Department of Commerce (CA)

INTRODUCTION TO INFORMATION TECHNOLOGY

SEMESTER:I **SUB CODE:18BCA14C**

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UNIT 5:System analysis and design-computer based information system- management information system-decision support system-expert system—recent trends in IT- blue tooth technology-wifi technology-cloud computing

REFERENCE BOOK:

*INTRODUCTION TO INFORMATION TECHNOLOGY BY ALX LEON AND MATHEW LEON

*INTRODUCTION TO INFORMATION TECHNOLOGY BY PARAMESHWARAN

PREPARED BY: DR. E.N. KANJANA,

ASST. PROFESSOR.

Systems Analysis and Design

System Analysis

The dissection of a system into its component pieces to study how those component pieces interact and work.

(1) **The survey and planning**

(2) **The study and analysis**

(3) **The definition**

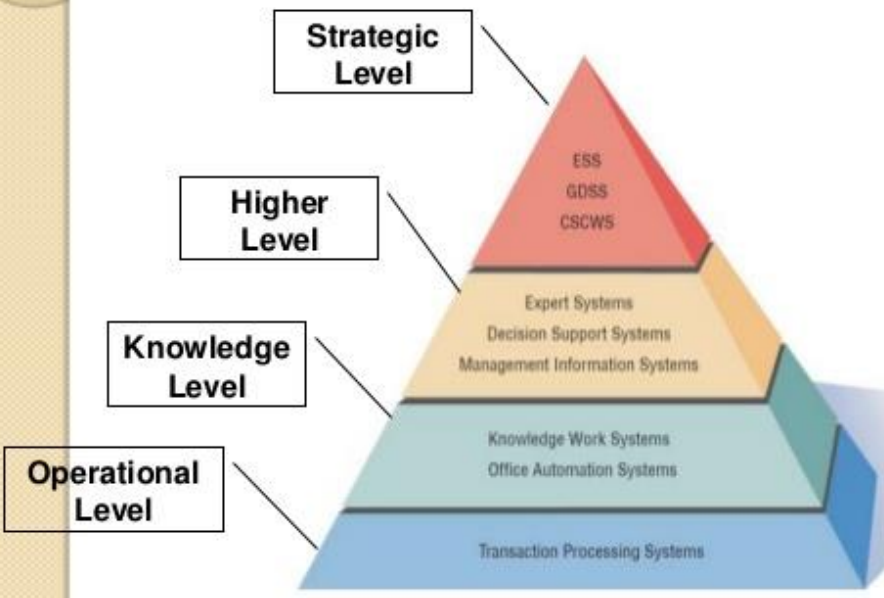
System Design

The process of defining the architecture, components, modules, interfaces and data for a system to satisfy specified requirements.

Need for System Analysis and Design

- Installing a system without proper planning leads to great user dissatisfaction and frequently causes the system to fall into disuse
- Lends structure to the analysis and design of information systems
- A series of processes systematically undertaken to improve a business through the use of computerized information systems

System Analyst Recommend, Design, and Maintain Many Types of Systems for Users



A system analyst may be involved with any or all of these systems at each organization level

OPERATIONAL LEVEL

Transaction Processing System (TPS)

It is a process of large amounts of data for routine business transactions.

- **Boundary-Spanning**
  Its *concerned with the detection of information*. It has **two primary sources** and **two main sources**.

Primary sources of Information

(1) Detect information
(2) Send information into the environment presenting the company in a favorable light.

Main sources of Information

(1) ***Business intelligence***.
(2) ***Competitive information***

- **Support the day-to-day operations of the company**
  Example: Payroll Processing, Inventory Management.

KNOWLEDGE LEVEL

Office Automation System (OAS)

- Supports data workers who share information, but do not usually create new knowledge

Examples: Word processing, Spreadsheets etc.

Knowledge Work System (KWS)

- Supports professional workers such as scientists, engineers, and doctors

Examples: computer-aided design systems, virtual reality systems, investment workstations

Higher Level

Management Information System (MIS)

To supports data worker who share information but do not usually create new knowledge.

Example: Word processing, Spreadsheets, Desktop publishing, Email Electronic scheduling, Communication through voice mail, Email, Video

Decision Support System (DSS)

Aids decision makers in the making of decisions

Examples: financial planning with what-if analysis, budgeting with modeling

Expert System (ES)

Captures and uses the knowledge of an expert for solving a particular problem which leads to a conclusion or recommendation.

Examples: **MYCIN** (an early ***xpert system*** that used **artificial intelligence** ;

XCON (e**X**pert **CON**figurer)

Strategic Level

Executive Support System (ESS)

- Helps executives to make unstructured strategic decisions in an informed way
  Examples: drill-down analysis, status access

Group Decision Support System (GDSS)

- Permit group members to interact with electronic support
  Examples: email, Lotus Notes

Computer-Supported Collaborative Work System (CSCWS)

- CSCWS is a more general term of GDSS. It may include software support called "*groupware*" for team collaboration via network computers.
  Example: video conferencing, Web survey system

Introduction

Over the last few years the use of information technologies in all sectors have increased.

Advancement and application of information technology are ever changing.

Some of trends in the information technology are as follows:

- Cloud Computing
- Mobile Application
- Digital Marketing

Cloud Computing

"Cloud computing is Web-based processing, whereby shared resources, software, and information are provided to computers and other devices (such as smart phones) on demand over the Internet."

The idea of the "cloud" simplifies the many network connections and computer systems involved in online services and resources.

It is the technology that uses the internet and central remote servers to maintain data and applications.

Cloud Computing

Examples of Cloud Computing

Why Cloud Computing

Characteristic	Cloud Computing	Traditional Computing
Time before service can be accessed	Minutes/ hours	Day/week
Capital Expenditure	Pay as you use	Fixed
Virtualized	Usually	sometimes
Scalability	Automatic	Manual
Software	No need for installation	Installation is required

Mobile Application

Another emerging trend within information technology is mobile applications (software application on Smart phone, tablet, etc.)

What's With the Name?

•The name 'Bluetooth' was named after 10th century Viking king in Denmark Harald Bluetooth who united and controlled Denmark and Norway.

•The name was adopted because Bluetooth wireless technology is expected to unify the telecommunications and computing industries

Digital Marketing

Digital marketing is a broad term that describes a set of marketing processes that utilize all available digital channels to promote a product or service or build a digital brand.

The channels that make up digital marketing include: Web sites, Social media platforms, email marketing, mobile marketing, Web, TV, SMS, and anything else with a digital foundation.

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Internet Marketing

Who Started Bluetooth?

ERICSSON

- Bluetooth Special Interest Group (SIG)
- Founded in Spring 1998
- By Ericsson, Intel, IBM, Nokia, Toshiba;
- Now more than 2000 organizations joint the SIG

What Is Bluetooth?

- Bluetooth is an open standard for short-range digital radio to interconnect a variety of devices Cell phones, PDA, notebook computers, modems, cordless phones, pagers, laptop computers, printers, cameras by developing a single-chip, low-cost, radio-based wireless network technology

Privacy/Security

- Very Important.
- Don't want data to be shared.
- Security not great.
  - Pairing security.

Reliability

- What it really means?
  - Which device are you connecting to?
  - How large is the file?
  - Which version are you using?
  - Have the two devices been connected before?

Devices

- Laptops
- Gaming Consoles
- Headsets
- Cell Phones
- Printers

Ease of Use

- Very easy to use.
- Connection is fast and simple.
- More devices are Bluetooth capable.
- Auto recognition.

Future

- Diverse applications with Bluetooth.
- Faster transfer rate.
- Stronger connection.
- Longer distance.