

# [Lecture 7](https://assignbuster.com/lecture-7/)

[Technology](https://assignbuster.com/essay-subjects/technology/), [Internet](https://assignbuster.com/essay-subjects/technology/internet/)

LECTURE 7 \* What 3 things must be present for communication to occur? \* Transmission media, data transmission, cooperation \* Define Bandwidth \* Amount of data can be transferred from one point to another in a certain time \* Define attenuation \* Loss of power in a signal as it travels from sending device to receiving device \* What is a protocol and why is it important in electronic communication? \* Rules governing data communication including error detection, message length, speed \* What is the difference between a switch and a router? \* Modem — Modulator Demodulator. Connects user to internet. Not required for wifi \* Switch — main linking device within a network \* Distinguish between main two types of conducted media (wired media) \* Electrical Conductors — Twisted pair cable consists of two copper lines twisted around each other — Coaxial cables used for long-distance telephone transmissions and local area networks \* Light Conductors — Fiber-optic cables are glass tubes surrounded by concentric layers of glass to form a light path through wire cables \* Distinguish between centralized data processing, decentralized data processing and distributed \* Centralized — Processing done at one central computer. Can exercise tight control on system operations and apps. Can be lacking responsiveness. Not common \* Decentralized — Each user/department has own computer for processing. More responsive to users. Lacks coordination/high cost/duplicates efforts \* Distributed — Centralized control and decentralized operations. More compatible, more features, more responsive. Dependence on communication. Incompatibility between equipment. More challenging management. \* Examples of WAN, MAN, LAN \* WAN — Wide area network. Spans several cities/states/countries. \* MAN — Metropolitan are network. Comm for multiple organizations in a city. \* LAN — Local area network Connects hosts that are in close proximity. \* If network topology is star/ring/bus/hierarchy or mesh network \* Represents networks physical layout \* Star — Central computer with a series of nodes \* Ring — Each computer manages its own connectivity. Each node connected to two other nodes \* Bus — Connected nodes along network segment. Ends of cable aren’t connected \* Hierarchical — Combines computers with different processing strengths in different organizational levels \* Mesh — Every node is connected to every other node \* What is packet switching? Advantages / disadvantages \* Slicing digital messages into packets, sending along different comm paths as available, reassembles at destination. \* Advantage — Adaptive routing for efficient line usage. Don’t need same data rates. Can be prioritized. \* Disadvantage — Delay due to multiple node decision points, variable delays cause jitter, extra overhead \* Two main protocols from basis of the industry standard suite of comm protocols? \* TCP/IP — standard. Enables internet communication. TCP — transmission control protocol. IP — Internet protocol. \* Client/Server Computing — Powerful clients (PC) connected to network with one or more server computers performing common function. Presentation, application, data mgmt. \* Explain convergence in data communication. \* Integrating voice, video, data so multimedia information can be used for decision making. It required network upgrades. Common apps- ecommerce, entertainment, conferencing. LECTURE 8 — INTER/INTRA/EXTRA NETS \* Identify 3 phases of internet evolution, approximate year of transition from one to next \* Innovation Phase (1961-1974) \* Institutionalization (1974-1995) \* Commercialization (1995-Present) \* Who is credited with inventing the WWW \* Tim Berners-Lee \* Differences between domain name/IP address/ URL \* Domain name — identifiers of network addresses on internet expressed in natural lang. \* IP address — Assigned by internet corporation for Assigned Names and Numbers (ICANN) \* URL — Uniform resource locators. Addresses used by browsers to identify location of web page. \* Two types of top level domains \* Organizational (Generic) (. com, . edu, . int, . gov, . net, . org) \* Geographic (country code) \* Difference between HTML / XML \* HTML — Hypertext markup language. Easy to use, fixed set of markup tags. \* XML — eXtensible Markup language. Describe data/information. Tags defined by user. \* HTTP protocol associated with what application? \* Hyper Text Transfer Protocol — Resources on Web \* SMTP protocol associated with what application? \* E-Mail, instant messaging, internet telephone \* Difference between directory and search engine. \* Directory — organize information into categories. Based on keywords in documents. \* Search engine — Look up information and resources on internet. Enable users to retrieve data from web by searching for terms. \* Explain how google works, innovation of google instant search \* Runs over 1 million servers globally. Processes over 1billion search requests, 24 petabytes every day. \* Instant — Refined in real time. Reduces search time from 9 sec to 4 sec. Delivers more ads \* Zillow. com? \* Real estate portal \* Web 2. 