

# Bidgoli Never MISses a Beat

by M. E. Kabay, PhD, CISSP-ISSMP  
Professor of Computer Information Systems  
School of Business & Management  
Norwich University, Northfield VT

*Long-time friend and colleague Eddie Rabinovitch is an independent consultant with more than 25 years of experience in IT, networking and security. He is a senior member of the IEEE < <http://www.ieee.org/index.html> > and an Editorial Review Board member for z/Journal < <https://enterprisesystemsmedia.com/magazines/z-journal/winter-issue-2012> >. He has authored more than 120 papers which have appeared in numerous technical and trade publications. In this book review, he reports on a mutually-favourite author's latest work. Everything below is entirely Eddie's work with minor edits.*

\* \* \*

In 2010 Professor Bidgoli < > published his college textbook < [http://www.mekabay.com/nwss/814\\_bidgoli\\_mis\\_2010\\_\(rabinovitch\).pdf](http://www.mekabay.com/nwss/814_bidgoli_mis_2010_(rabinovitch).pdf) > for management information systems (MIS), which at that time I called “the missing link in college education” preparing students for real life applications of information systems. To keep-up with the fast pace of the 21<sup>st</sup> century, since then Professor Bidgoli had published two new editions < [http://www.mekabay.com/nwss/902\\_bidgoli\\_2nd\\_edition\\_mis\\_\(rabinovitch\).pdf](http://www.mekabay.com/nwss/902_bidgoli_2nd_edition_mis_(rabinovitch).pdf) > of his excellent textbook, focusing on and emphasizing the most recent developments in information systems management. The most recent edition MIS<sup>3</sup> < <http://www.amazon.com/MIS-3-Printed-Access-Card/dp/1133627307> > is yet another gem of a textbook in college education.

As the previous editions MIS<sup>3</sup> is an interactive print accompanied with a full featured eBook educating the readers on the hottest topics and the coolest gadgets and at the same time challenging and engaging them with quizzes and problem solving.

**Chapter 1 – “Information Systems: An Overview”** describes how organizations use computers and information systems to reduce costs and gain competitive advantage in the marketplace. After studying this chapter the reader should be able to:

- Discuss common applications of computers and information systems
- Explain differences between computer literacy and information literacy
- Define transaction-processing systems
- Define management information systems (MIS)
- Describe four major components of information systems
- Discuss the differences between data and information
- Explain the importance and applications of information systems for businesses
- Discuss utilization of information technologies to gain competitive advantage
- Explain the 5 forces model (buyers, suppliers, substitute products/services, new entrants, rivalry among competitors) for gaining competitive advantage
- Review the IT job market
- Summarize the future outlook of MIS

This chapter, as is the entire textbook, is enriched by real-life examples and case studies from some of the best known corporations; e.g., Hertz, Home Depot, UPS, Walmart, Netflix, FedEx,

and Microsoft. **Case Studies** discuss recent industry trends, such as using IT at FedEx and Mobile Technology for future shopping.

**Chapter 2 – “Computers: The Machines Behind Computing”** describes major components of computers. It reviews the history of computer hardware and software providing a high level overview of computer operations. After studying this chapter the reader should be able to:

- Define a computer system and describe its components
- Discuss the history of computer hardware and software
- Explain distinct factors characterizing computing power
- Summarize computer operations
- Discuss the types of input, output and memory devices
- Explain computer classifications
- Describe the different types of computer software: i.e. operating systems and applications
- List the generations of computer languages

Real life examples in this chapter include companies like IBM and Google with industry connection to IBM and **Case Studies** discussing **Linux as rising OS** and **Laptop versus Tablet**.

**Chapter 3 – “Database Systems, Data Warehouses, and Data Marts”** gives an overview of databases and database management systems, discussing the history as well as recent trends in database use. After studying this chapter the reader should be able to:

- Define a database and database management system
- Explain logical database design and relational database model
- Define components of a database management system
- Summarize recent trends in database design and use
- Explain the components and functions of data warehouse
- Describe functions of a data mart
- Define business analytics and describe its role in decision-making process

Real life examples in this chapter include companies like InterContinental Hotels Group (IHG), Netflix, Blue Cross Blue Shield (BCBS), Match.com with industry connection to Oracle and **Case Studies** discussing **Business Intelligence and Data Warehouse Applications at InterContinental Hotels Group (IHG)** and **Data Mining Tools at Pandora Radio**.

**Chapter 4 – “Personal, Legal, Ethical, & Organizational Issues of Information Systems”** examines privacy and ethical issues and discusses reduction of organizational and personal risks. After studying this chapter the reader should be able to:

- Discuss information privacy and methods for improving the privacy of information
- Explain the effects on information privacy of e-mail, data collection, and censorship
- Discuss the ethical issues related to information technology
- Discuss the principles of intellectual property and issues related to the infringement of intellectual property
- Discuss information systems issues affecting organizations, including the digital divide, electronic publishing, and on the connection between the workplace and employees’ health
- Describe green computing and the ways it can improve the quality of the environment

Real life examples in this chapter include Verizon's v. OnlineNic Cybersquatting lawsuit, Health and Social issues related to Online Gaming, with industry connection to Anonymizer, Inc. **Case Studies** are discussing **Privacy and Security Breaches at Acxiom** and **Privacy and other Legal Issues at Google**.

