



THE MANAGEMENT OF
INFORMATION SYSTEMS

GARY W. DICKSON
JAMES C. WETHERBE

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**THE MANAGEMENT
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DEDICATED TO
Mariel and Scott

and

Jamie and Jessie

The rapid emergence of management information systems (MIS) in organizations during the past two decades has created an intense demand for well-trained, capable MIS managers to plan, organize, direct, and control the powerful technology of computer-based information systems. This demand has resulted in a multitude of young, unprepared MIS technicians being catapulted into MIS management positions. The consequences have been predictable and unfavorable. The turnover rate for MIS managers commonly ranges from 25 to 33 percent per year, which compares most unfavorably with non-MIS manager turnover rates of 10 percent per year. Involuntary termination, normally considered a last resort tactic for most management positions, has become too common for MIS management positions.

Many MIS managers have confided to the authors that they had to get a failure or two under their belts before they learned how to be an MIS manager. This partially explains the gypsy nature of many MIS manager careers. It is not uncommon to see an MIS manager resume with three to five MIS management positions listed within a five year period. Not that each job change represents a termination, but things get uncomfortable in one organization and an opportunity to move comes along and...

MIS management is a tough job. And it is not getting any easier. MIS managers must cope with more diverse and complex technology, and MIS has become more interwoven into the complex fabric of modern organizations. MIS managers must be respectable technically in MIS and be above average managers to measure up. Not too surprisingly, employment demand forecasts by leading business journals state that the MBA with expertise in information systems is guaranteed a ticket to future career success.

Fortunately, more and more university MBA programs are offering specialties in MIS. These programs typically provide courses in MIS, system analysis and design, database, decision support systems, and, occasionally, MIS management. There are excellent texts for each subject except for MIS management. With the most recent curriculum recommendations of the Association for Computing Machinery (ACM) and the Data Processing Management Association (DPMA) strongly recommending that a graduate course in MIS management be provided for MIS majors, the need for an MIS management book is greater than ever. A recent survey of MIS executives conducted by the Society for Information Management (SIM) revealed that MIS management is the single most important curriculum area for MBAs in MIS. Yet there is little codified knowledge on managing MIS. The few universities that offer courses in MIS management are forced to use journal articles as a surrogate to a comprehensive text.

The objective of this book is to provide a systematic and comprehensive treatment of MIS management. The topics presented provide a managerial, organizational, behavioral, and technical treatment of MIS management. The book is designed to provide a practical guide and reference for the practicing MIS executive and to provide a course of study for a capstone course for MIS majors.

During the past ten years the authors have conducted courses in MIS in graduate schools of business at the University of Houston and, primarily, at the University of Minnesota. To conduct these courses, the authors have extensively drawn from the business community for distinguished lectures on MIS management issues and have developed extensive reading materials from professional and scholarly journals.

Based upon this material and the research, consulting, and direct management experience of the authors, this book represents a first attempt at coalescing the available knowledge into book form.

The book is divided into seven major sections as follows:

The MIS Executive

MIS Organization

Managing MIS Personnel

MIS Planning and Control

Key Technology Trends and Implications

Managing MIS Development

Management of Production and Computer Operations

The first section consists of an introductory chapter, "The MIS Executive," that provides a historical perspective on MIS executives and defines the characteristics of the successful MIS executive.

The second section, "MIS Organization," consists of two chapters. The first chapter discusses organizational use of MIS. The second chapter discusses strategies for the internal organization of the MIS function and approaches for staffing the MIS organization.

The third section, "Managing MIS Personnel," consists of two chapters. The first chapter discusses general management theory and how it applies to managing the MIS function. Particular emphasis is placed on contingency management theory. The second chapter discusses the behavioral research findings about MIS personnel and its implication for MIS management and strategies for achieving job productivity and job satisfaction.

The fourth section, "MIS Planning and Control," consists of two chapters. The first chapter analyzes strategic and project planning and the various planning methodologies that have been advocated. The second chapter pertains to management assessment and evaluation of the MIS function.

"Key Technology Trends and Implications," the fifth section, provides a review of the most pressing technology issues facing the MIS manager. This section reviews existing technology that is not yet totally absorbed by organizations and forecast future technology developments. There are chapters on database management systems, decision support systems, data communications, distributed data processing, advanced office systems, and robotics.

The sixth section, "Managing MIS Development," is concerned with managing the systems development cycle. The first of three chapters focuses on systems analysis and design strategies and procedures. Emphasis is placed on evaluating different methodologies and selecting an appropriate approach. The second chapter provides practical guides for managing software development via programming standards and controls. The third chapter is concerned with managing the implementation of systems. Special treatment is given to behavioral resistance to systems and minimizing it.

"Management of Production and Computer Operations," the seventh and last section, is directed towards the production side of MIS. There are chapters on computer capacity planning, hardware and software acquisition, and computer operations management.

As discussed earlier, the book is designed for both the practitioner and the student of MIS management. For classroom use, the authors have developed a case book -- *Management of Information Systems Casebook* -- that is most instructive for applying the concepts presented in the book.

It goes without saying that developing a book of this magnitude requires contributions far beyond those of the authors. We are able to recognize literary contributions in the bibliography by referencing outstanding authors who have contributed to the professional and scholarly journals that were so important to our efforts. It is more difficult to recognize the many outstanding MIS practitioners who have shared their wealth of insight and experience with us. As a small effort of gratitude we would like to recognize the Associate Firms of the MIS

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As we acknowledge the efforts of all who have contributed, we also assume full responsibility for any inadequacies or discrepancies in the book.

Gary W. Dickson
James C. Wetherbe

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