Preface

This book is about the experiences of contemporary chief information officers (CIO). CIOs in New Zealand, Taiwan, and the United States of America agreed to participate. They also agreed to be identified along with the name of their company. They provided their interpretation of issues that have been dealt with and those they anticipate having to deal with in the foreseeable future. The results of the interviews allowed the identification of emerging themes related to management and technological aspects. Another important result is the identification of an alignment issue. That is, it is important to ensure that the interpretation of the CIO role is clearly and explicitly agreed upon by both the chief executive officer (CEO) and the CIO.

As senior management address the importance of information technology to the functioning of an organization, the formally recognized role performed by a CIO emerges (Kishore & McLean, 2002). The emergence of this role can take on many forms and is contingent upon many factors. Some of the major factors may relate to some of the following items. First, the CIO role may be affected by environmental factors such as size, industry, or organizational structure. A second factor may relate to the level of maturity of the CIO role. Thus, the role in one firm may be contributing more to a firm's competitive advantage. Along with this factor is also the aspect of senior management's interpretation of the value of information technology to the overall operation of the firm. A third factor relates to industry-based government regulations that may exist and perhaps influence the role performed by the CIO in relation to processes of gathering, retaining, and distributing information.

Recent research projects that have directly investigated CIO perspectives include the following. Seddon, Graeser, and Willcocks (2002) surveyed 80 senior IT managers about the benefits for their organizations from various approaches to evaluating IT projects and the IT function. Kishore and McLean (2002) documented the discussion of a CIO panel of nine senior executives and their opinions about the future of virtual organizations.

While the above projects are elucidating, they do not provide an in-depth and comparative perspective to the emerging CIO role. This book identifies the emerging aspects of the CIO role. In-depth interviews were employed to attempt to develop a better understanding of this role. The results of this investigation expand our understanding in this area through a discussion of the emerging roles of the CIO.

An interview protocol served as a discussion guide for the conversations with each CIO. The personal and family history, as well as the background material of the company, provided some context within which to view the CIO comments about their management experiences. The remainder of the interview protocol attempted to document CIO comments about issues the CIO felt were significant. The questions include the following:

- Personal and family history
- Company background
- Why the current position was accepted
- Issues
    o Initial
    o Current
    o Future
- Dealing with users
- Deciding on investments
- General comments about being a CIO

The book is organized into five sections.

The first section of the book provides an overview of the book project, an historical perspective to the role of the CIO, and background discussion of the interviews which generated the CIO comments.

Chapter I presents an overview of this book. Reasons for writing the book are discussed along with expected findings. This chapter concludes with a presentation of the format for the remainder of the book.

The historical presentation is in **Chapter II**. The CIO role within organizations is relatively new. This chapter presents a general discussion of the perspective of the role of the CIO. Comments are included from researchers, CIOs, and other senior managers.

Chapter III describes an overview of the process for conducting the interviews, including some of the issues that were addressed during the process of gathering the CIO comments about their experiences and the issues they addressed.

The second section of the book presents chapters about the CIOs from New Zealand. The following CIOs agreed to participate in this project and interviews have been conducted with them.

Chapter IV is about Wendy Bussen, director of information technology, Auckland University of Technology (AUT). Wendy was born and grew up in Huntly, New Zealand. She has a

Bachelor of Science in mathematics from Waikato University and a Master of Philosophy in information systems from Auckland University. She joined AUT in 1996. AUT is New Zealand's newest university, although it opened its doors as a postsecondary institution in 1895. The goal of AUT is to produce excellent, capable graduates in relevant fields.

Chapter V is about George Elder, information and supply chain manager, Tait Electronics Limited. George was born in Dunedin, New Zealand and grew up in Motueka, New Zealand. He has a CPIM certification from the American Production and Inventory Control Society and an MBA from the University of Canterbury. He joined Tait in 1997. Tait was established in 1969 with head offices in Christchurch, New Zealand. The company supplies world class radio communications equipment.

Chapter VI is about Rhys Gould, group manager of information systems, Fulton Hogan. Rhys was born and grew up in Dunedin, New Zealand. He studied accounting at Otago University in Dunedin. His first job after university was with Fulton Hogan. Fulton Hogan was founded in 1933 as a contracting company specializing in road works, quarrying, and civil construction.

Chapter VII is about Zarina Thesing, general manager of information technology, Pumpkin Patch. Zarina was born and grew up in Auckland, New Zealand. Pumpkin Patch was founded in 1990 to provide quality children's fashion.

Chapter VIII is about Russell Turner, chief information officer, MetService. Russell was born in Gisborn and grew up in Wellington, both in New Zealand. MetService was formed in 1992 to provide weather forecasting service in New Zealand.

The third section of the book presents chapters about the CIOs from Taiwan. The following CIOs agreed to participate in this project and interviews have been conducted with them.

