# MIS 5 (7-10)

Exam june 1

# Chapter 7 the inter/intranet

| | |
|---|---|
| ARPANET | start of internet |
| Directories | indexes of info, keywords |
| Domain Name System | server protocol using IP address |

Search engines = web crawlers search for new data + index data

Extranet

secure network that ***connects*** intranet organizations & consumers

Gigapops

local connection point to internet2 network

Hypermedia

documents w/ **embedded** references to audio etc

HTML

| | |
|---|---|
| **Internet** | collection of millions of computers & networks |
| **Internet backbone** | linked fiber optic cables (gov't, academic & commercial data routers) |
| Internet **of everything** | web based development -people/processes/data, wifi QR codes |
| Internet **of things** | **physical objects** connected to the internet |
| Internet Relay Chat (IRC) | chat rooms exchange text messages in real time |
| Internet telephony | internet network to exchange conversations |
| Internet2 (I2) | 200 US universities develop advanced research tech & apps for higher education |
| **Intranet** | network inside organization using protocols (TCP/IP, FTP) collect/store business info |

# Newsgroups groups of people that share topic of interest or business

Podcast = audio file posted for download

RSS

really simple syndication feeds, distribute web content in XML, subscriptions

Search engines — info system retrieve data from web search terms

**U**niform **R**esource **L**ocators (URL) — ID for a web page, address of site

Web 2.0 — web apps for interactions/ collaborations

# Chapter 8: E-commerce

## E-business

All the selling & buying using computer communication tech (online shopping, supply chain management)

## E-commerce

Buying & selling goods & services over the internet

# Porter's Value Chain Analysis ===

Org Infa -Td -HRm -Procure + LOLMarks+S

Activities that meet business needs by *adding value cost in each phase of the e-commerce process*

Organizational infrastructure
Human Resource mgmt
Tech development
Procurement
    Logistics (vendor/ supply to production), Operations (process raw materials)
    Logistics (production to user/ distrib.), Marketing Sales (users needs/sales)
    Service (customer service)
LOLMS

## Click & Brick e-commerce Mix of traditional store and online

**Advantage** better customer/supplier/business relations, “price transparency” equal price, 24/7 operations, ease of shopping

**Disadvantage** bandwidth problems, security & privacy issues, access to the web

# E-commerce business models

| | |
|---|---|
| Merchant model | transfer from old to online retail model |
| Brokerage model | sell/buy online + get commission on transactions (ebay) |
| Advertising model | ad banners, Pay Per Click ads (Google) |
| Mixed model | $ from >1 source (ads + subscriptions or commissions) |
| Infomediary model | collect info & sell it for marketing |
| Subscription model | selling `digital` products/ services |

Business 2 Consumer (B2C)
Business 2 Business (B2B)
Consumer 2 Consumer (C2C)
Consumer 2 Business (C2B)

Business model: delivers products/services to customers

electronic transactions between businesses

transactions between users (Craigslist)

selling to business products/services

EDI = electronic data interchange

EFT = electronic funds transfer

**GOVT 2 citizen** (taxes/ voter reg) **GOVT 2 business** (licenses)
**GOVT 2 GOVT** (disaster/crisis relief) **GOVT 2 employee** (e-training)

## Organizational *intra* business e-commerce

Exchange of goods/services/info among employees

# B2C e-commerce cycle = I-Ord-Pay-Ful-Serv+S

Info sharing via websites/ email/ ads/ news
Ordering = email to order products from a B2C site
Payment = credit cards/ e-cheques/ e-wallets
Fulfillment = *delivering* products/services to customers digital or physical
Service & support
*All this reduces delivery time, prices, inventory & share info*

# B2C e-commerce models

| | |
|---|---|
| Seller-side marketplace | 1 stop shopping market model |
| Buyer-side marketplace | buyers get sellers to bid on products |
| E-procurement | employee orders supplies/services *directly from suppliers* |
| 3rd party market | fees charged for matching buyers & sellers |
| Vertical market | = utility companies |
| Horizontal market | = business that `automates` different industries |
| Trading partner agreements | = `automate` negotiating processes & *enforce contracts* |

# Mobile e-commerce

Wireless Application Protocol (WAP)  WWAN wireless wide area networks
Voice-based commerce = text to speech

**Electronic payment systems** (credit/ debit/ charge/ smart  cards)

- Smart cards have microprocessor chip w/ info
- E-cash = “recharged” cards  E-cheques
- E-wallets = hold personal info PINS/passwords
- Paypal = online payment system
- Micropayments = transactions on the web w/ small amounts of money

# Web marketing

Ad impression (view of ad), banner ads on websites, Pay Per Click ads, Cost per Thousand pricing cost of ad impressions, Cost per Click the cost of each click on an ad ($ goes to hosting website), Click Through Rate divides # of clicks an ad gets by the total impressions bought (100 impressions / 20 clicks = CTR of 20%), Cookies, Hits = any element of a website that is clicked, Meta Tag (HTML), Page View, Pop Up Ads (block users view), Pop Under ads, Splash Screen (grab attention with logo), Spot Leasing (search engines & directories ad space)

**Search Engine Optimization** method for improving the volume/quality of traffic to a website [web rankings] using Keywords/ page titles/ inbound links/ content/ links to others

# Chapter 9 GIS

Global Info System — all tech & apps that gather store transmit data

**Global** structure — `centralized` info system, subsidiaries have no autonomy

International structure — multinational corporations, HQ's run the show

Multinational structure — production/sales/marketing *decentralized*

Transnational structure = parent & subsidiaries designing policies/procedures/services

**MultiNational Corps (MNC)** **private org w/ assets & products/ operations**

Offshore outsourcing — another country providing services & products

Transborder data flow — restricts type of data captured & transmitted in countries

# Chapter 9 video

| Growth strategy | Current products | New products |
|---|---|---|
| Current markets | Market penetration | Product development |
| **New** markets | Market development | **Diversification ** risky** |

Why go global? Customer demand.