**Chapter 5 – “Protecting Information Resources”** highlights awareness, safeguards, and protection of information resources. After studying this chapter the reader should be able to:

- Describe information technologies that could be used in computer crimes
- Describe basic safeguards in computer and network security
- Explain major security threats
- Describe security and enforcement measures
- Summarize the guidelines for a comprehensive security system, including business continuity planning

Real life example in this chapter describes Biometrics at Phoebe Putney Memorial Hospital with industry connection to McAfee. **Case Studies** discuss **The Love Bug Virus** and **Security Breach at SONY's PlayStation Network**.

**Chapter 6 – “Data Communications: Delivering Information Anywhere and Anytime”** explains the role of data communication systems in delivering information for decision making. After studying this chapter the reader should be able to:

- Describe major applications of a data communication system
- Explain major components of data communication system
- Describe the major types of processing configurations
- Explain the three types of networks
- Describe the main network technologies
- Explain important networking concepts, such as bandwidth, routing, routers, and the client/server model
- Describe wireless and mobile technologies and networks
- Summarize the convergence phenomenon and its applications for personal and business use

Real life examples in this chapter include Cisco's WebEx, Apple's iPhone, and Telepresence as a new use of Data Communication and Convergence. Cisco Systems is the industry connection in this chapter with **Case Studies** discussing **Data Communication at Walmart** and **Security and Privacy Protection of Mobile Devices**.

**Chapter 7 – “The Internet, Intranets, and Extranets”** introduces the user to the Internet and Web technologies. After studying this chapter the reader should be able to:

- Describe the makeup of the Internet and the World Wide Web (WWW)
- Discuss navigational tools, search engines and directories
- Describe common internet services
- Summarize widely used web applications
- Explain the purpose of intranets
- Explain the purpose of extranets

- Summarize the trends of the Web 2.0 and Web 3.0

Real life examples in this chapter include numerous examples of Internet and WWW applications that became household names. Interesting exhibits in this chapter include **IBM's Backbone, Cengage Learning home page** as well as experts' predictions on **The Internet in 2020**, which we should definitely reassess in few years from now. Google is the industry connection in this chapter with **Case Studies** discussing **IBM's Intranet and Social Networking in Support of Small Businesses**.

**Chapter 8 - "E-Commerce"** provides an overview of e-commerce and value chain analysis, then comparing e-commerce with traditional commerce. After studying this chapter the reader should be able to:

- Define e-commerce and explain its pros, cons and business models
- Explain the major categories of e-commerce
- Describe the business-to-consumer e-commerce cycle
- Summarize the major models of business-to-business e-commerce
- Describe mobile-based and voice-based e-commerce
- Explain two supporting technologies for e-commerce

Real life examples in this chapter include Twitter's role in helping business to find new customers, USA.gov, e-procurement at Schlumberger, Worldbid.com. Amazon.com is the industry connection in this chapter with **Case Studies** discussing e-commerce applications in online travel and convergence of e-commerce with traditional commerce.

**Chapter 9 – "Global Information Systems"** is dedicated to globalization of information systems. After studying this chapter the reader should be able to:

- Discuss the reasons for globalization and use for global information systems, including e-business and Internet growth
- Describe global information systems, their requirements and components
- Explain the type of organizational structure used with global information systems
- Discuss obstacles to using global information systems

Real life example in this chapter includes Rohm & Haas – part of Dow Chemicals - with industry connection to SAP. **Case Studies** discuss multinational companies challenges dealing with language barriers on the Web and success in global e-commerce.

**Chapter 10 – "Building Successful Information Systems"** highlights modern systems analysis and design explaining the Systems Development Life Cycle (SDLC). After studying this chapter user should be able to:

- Describe SDLC as a method for development information systems
- Explain the tasks involved in the planning phase
- Explain the tasks involved the requirements-gathering and analysis phase
- Explain the tasks involved in design phase
- Explain the tasks involved in implementation phase
- Explain the tasks involved in the maintenance phase

- Describe the new trends in systems analysis and design, including service-oriented architecture, rapid application development, extreme programming, and agile methodology

Real life examples in this chapter include WestJet Airlines, Sabre Holdings, and Agile Methodology at Overstock.com. CA Technologies (formerly known as Computer Associates International) is the industry connection in this chapter with **Case Studies** discussing **Systems Development at SEB Latvia and Crowdsourcing**.

