

CS-1st Year

Systems Analysis and Design

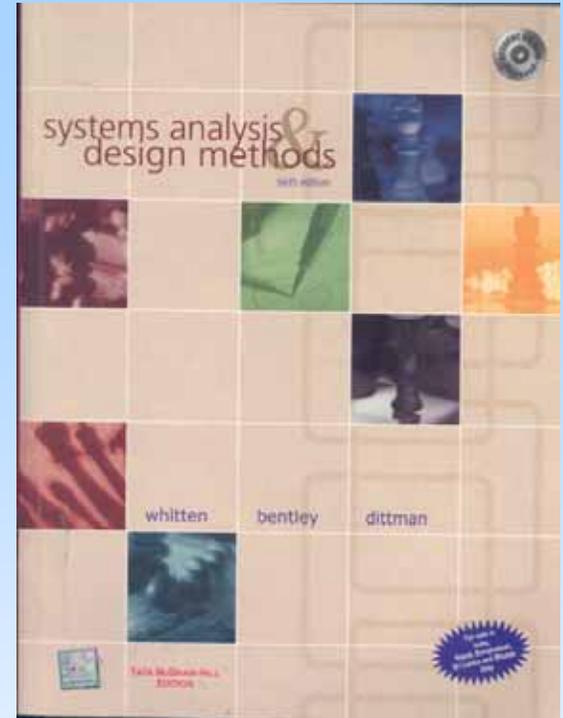
G.K.A. Dias

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References

Ref : System Analysis and DESIGN METHODS

By Jeffrey L Whitten & Lonnie D Bentley ISBN 0-07-063417-3 (7th Edition)



Recommended Links

<http://www.mhhe.com/whitten>



Introduction to Information System Environment

- What is an information system?
- Types of Information Systems and processing types
- System development life cycle ???
- Major components of the development process???

Information Systems

Applications

➡ Earlier applications



Airline Reservations



**Keeping records
of transactions**

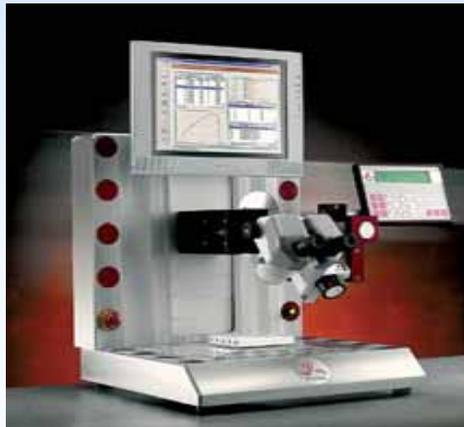


**Keeping records
of Stock**

Information Systems

Introduction

- ➡ Computers are now becoming part of virtually every activity in an organization



Production



HRM - Training



Telephone Integration

Information System

➔ An arrangement of

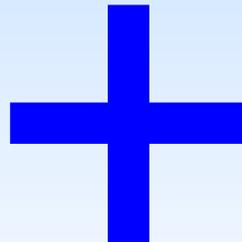


- To support and Improve day to day operations
- problem solving and decision making needs of management and users

Information System

Information Technology

➡ A combination of



Computer Technology

Telecommunication Technology

Information Systems

The Players - *System Stakeholders*

- any person who has an interest in an existing or proposed information system.
- Can be classified into five broader categories
- may include both
 - technical and non-technical workers
 - Internal and External workers