Chapter IX is about Lucas Chuang, chief information officer, EVA Airways. Mr. Chuang was born and grew up in Madou, Taiwan. He has a Bachelor of Science in mathematical sciences from National Chenghi University. He joined EVA Airways in 1988. EVA was formed in 1988 as part of Evergreen Marine Corporation the world's largest company for shipping containers and container vessels. EVA is currently the second largest airline in Taiwan providing international passenger and freight service.

Chapter X is about C. M. Ko, section manager, MIS Department, Compostar Technology Corporation. Mr. Ko was born and grew up in Kaohsiung, Taiwan. He studied industrial management at a junior college. He joined Compostar soon after it was formed in 1998. Compostar is a manufacturer and worldwide exporter of resistors and capacitors.

Chapter XI is about James Lin, vice president in charge of information technology, Taiwan Fixed Network Company (TFN). Mr. Lin was born near Sun Moon Lake in Taiwan. He grew up in Taipei, Taiwan. He has a degree in from Tamsui Oxford University majoring in accounting and statistics with a minor in information systems. He joined TFN in 2003. In 2001, Taiwan Fixed Network Company was granted an integrated network license. Since 1991, the company had operated as part of various organizations within Taiwan. The mission of Taiwan Fixed Network is to provide back end (that part of the network that does not move) connections for all international carriers and mobile phone services.

Chapter XII is about C. K. Tsai, deputy director, Information Technology Division, Chi Mei Optoelectronics (CMO) Corporation. Mr. Tsai was born and grew up in Tainan, Taiwan.

He has a Bachelor of Science with a major in geology from National Taiwan University in Taipei. He joined CMO in 1998 when the company was formed. CMO, formed in 1998, is headquartered in Tainan Science Park just south of Kaohsiung, where they are the world leading manufacturer of thin film transistor liquid crystal display products, which are the major components of computer monitors and television screens.

Chapter XIII is about D. I. Wang, chief information officer, Lite-On Technology Corporation. Dr. Wang was born and grew up in Tainan, Taiwan. He has a bachelor's degree in mathematics from a university in Taiwan, and a master's degree in computer science and a PhD in applied mathematics, both from Northern University, Boston, USA. He joined Lite-On in 1998. In 2002, Lite-On Technology Corporation became part of the Lite-On Group. Lite-On Technology has a vision to be a world class producer of light emitting diodes, power supplies, wireless devices, liquid crystal display computer monitors, PDAs, and printers.

Chapter XIV is about M. P. Wang, general manager, Information Systems Department, China Steel. Mr. Wang was born and grew up in Tainan, Taiwan. He has a bachelor's degree in computer science from National Taiwan University in Taipei. He started working for China Steel in 1975. China Steel is an integrated steel mill formed in 1971. With 50% of the Taiwan steel market, the company employs a state of the art computerized continuous casting production process.

The fourth section of the book presents chapters about the CIOs from the United States of America. The following CIOs agreed to participate in this project and interviews have been conducted with them.

Chapter XV is about Jonathan Dove, chief information officer, Worthington Industries. Jonathan was born in Pasadena, California. When he was eight, the family moved to a farm just outside of Pocahontas, Missouri, where he grew up. He has a bachelor's degree in computer science from Coe College in Cedar Rapids, Iowa. He joined Worthington Industries in 1998. Formed in 1955, Worthington Industries is a diversified custom metal processing company and manufacturer of metal related products.

Chapter XVI is about Gary Houk, vice president of Corporate Information Technology and Business Integration, Online Computer Library Center (OCLC). Gary was born in Akron, Ohio. He lived in a lot of different places growing up. He has a bachelor's degree in computer science and an MBA, both from Ohio State University. He joined OCLC in 1974. OCLC was established in 1970 as a nonprofit member-run organization using computers to improve library productivity by creating and maintaining a shared catalogue database. OCLC also owns and maintains the Dewey Decimal Classification System.

Chapter XVII is about Marty Luffy, chief information officer, Installed Building Products. Marty was born and grew up in Pittsburgh, Pennsylvania. He has a Bachelor of Science in industrial management from Purdue University and an MBA from the University of Dayton. Marty is also a certified public accountant. Formed in 1991, Installed Building Products provides commercial and residential construction services such as insulation, waterproofing, gutters, shower doors, shelving, and mirrors.

Chapter XVIII is about Angelo Mazzocco, vice president and chief information officer, The Dispatch Companies. Angelo was born and raised in New Castle, Pennsylvania. He has a Bachelor of Science in mathematics and computer science from Indiana University of Pennsylvania, and an MBA in marketing and information systems from the University of Dayton. He joined the Dispatch Companies in 1998. In 1871, the Columbus Dispatch

began printing and selling a daily newspaper. The company currently comprises 14 different entities in television, radio, newspaper, real estate, aviation, magazine, direct marketing, and professional sports.

