

: *How does a DSS differ from an MIS?*

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Some Decision Support Systems (DSS) are Management Information Systems (MIS), but DSS serve purposes other than providing managers with information. In the 1970s and 80s, people used the term MIS to describe a broad, general category of information systems (cf., Davis, 1974). Currently, the acronyms MIS and IS (Information Systems) are used interchangeably to describe a functional department that is responsible for managing information systems and technology. Also, today a number of computing jobs are grouped together under the heading of MIS or IS professionals. Additionally, the term management information systems and MIS is used to identify an academic major and an area of scholarly inquiry in some universities.

In the late 1960s and early 1970s, an MIS generated periodic management reports (cf., Davis, 1974). MIS supported the internal reporting needs of management accountants. Davis defined a Management Information System as "an integrated, man/machine system for providing information to support the operations, management, and decision-making functions in an organization. (p. 5)." Davis's framework incorporated computerized decision support systems into the emerging field of management information systems. Today, managers use data-driven DSS to meet their management reporting needs and ad hoc decision support needs. When the term management information system is defined narrowly it refers to a management reporting system that provides periodic, structured paper-based reports. When used broadly, MIS refers primarily to data-driven DSS and management reporting.

In general, management information systems (MIS) refers to any computing systems supporting managers and to an academic discipline investigating the application of information technology to business problems. Kroenke defines management information systems (MIS) as "the development and use of information systems that help businesses achieve their goals and objectives (p. 376)." Information systems support processes and operations, especially the processing of transactions, and decision-making processes including performance monitoring, reporting, and analysis. Information systems is the broadest concept and includes computerized systems that are not DSS or MIS.

Gorry and Scott Morton (1971) differentiated decision support systems as a category of management information system. Today DSS refers to interactive computer-based systems or subsystems intended to help decision makers use communications technologies, data, documents, knowledge and/or models to identify and solve problems, complete decision process tasks, and make decisions in semi-structured decision situations. Decision support system is a general term for any computer application that enhances a person or group's ability to make decisions. Also, decision support systems refers to an academic field of research that involves designing and studying decision aiding technologies. In general, decision support systems are a class of computerized

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information system that support decision-making activities. Five more specific decision support system types include:

Communications-driven DSS, Data-driven DSS, Document-driven DSS, Knowledge-driven DSS, and Model-driven DSS.

Gordon Davis (1974) summarized the information systems support needed for decision making and planning and control. He noted "The MIS support for decision making thus consists of a comprehensive data base, a data base retrieval capability, statistical and analytical software, and a model base containing model-building software, decision models, and decision aids (p. 335)." Also, he noted "The planning process requires a planning model, input data, and manipulation of the model to produce the planning output. The information system should provide support for each of these requirements (p. 348)."

Computerized decision support is much more than providing information to managers. Gorry and Scott Morton argued "While improving the quality of information available to managers may improve the quality of their decisions, we do not believe major advances will be realized in this way. Most managers do not have great informational needs."

Other MIS definitions from various sources

Haag, Cummings and Dawkins (1998) in their introductory MIS text define management information system (MIS) as "a system that provides periodic and predetermined reports that summarize information within a database (p. 519)."

Laudon and Laudon (1998) define management information system (MIS) as "management support systems that provide routine summary reports on the firm's performance; used to monitor and control the business and predict future performance (p. 650)."

In another book, Laudon and Laudon (2006) define management information system (MIS) as "the study of information systems focusing on their use in business and management (p. G8)."

According to webopedia (<http://www.webopedia.com>), MIS is "short for management information system or management information services, and pronounced as separate letters. MIS refers broadly to a computer-based system that provides managers with the tools for organizing,

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evaluating and efficiently running their departments. In order to provide past, present and prediction information, an MIS can include software that helps in decision making, data resources such as databases, the hardware resources of a system, decision support systems, people management and project management applications, and any computerized processes that enable the department to run efficiently. Within companies and large organizations, the department responsible for computer systems is sometimes called the MIS department. Other names for MIS include IS (Information Services) and IT (Information Technology)."

The online Business Dictionary (<http://www.businessdictionary.com>) defines management information system (MIS) as an "Organized approach to the study of information needs of a management at every level in making operational, tactical, and strategic decisions. Its objective is to design and implement man-machine procedures, processes, and routines that provide suitably detailed reports in an accurate, consistent, and timely manner. Modern, computerized systems continuously gather relevant data, both from inside and outside the organization. This data is then processed, integrated, and stored in a centralized database (or data warehouse) where it is constantly updated and made available to all who have the authority to access it, in a form that suits their purpose."

US Legal definitions website(<http://definitions.uslegal.com>) states "A management information system (MIS) is a computerized database of financial information organized and programmed in such a way that it produces regular reports on operations for every level of management in a company. It is usually also possible to obtain special reports from the system easily. The main purpose of the MIS is to give managers feedback about their own performance; top management can monitor the company as a whole. Information displayed by the MIS typically shows 'actual' data over against 'planned' results and results from a year before; thus it measures progress against goals. The MIS receives data from company units and functions. Some of the data are collected automatically from computer-linked check-out counters; others are keyed in at periodic intervals. Routine reports are preprogrammed and run at intervals or on demand while others are obtained using built-in query languages; display functions built into the system are used by managers to check on status at desk-side computers connected to the MIS by networks. Many sophisticated systems also monitor and display the performance of the company's stock."

Finally, in another introductory text, Turban, Rainer and Potter (2001) define management information system (MIS) as "a system that accesses, organizes, and reports on organizational information needed for repetitive decision making in functional areas, usually by middle managers (p. G-11)."

References

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