INTRODUCTION TO MIS (Prepared by Dr. Daniel F. Duran)

What is "Management Information Systems (MIS)"?

- Field Began in Early 80s
- MIS bridges the gap between end-users and technical staffs (e.g. programmers)
- Consider the three key words (management, information, & systems) that have significant implications:

Management:

- Managing resources that include people, machinery (technology and computers), money, and time, etc.

You have to consider three managerial factors together in MIS: effectiveness, efficiency and profitability.

- **Effectiveness** – how well a firm is pursuing a goal or objective of its business; for instance, providing quality product/service can be a business goal that is usually stated in a firm's mission statement; Management by objective (MBO), etc.

- **Efficiency** – best use of resources, a synonym is productivity = output divided by input. Productivity is measured in general by a ratio of OUTPUT to INPUT. Here, output indicates revenue, market share, etc., while input indicates labor, raw materials, administrative costs, operations costs, and IT related costs.

- **Profitability** - The empirical studies in the IS literature have reported that on the contrary to the management's belief, there exists no significant difference in the profitability between before and after the new IS implementation. In other words, the new IS does not make significant profitability increase whatsoever. In general, the bottom line in any business is the profitability. If it does not enhance the profitability, then what is a point to go through all the trouble to develop/implement a new IS? Using IT is not the perfect solution for every business situation. Whenever a new IT or information systems (IS) are implemented, additional costs incur. They can be costs related to hardware, software, training, maintenance, etc. Therefore, the cost-benefit analysis should be conducted prior to a new systems implementation.

Information

- Relates to the computer; refers to knowledge.

- Data are a source for the information. If the data are processed in a meaningful way, they become "information." Here, IT can contribute. Information can be extracted easily through IT (e.g. computer) if data are properly processed. Therefore, the second word in M.I.S. indicates IT or computer.

- Of course, information can be obtained by a primitive way such as manual sorting, etc. by a clerk. Using IT definitely outperform any other means in history, in terms of processing data.

Systems

- If a nice system is made, it is self running which leads to reducing the people necessary to the business process.
- Systems Theory, Systems approach
- Systematically doing business
- Systems comes from systems theory that stresses the importance of systems approach to problem-solving and a structured way to control and adjust automatically. Computer programmers and software engineers/developers realized it was only way to reduce a possibility of encountering errors later in the systems development process.
- When you construct a new/better system for the current business operations/decision-making process, you don't want to make a computer program based on the current business way. Instead, you develop a new model after serious analysis of the current system, so later can save resource in terms of time and money by avoiding a possible mistake/error. Therefore, business process reengineering (BPR) is unthinkable without a sound understanding of systems theory/concepts.

- MIS is a field of science that studies on (1) how better we can manage technologies (2) how better we can design information systems, in order to enhance a firm's effectiveness, efficiency and profitability.
- MIS is a new subject in the last ten to fifteen years. The idea is still being researched since the concept is being evolved. A teacher's bias has a large impact on this type of subject.