0? Main applications associated? \* Web applications more interactive than traditional web apps. SOCIAL NETWORKING. \* Web 3. 0? \* Semantic web. Provides context for searching online information. Focuses on intelligent web apps using various apps of artificial intelligent technologies \* Intranet? \* Network within organization uses internet protocols and technologies for internal use. \* Extranet? DMZ? \* Extranet — uses internet and web tech to connect intranets to business partners. Supply chain systems. \* DMZ — demilitarized zone, are of network that’s separate from the organizations LAN. Between intra and extra. \* Interorganizational system? Types of IOS? \* IOS — Electronic funds transfer (EFT). Electronic data interchange (EDI). XML. Radio frequency identification (RFID) LECTURE 9 — E-COMMERCE \* Network externalities? Identify when important in e-commerce. Other names for this? Difference between positive and negative externality? \* \* Distinguish e-business and e-commerce \* E-business — Activities companies perform for selling and buying products/services, using computers and communication technologies \* E-commerce — Buying and selling goods and services over the internet \* 4 supporting activities and 5 primary activities of Porter’s Value Chain? \* \* Discuss 3 advantages and disadvantages of e-commerce compared to traditional commerce \* Improved customer service \* Increasing flexibility, customer involvement \* More information \* Around the clock operations \* Better relationships \* DISADVANTAGES — Bandwidth capacity problems, security, accessibility, acceptance \* Different e-commerce revenue models discussed in class/text \* Merchant Model — Selling products \* Brokerage Model — Collecting transaction fee \* Advertising Model — \* Informediary Model — Sell user information \* Subscription Model — \* Affiliate Model - \* Current trends in online retailing \* Emphasis on better shopping experience \* Selection of goods online increases \* Multi-channel integration? 2 examples \* Online order w/ in-store pickup. \* Web promotions \* In-store kiosk or clerk web order \* Difference between B2C and B2B e-commerce and which is larger \* B2C \* Companies sell to consumers. \* B2B \* 10x larger than B2C. \* Fastest growing segment. \* Partners use intranets/extranets, EDI, EFT \* Lowers production costs and improves accuracy \* 4 major B2B e-commerce models \* Seller — sellers to markets jointly create common marketplace \* Buyer — buyer/group of buyers opens electronic marketplace \* Intermediary (third party) — revenue from fees for matching buyers/sellers \* Trading partner agreements — automate negotiation process/enforce contracts (XML) \* M-Commerce \* Mobile commerce \* Based on wireless application protocol. Using smart phones/PDA’s \* Explain how 2 different e-payment systems work \* Electronic payment \* Exchanged only electronically \* Smart Cards \* Credit card sized, contains embedded chip storing important financial info \* Search Engine Optimization \* Method for improving volume or quality of traffic to web site LECTURE 10 — GLOBAL INFORMATION SYSTEMS \* Why companies have strong emphasis on going global, why info systems need to be global systems \* A demand for integrated global services is created \* Trends in global adoption of internet \* Africa: quadrupled from 2007, with annual growth over 60% \* Middle East: tripled, annual growth 35% \* Latin America: doubled, annual growth 25% \* End of 2013, Asia will have half of all internet users \* How global IS influence organizations approach to organizational control and coordination \* Control requires: \* Centralized architecture for data \* Standard formats \* Defined behaviors \* Coordination requires: \* Decentralized architecture \* Ability to communicate standards to/from departments \* Collaboration system \* Key issues must be considered when developing global IS \* Prerequisites for successful GIS — understanding laws, tech issues, business needs \* Organizational issues \* Economic Issues \* Technical issues \* 4 common types of global organizations. Each, identify important characteristics of there IS needs. \* Multinational — Production, sales, marketing decentralized \* Global — Highly centralized information system \* International — Operates like multinational, but subsidiaries depend on headquarters for processes and production decisions \* Transnational — Parent and subsidiaries work together in designing policies, procedures, logistics \* IT outsourcing and rationale for doing outsourcing. What is offshoring? \* Offshoring — Alternative for developing information systems \* Key obstacles for developing global IS? \* Lack of standardization \* Diverse regulatory practices \* Cultural differences \* Poor telecommunication infrastructures \* Lack of skilled analysts and programmers