Information Systems

System stakeholders

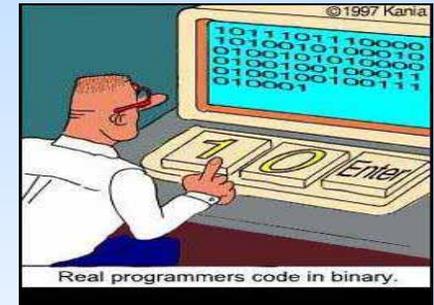
- ➔ can be classified into five groups



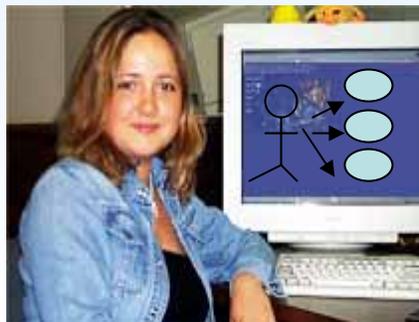
System User



System Owner



System Builders



System Designer



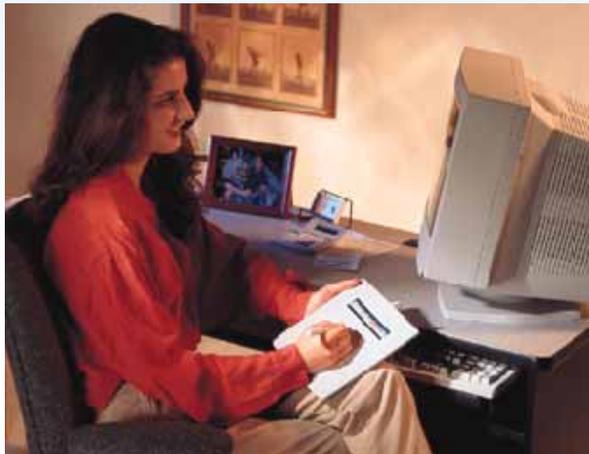
System Analysts

Information Systems

- Stakeholders cont..



a “customer” who will use or is affected by an information system on a regular basis – capturing, validating, entering, responding to, storing, and exchanging data and information.



**System Users
or Clients**

Information Systems

- Stakeholders cont..

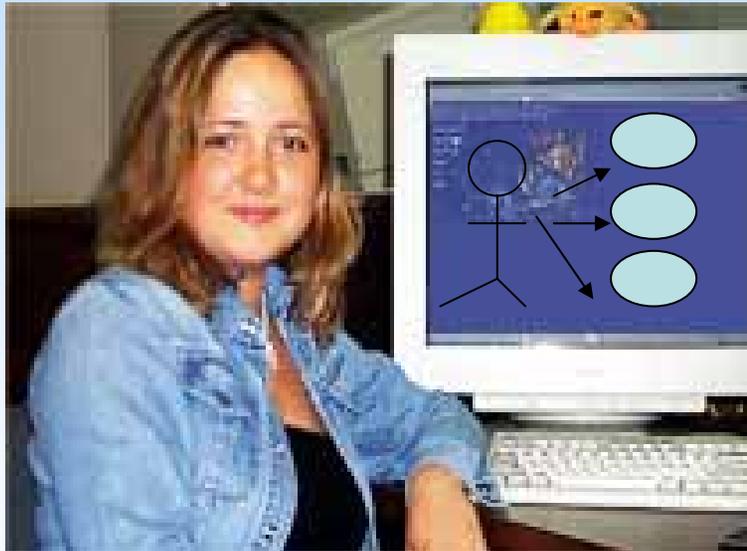


System Owner

- An information system's sponsor and advocate
- Owns the system
- Set the vision and priorities
- Determine the policies
- Responsible for funding the project of
 - Developing
 - Operating
 - Maintaining

Information Systems

- Stakeholders cont.. ➤ technical specialists

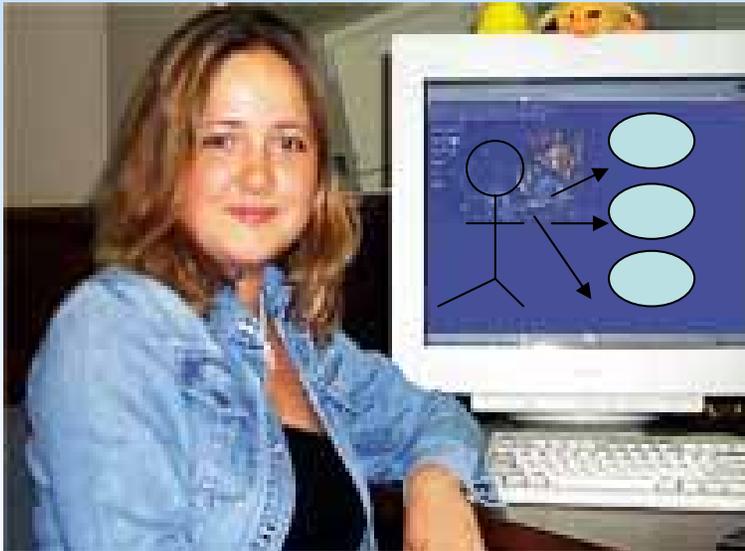


System Designer

- Translates system users' business requirements and constraints into technical solutions.
- Design the system (data-bases, inputs, outputs, screens, network, software) to meet the users requirements