Chapter XIX is about Cindy Sheets, senior vice president and chief information officer, Mount Carmel Health System. Cindy was born and grew up in Columbus, Ohio. She has a bachelor's degree in medical technology from Ohio State University and an MBA from the University of Dayton. She joined Mount Carmel Health System in 1989. Mount Carmel was formed over 120 years ago by the Sisters of the Holy Cross. Today, it is a leading provider of general health care services in Ohio.

Chapter XX is about Kathleen Starkoff, chief technology officer and group vice president, Limited Brands. Kathleen was born and grew up in Port Clinton, Ohio. She has a Bachelor of Science in mathematics with minors in chemistry and business from Kent State University, and an MBA from Case Western Reserve with a major in policy. She joined Limited Brands in the late 1990s. Formed in 1963, Limited Brands has over 3,800 retail stores carrying six retail fashion brands, including apparel and fragrance.

Chapter XXI is about John Zarb, chief information officer, Libbey. John was born and grew up in Highland Park near Detroit, Michigan. He has a bachelor's degree from Eastern Michigan University and an MBA from Michigan State University. He joined Libbey in 1996. Libbey is the leading producer of glass tableware in North America. Formed over 185 years ago the company produces glass tableware, ceramic dinnerware, metal flatware, and various plastic utensils.

The fifth section consists of three chapters which describe how the results of the interviews were determined and analyzed. There is also a discussion of the content of the themes that were identified.

Chapter XXII (Reviewing CIO Comments) presents a discussion of the content of the comments offered by each CIO in response to the general categories of questions in the interviews. To begin, the first section presents summary data about what the participants did before they became a CIO. This section discusses their early life and education, provides an overview of the types of positions held before the participant became a CIO, and outlines some of the comments made about why the participant accepted the position of CIO. Following this initial discussion, the chapter presents sections related to the major category of questions asked during the interviews. These major categories are as follows:

- Dealing with Users
  - How the CIO interacts with various levels of users within the organization
- Deciding on the Technology
  - What aspects surround the decisions about the acquisition of technology for the corporation
- Initial Issues
  - Categories of issues that required the CIO to take action upon assuming the CIO role
- Current Issues
  - Issues the CIO is dealing with now (or at the time of the interview)

- Future Issues
    - o These are issues the CIO foresees having to deal with in the future

In **Chapter XXIII** (Analyzing CIO Comments), an analysis of the comments is presented. Mintzberg's managerial roles framework is introduced and the components are described. The themes identified within each of the major categories of the CIO interviews are then mapped onto the roles described in the framework. This process supports a discussion of the analysis of the CIO role. The final section of the chapter presents some concluding remarks.

While the development of an interview protocol was important to provide consistency across a number of interviews, it was also important to allow the CIO to pursue aspects of their comments about their own experiences that are central to their story. This tension between structure and flexibility requires the interviewer to "walk a thin line." Also, the collection of qualitative interview data takes time. It takes a lot of time and effort to read and reread transcripts, and in this case, then, to develop a chapter based upon a series of transcripts from interviews with the CIO. This approach adds richness and allows insights of the research participant to be gathered. The details of the stories provide a glimpse of insight into the real world of the CIO.

Then, **Chapter XXIV** (Final CIO Comments) presents an overview of the final comments made by the CIOs. At the end of each interview the CIO was asked to provide an overall comment from a general perspective about how they interpret their role within the context of their company. These interpretive comments are divided into three main categories. The first category presented here includes comments about the internal operations of the CIO's business unit. The second category relates to the CIO's interpretation of how the information systems business unit should relate to the corporate user community. The third category discusses how the CIOs view their role in relation to senior management. Then, some final comments are presented about the changing role of CIOs. A brief conclusion section ends this chapter.

Each CIO seemed to really enjoy what they were doing. There was an excitement in their voice when they described how their role was unfolding and how recognition was emerging for their contribution to the company goals and objectives. They are the types of individuals who like the challenge of identifying and understanding an issue, and overseeing its resolution. Finally, ever the optimists, they look forward with anticipation to a future where new technology may be employed in a novel way to benefit their company.

Conclusion

The following chapters document the project and the comments of 18 CIOs about their experiences. Emerging themes are identified relative to both management and technological aspects. In general, it is noted that the CIO role is now emphasizing more of the management aspects than the technological aspects. It remains part of the CIO role that they are knowledgeable about technology. But more often the CIO is looked upon as a leader from a business perspective in the appropriate application of information technology. Thus, the focus is on employing technology to address business goals. It is important that the individual

who fulfills this role knows the expectations of the company as expressed by fellow members of the senior management team. It is even more important that the members of the senior management team also understand what role is to be played by them and the CIO, and that they concur with how the role will facilitate attaining corporate objectives.

This book provides valuable insights into the role of the CIO and the necessary interaction with other parts of the organization and external relationships with vendors and suppliers. These insights have been gained through in-depth discussions with currently practicing CIOs. Their comments will prove valuable to both currently practicing CIOs and those who aspire to this challenging role.

References

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