Prereq's to success of GIS = understand customs, laws, tech and local business needs

US shoe company: Shoe tops produced (italy), shipped to China attaches tops to soles, shipped to Ireland for testing, shipped to US for sales.

# Chapter 9 video

Coca-cola video case: 85000 L bottles delivered using a wheelbarrow areas in S. Africa, everyone delivers the product makes money, 160 coke plants. New market of middle class people can buy coke. Overseas market = 80%. Brand loyalty via local support of soccer & community events.

Airlines = 1st large scale GIS

Global products / services get standardized for all markets, Globalization important in purchase & supply chain

Melinda Gates TED talk: coke is ubiquitous in the world, why can't NGO's do the same. **Real time data**, local support (locals buy bulk & sell it, micro-sales =90% of sales), marketing (association to good life/happy = community respect). Data to ID sales reports. Public Health messages fail selling the "want" for needed items.

Driving Force: e-business= GIS + internet, equal playing field for small/large businesses

GIS = international company, global markets, strategic planning, control (data+reports) vs. coordination (managing, decentralized data)

# Chapter 9 video

What makes GIS global? Supporting complex decisions, enviro = laws, intellectual laws, cultural, ethics, religions, economics, taxes, political - type of gov't & relations

4 types of global organizations: GIMT

| | |
|---|---|
| Global | HQ process & control decisions), *decentralized* prod/sales/marketing |
| International | HQ (process production decisions), *decentralized* financial info |
| Multinational | HQ (finance), *decentralized* prod/sales/marketing |
| Transnational | HQ *decentralized* `policies & procedures` |

GIS + **Offshore outsourcing** in different country

obstacles lack of standardizations ( time/work/language), culture differences, regulations, telecomm infrastructure, lack of skilled programmers

# Chapter 9 video

Marriott hotel video case: 18 brands, India hotel (old + new), 15 hotels in India, local business owns parts of hotel, bribes are ubiquitous, building is old school & takes longer than US, India: 30% growth demand for hotels, water issues & safety is treated in hotel for safety, hotels have been hit by terrorists - now security is vital, bollywood & hotel = partnership built.

# Chapter 10  building info systems

# Systems development life cycle

Using a system development can prevent system failures = missed deadlines, exceeding budgets, unhappy users
Info System Success = integrate people, software + hardware

Phase 1 (Planning) = system designer defines problems in org. [analysis: econ/tech/operation/sched/legal] who/what etc.
Feedback from in/external users  Joint App Design  econ/ tech/ operational feasibility study

Phase 2 (gather & analysis) = the req for running the system, find problems & solve
**SSAD** struct sys analysis design and **OOA** object oriented approach

Phase 3 (design) = choose a solution, print solution in detail
CASE tools  sell/ prototyping (gather info/sys req's/tech feasibility== proof of concept)

Phase 4 (implement) = paper to action!  - hire/train/code/test/recovery plan
`Parallel conversion`  phase in/out conversion  plunge conversion (old for new)  **pilot** conversion
PERT program eval review technique  RFP request for proposal  RFI request for info
Insourcing  self sourcing  outsourcing  crowdsourcing

Phase 5 (maintenance) modifications are made
SOA service orientated architecture  **RAD** rapid app dev  XP extreme programming  Pair programming
Agile methodology (limited scope)

| | |
|---|---|
| Agile methodology | limited scope software development |
| Comp Aided Sys Engineering (CASE) | automatic tools of app development design |
| Crowdsourcing | outsourcing tasks |
| #1 Design phase | analysts solves problems (outlined document) |
| Economic feasibility | assess system's cost & benefits |
| External users | not employees but use system (customer/contractor/etc) |
| *Extreme* programming | software dev in small step by step functions |

| | |
|---|---|
| Feasibility study | proposed solutions to management |
| #4 Implementation phase | solution: paper → action! |
| *In*sourcing | organization's team develops the system |
| Joint App Design (JAD) | users+management+IT develop an app |
| Legal feasibility | legal issues / Info Privacy Act requirements |
| #5 Maintenance phase | info system modifications |
| Operational feasibility | quality of solution & customer reaction |

| | |
|---|---|
| Outsourcing | external vendor providing development services |
| Pair programming | 2 programmers in 1 development |
| `Parallel conversion` | old + new system run at same time |
| Phased in/ out convo | each module of new system converted |
| **Pilot** conversion | analyst tries system in 1 department then all |
| Plunge conversion | old system stopped, new system started |

Proof of concept prototype (*#3*) — show users task can be done

| | |
|---|---|
| Prototyping | small version of system developed, show benefits of system |
| **Rapid App Development (RAD)** | interaction users ⟷ designers, plan+analysis phase |
| Request For Info (RFI) | screening document, vendor info |
| Request For Proposal (RFP) | document to request bids equip/etc |
| #3 Req's gathering & analysis phase | def problem & use alternatives solving it |
| Scheduling feasibility | new system completed on time |

Self sourcing — end users develop their own system

Selling prototype — sell a proposed system to users showing features

Service Oriented Architecture (SOA) — software dev that reuses code

Technical feasibility — tech used in the system & if it's supported/ available

Systems development life cycle (SDLC) = all the phases for developing a system