**Chapter 11 – “Enterprise Systems”** describes enterprise system as an application used in all functions of a business that supports decision making throughout the organization. After studying this chapter the reader should be able to:

- Explain How supply chain management is used
- Describe customer relationship management systems
- Explain knowledge management systems
- Describe enterprise resource planning systems

Real life examples in this chapter include Dell Computer, Time Warner Cable, Amazon.com, Naghi Group with industry connection to Salesforce.com. **Case Studies** discuss ERP and Johns Hopkins Institutions and CRM at Starbucks.

**Chapter 12 – “Management Support Systems”** focuses on improving and expediting decision making process. After studying this chapter user should be able to:

- Describe the phases of decision making process in a typical organization and the types of decisions that are made
- Describe a decision support system
- Explain an executive information system’s importance in decision making
- Describe group support systems, including groupware and electronic meeting systems
- Summarize the uses for a geographic information system
- Describe the guidelines for designing a management support system

Real life examples in this chapter include maintenance of electronic health records, electronic meetings at General Motors, and Microsoft Office SharePoint with industry connection to SAS, Inc. **Case Studies** discuss collaboration systems at Isuzu Australia Limited and the increasing popularity of mobile medical-collaboration tools.

**Chapter 13 – “Intelligent Information Systems”** gives a concise, excellent overview of Artificial Intelligence (AI), robots, expert systems, case-based reasoning, fuzzy logic, neural networks, genetic algorithms and natural language processing systems. After studying this chapter user should be able to:

- Define AI and explain how AI technologies support decision making
- Describe an expert system, its applications and components
- Describe case-based reasoning
- Summarize the types of intelligent agents and how they are used
- Describe fuzzy logic and its uses
- Explain artificial neural networks
- Describe how new genetic algorithms are used

- Explain natural-language processing and its advantages and disadvantages
- Summarize the advantages of integrating AI technologies into decision support systems

Real life examples in this chapter include experts Systems in Baltimore County Police Department, Neural Networks at Microsoft and the Chicago Police Department with industry connection to Alyuda Research. **Case Studies** discuss genetic algorithms at Staples and natural language processing making a smartphone smarter.

**Chapter 14 – “Emerging Trends, Technologies, and Applications”** discusses new trends in software and service distribution, including pull and push technologies, Software as a Service (SaaS), virtual reality, new trends in networking, including grid, utility and cloud computing. The reader also gets an overview of how nanotechnology is being used, its potential and future applications. After studying this chapter user should be able to:

- Summarize new trends in software and service distribution
- Describe virtual reality components and applications
- Discuss uses of Radio Frequency Identification (RFID)
- Explain Quick Response (QR) codes
- Summarize new uses of biometrics
- Describe new trends in networking, including grid, utility and cloud computing
- Discuss uses of nanotechnology

Real life examples in this chapter include Coca-Cola’s utilization of RFID-based dispensers for generating business intelligence and cloud computing providers, such as Amazon.com, Google, Microsoft, IBM and salesforce.com, to mention just a few. Mechdyne Corporation is the industry connection in this chapter with **Case Studies** discussing cloud computing’s help in cost cuts at universities worldwide and virtual worlds at IBM.

As with its older versions, MIS and MIS<sup>2</sup>, this third edition MIS<sup>3</sup> is a priceless teaching tool for any school of business, science or engineering. It will encourage students to relate the theoretical aspects of different subjects in information systems to real life implementations of these topics.

I also believe, because of the way it's written with a variety of cool auxiliary tools and online references, that this book can be used as a reference guide for popularization and demystification of MIS in any modern business and even at home. It’s a perfect teaching tool for non-technical executives moving into any business that is leveraging modern information technology for mission-critical functions.

Congratulations to Professor Bidgoli – again!

\* \* \*

Eddie Rabinovitch < [http://www.linkedin.com/profile/view?id=115837&trk=tab\\_pro](http://www.linkedin.com/profile/view?id=115837&trk=tab_pro) > is a physicist by training who has more than twenty years of experience in information technology, data processing, networking, security, Internet/intranet/extranet and business communications. He has held executive technical, operational, and consulting positions with major corporations in the USA and overseas in information technology, marketing, business development, program management, pre- and post-sales customer support and is currently serving as a member of the Council of Technology Advisors for the Gerson Lehrman Group (a technology research firm in New York, NY engaged in consulting to major investment and fund management companies).

He has authored more than 120 papers with major technical and trade publications. He is a Senior Member of the IEEE and a frequent speaker at national and international conferences on business and technology.

\* \* \*

M. E. Kabay, < <mailto:mekabay@gmail.com> > PhD, CISSP-ISSMP, specializes in security and operations management consulting services and teaching. He Professor of Computer Information Systems in the School of Business and Management at Norwich University. Visit his Website for white papers and course materials. < <http://www.mekabay.com/> >

\* \* \*

Copyright © 2013 Eddie Rabinovitch & M. E. Kabay. All rights reserved.