

# Growing importance of information

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Information Integrity/Integrity Information System/Management Information System

Course Lecture # 1

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# OVERVIEW

- Information - An ever expanding universe
- Communication Technologies – The engine for driving information through all ages
- Information System- An orderly machine for actionable information
- Information *Use*-Its emergent pervasiveness and it's implication
- Exercises

# INFORMATION-

## An ever expanding universe - 1

- Earliest permanent records of information - On cave walls or cliffs, on stone, wood or papyrus (paper came later)
- Invention of writing
- Information Explosion-Phase I
  - Recording and disseminating of information: inventions of paper and printing
- Enter the computer: Advent of Digital Information

# INFORMATION-

## An ever expanding universe - 2

- Information Explosion – Phase II
  - Exponentially mounting records documenting individuals life journey
  - Exponentially mounting records to manage communities, organizations and governments
- Information Explosion-Phase III
  - The advent of the Internet
  - Information-A life blood of everyday existence for individuals and nations

# INFORMATION-

## An ever expanding universe - 3

- Allow your mind to wander beyond the traditionally narrow computer debate. Consider extent of information explosion in US economy.
- The officials and clerks of the US government, each year armed with more and more computers, collect 4 billion separate records about the people of the US, 17 items for each man, woman and child in the country (1983 US statistics).

# **Communication Technologies - The engine for driving information through all ages - 1**

- The first communication technologies
- Telephone and Television
- Typewriters and Computers
- Fax and Recorders
- Computers on-line
- The Internet

# Communication Technologies-

## The engine for driving information through all ages - 2

- Digital Networks
- Impact of information and communication technologies (ICTs) on information processing
  - Information Infrastructure
  - Information availability at any time, any place

# **Communication Technologies-**

## **The engine for driving information through all ages - 3**

- Extent of technology contribution to information explosion leading to far reaching changes in the nation's economy.
- An internal communications network serving just one multinational corporation now links more than 500 computers in over a 100 cities in 18 countries and is growing at a rate of about one additional computer a week in recent years (1983 US statistics).

# **Communication Technologies-**

## **The engine for driving information through all ages - 4**

- 10,000 merchants all over US are able to obtain a summary fact sheet about any one of 86 million individual Americans in a matter of three or four seconds from a single data base in southern California (1983 US statistics).

# Information System- An orderly machine for actionable information

- *IS*- A means for records management
- Influence of computers over information system
- Centralized, computerized *IS* operated within a heavily controlled and secure environment with emphasis on integration minimization
- Networked, computerized *IS* operated in a distributed environment with emphasis on integration maximization
- Movement from simple to complex information system

# **Information *Use*-Its emergent pervasiveness and it's implication-1**

- For students, access to best schools, teachers and courses irrespective of geography, distance, resources or disability.
- Information resources of art, literature, and science available everywhere, not just in large institutions or big-city libraries and museums.
- Services that improve health-care and respond to other important social needs available on-line, without waiting in line, when and where needed.

# Information *Use*-Its emergent pervasiveness and it's implication-2

- Possible to live in place of one's choice without foregoing opportunities for useful and fulfilling employment, by “telecommuting” to office through an information highway.
- Small manufacturers can get orders from all over the world electronically-with detailed specifications-in a form that the machine could use to produce the necessary items.
- One can see latest entertainment of one's choice from the comfort of one's home whenever desired.

# Information *Use*-Its emergent pervasiveness and it's implication-3

- Access to Government information directly or through local organizations like Libraries, and ability to apply for and receive government benefits electronically, and to get in touch with government officials easily.
- Electronic exchange of information by individual government agencies, business and other entities-reducing paperwork and improving efficiency.
- The Implication of the pervasiveness of information *use*  
-Need for *IS* to process correct (integrity) information.

# EXERCISES - 1

- (E4.1) “Information System is an orderly machine for actionable information”. Comment on the requirements of the orderly machine that *IS* should be keeping in view implications of the real world operation. How do these requirements compare with the requirements of information systems currently in vogue?
- (E4.2) “Information is for *use*”. Comment
- (E4.3) Compare between centralized, computerized *IS* operated within a heavily controlled and secure environment with emphasis on integration minimization and networked, computerized *IS* operated in a distributed environment with emphasis on integration maximization.

# EXERCISES - 2

- (E4.4) What is the basis for movement from simple to complex information systems? How does it help?
- (E4.5) How can pervasive of information *use* lead to need for Information Integrity (I\*I) in information system? Explain through an example.

**THANK YOU**