Information Systems

- Stakeholders cont..

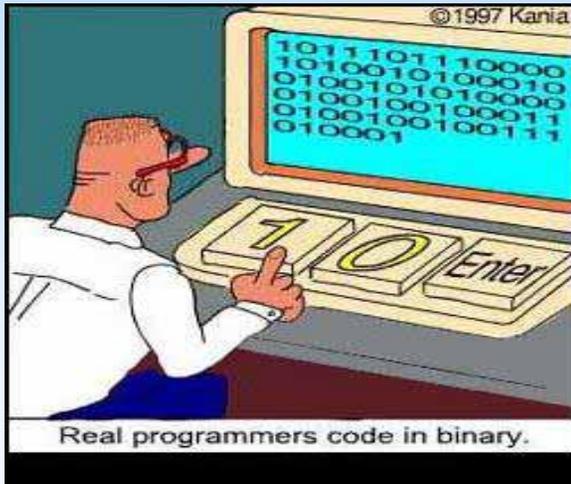


System Designer

➤ Design the computer files, databases, inputs, outputs, screens, networks, and programs that will meet the system users requirements.

Information Systems

- Stakeholders cont..



Construct, test and deliver the Information System based on the design specifications generated by the system designer.

System Builders

Information Systems

- Stakeholders cont..



Systems Analysts

People who understand both business and computing.

Information Systems

- Stakeholders cont.. ➤ Studies the problems and needs of an organization



Systems Analysts

- Determine how people, data, processes, and information technology can best accomplish improvements for the business
- Bridge the communication gap that exists between non technical and technical people involved with building systems.

Information Systems

- Stakeholders cont..

What does a systems analyst do?



INTERVIEWS Systems Analysts

- Identify the problem
- Analyze and understand the problem
- Identify the requirements
- Identify the solution
- Identify alternative solutions
- Design and implement the best solution
- Evaluate the result

Information Systems

Legacy systems

- an existing computer system or application program
- continues to be used because the user does not want to replace or redesign it
- an "antiquated" systems.
- Ref : http://en.wikipedia.org/wiki/Legacy_system

Information Systems

Legacy systems cont...

- potentially problematic
 - often run on obsolete (and usually slow) hardware
 - spare parts for such computers become increasingly difficult to obtain
 - hard to maintain, improve, and expand because there is a general lack of understanding of the system
 - The designers of the system may have left the organization, leaving no one left to explain how it works
 - Integration with newer systems may also be difficult because new software may use completely different technologies.

Information Systems

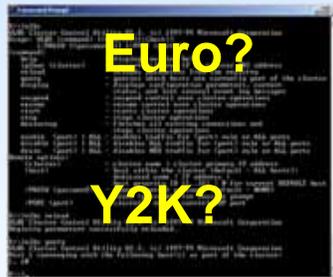
Legacy systems cont...

Support old business requirements

Support new business requirements

Old technology

Old standard



Old system

Converted to satisfy new environments



New system

New standard

New technology

New functionality

Information Systems

Legacy systems cont...

- Many complex legacy systems yet to be upgraded to new technologies because of
 - Cost,
 - Skills and
 - People required
- Force to change – to reflect new or changing business requirements.
 - Year 2000 problem (Y2K)
 - Euro conversion

Information Systems

Legacy systems cont.

Y2K problem

- Many computers and applications stored date with only 2 digits.
(e.g. 99 =1999)
- Problems : when the millennium changed
(e.g. 03=2003)

Born in 1978

Age? -74, 0, 74