On the **Internet**, the buyer could be in Mexico and the seller in the United States. ... These include **debit cards**, **electronic** benefit **transfer cards**, and smart **cards**.

**Electronic Fund Transfer(EFT)**

**Electronic funds transfer** (**EFT**) are **electronic transfer** of money from one bank account to another, either within a single financial institution or across multiple institutions, via computer-based systems, without the direct intervention of bank staff.

**Debit card**

A **debit card** (also known as a **bank card**, **plastic card** or **check card**) is a [plastic](https://en.wikipedia.org/wiki/ISO/IEC_7812) [payment card](https://en.wikipedia.org/wiki/Payment_card) that can be used instead of [cash](https://en.wikipedia.org/wiki/Cash) when making purchases. It is similar to a [credit card](https://en.wikipedia.org/wiki/Credit_card), but unlike a credit card, the money is immediately transferred directly from the cardholder's [bank account](https://en.wikipedia.org/wiki/Bank_account) when performing any transaction.

**Smart Cards and Electronic Payment Systems**

The enormous potential of electronic tokens is currently stunted by the lack of a widely accepted and secure means of transferring money on-line. In spite of the many prototypes developed, we are a long way from a universal payment system because merchants and banks have to be signed up and a means has to be developed to transfer money.

Smart cards are credit and debit cards and other card products enhanced with microprocessors capable of holding more information than the traditional magnetic stripe. The chip, at its current state of development, can store significantly greater amounts of data, estimated to be 80 times more than a magnetic stripe.

**Electronic or Digital Cash**

Electronic or digital cash combines computerized convenience with security and privacy that improve on paper cash. The versatility of digital cash opens up a host of new markets and applications. Digital cash attempts to replace paper cash as the principal payment vehicle in online payments. Although it may be surprising to some, even after thirty years of

developments in electronic payment systems, cash is still the most prevalent consumer payment instrument.

Cash remains the dominant form of payment for three reasons:

* lack of consumer trust in the banking system;
* inefficient clearing and settlement of non-cash transactions; and
* negative real interest rates on bank deposits.