Preface

Temporal Structures in Individual Time Management: Practices to Enhance Calendar Tool Design covers the concepts, methodologies, techniques, tools and perspectives essential for understanding individual time management strategies, with an emphasis on personal temporal structure usage that involves calendar tools. This book provides evidence and insights for researchers and practitioners to enhance the current electronic calendar systems design and implementation. The primary target audience is human-computer interaction, information systems and computer science researchers and practitioners; a secondary target audience includes those who are generally interested in improving the quality of personal time management, in that this book also offers rich personal time management stories with time management strategies and lessons through the aid of calendar tools.

As an invaluable and non-renewable resource, time dominates our lives. Everyone, no matter how rich or poor they are, gets an equal twenty-four hours a day. With the advancement of our society, temporal regularity has been introduced to better structure our society. As a result, many routine activities are created with an evident time boundary, for example, most professionals working in industry start their work at 8:00 in the morning and end their day at 5:00 in the evening, with a one hour lunch break in between. In general, these routines indicate one type of temporal structure created by our society based on a long history of human social practices and on a basic understanding of the temporal cycle of our physical bodies. Gidden (1984) argues that routine is “integral to the continuity of the personality of the agent…and to the institutions of society” (p. 60). His famous structuration theory (1991) indicates that the temporality (or the state of being in one’s own time milieu) of the individuals is associated with that of institutions. He categorizes temporality into three “intersecting planes,” i.e., durée (day-to-day life), the Heideggerian dasein (the human lifespan from birth to death) and the longue durée (social institutions) (Giddens, 1981, p. 28). Social structures are being shaped and re-shaped by everyday social practices, and therefore, the structuration is the continuous interplay between individuals and society with an emphasis on temporality. Gidden’s theory demonstrates the complexity of temporality in our society, but also shows the nature of the social aspects of time, which is a main time focus throughout this book.

Social aspects of time are defined as socially-constructed time (Clark, 1985). When individuals conduct their personal time management practices, no doubt, they need to interact time in their social contexts. When we measure how much time was spent on specific activities, time units (i.e., second, minute, hour, day, month and year) are used to explain an activity and show the objective aspect of time. In order to manage time, human beings invented artifacts, such as the clock and calendar; for recording the activities and events through a variety of schedules, which represent both socially-constructed and objective time. Holidays are an example of socially-constructed time. For instance, Julia worked on an urgent interface design project from 1 p.m. to 4 p.m. with her co-workers for a Japanese client in an East Coast city of the United States on July 4, 2008. From Julia’s schedule, 1 p.m. to 4 p.m. and July
4, 2008 were objective time measures, and the project activities with her co-worker on July 4 represent one type of socially-constructed time, since July 4 is Independence Day in the United States, but not a holiday in Japan. To schedule this project time, Julia and her co-workers had to synchronize their personal schedules to find a common time period on July 4 to work on the urgent interface design project for their Japanese client.

As Giddon indicated in his structuration theory, individuals’ temporality is constrained by social structures, aligned with the society temporal regularities. In this research, I emphasize the structure of strategies in personal time management practices called *temporal structure*, which is a key notion in this book. Temporal structure is defined as a time representation indicating how actors, such as individuals, organizations, communities and societies, capture, manipulate, and manage social structures, organizational structures and other time-related structures in order to find out the best ways to manage their time. *Temporal structure* can be either explicit or implicit. For instance, holidays are viewed as one type of explicit temporal structure, since they are known to the whole society and are usually announced to the public. An anniversary for a family can serve as an instance of an implicit temporal structure, which is only known within a small group or by very few people or even just an individual. In reality, temporal structures utilized by individuals are more sophisticated than the two temporal structure examples presented in this paragraph because of many unknown and unpredictable variables involved. This is also why few time studies have been carried out so far. *It takes time to do time research* (Ancona et al., 2001), thus the majority of prior temporal structure research has been at the theoretical building stage. The research reported in this book therefore aims to extend temporal structure theories and to provide further empirical evidence for investigating new user requirements to enhance the current electronic calendar systems. This research also offers insights on how individuals capture, manage and utilize temporal structures surrounding them for successful personal time management practices.

In practice, many people utilize calendar tools to assist with their time management. *Calendars* are regarded as a very valuable tool for professionals in an office (Kincaid et al., 1985). In the existing human-computer interaction literature, temporal structure practices for calendar tool design are fairly scant; therefore, this book aims to present the author’s efforts to bridge the gap between temporal structure usage in personal time management practices and the current electronic calendar design. The work reported in this book informs new opportunities for human-computer interaction researchers and practitioners in the computing field to enhance the current electronic calendar tool design at both the individual and organizational levels with suggestions to incorporate more extensive temporal structure features.

In this book, many prior time and calendar related studies are reviewed in a systematical way. For those who are interested in time, time management, time-related organizational behaviors, individual temporal perception, and electronic calendars, this book can serve as a starting point for getting to know the literature in the field. The opinions disclosed in this book should be of interest to human-computer interaction researchers, software developers and interface designers who desire to learn and enhance the current electronic calendar systems.

This research describes individual time management strategies in an academic institution and gathers information on the complex temporal structures a group of academics experience and manage. The focus is on understanding the relationship between the quality of individual time management and an individual’s understanding and use of temporal structures. This work includes two sets of field interview studies that gathered data on how people use temporal structures with electronic calendar tools. It is followed by a survey that is given to a larger group of respondents in the same subject population and examined within the field studies. The survey examines the hypotheses developed from a literature review on the impact and role of time in people’s work lives coupled with the information uncovered in the field study on time management practices. A research model was then developed using partial
least squares (PLS) to examine the relationships between the key survey constructs. Following the large survey study, a small-scale longitudinal study with two subjects was conducted to further confirm the study findings in order to further provide strong evidence for more extensively incorporating temporal structure features into the current electronic calendar systems design.

The field interview studies with twenty professionals deepen our understanding on the complicated nature of personal time management, and offer rich stories about individual usage of various temporal structures with personal calendar tools. Moreover, through individual time managers’ stories, this book further facilitates ideas of what the best ways to manage personal time are, particularly through taking advantage of the information technologies and understanding temporal structure relationships. For organizations, the process of capturing, retrieving and creating temporal structures is indeed a knowledge management process (Wu et al., 2008), and therefore, this book also provides useful hints on how organizations could design more appropriate temporal structures to “entrain” their employees for higher productivity with a healthier pace.

Following the field interviews, a large survey study of over 700 respondents at a US public research university demonstrates that the use and understanding of temporal structures is an important component for good individual time management. Four properties of individual time management quality were identified and utilized to characterize those who are effective time managers. These four properties include planning, meeting deadlines, sensing a lack of time control and engaging in procrastination.

Significant differences are found in the use of explicit temporal structures, creation of temporal structures and understanding of temporal structure relationships between effective time managers and ineffective time managers. A research model was then built to understand the interacting variable relationships. Significant differences in the relationships between quality of individual time management and various temporal structures were discovered among students, faculty and staff members in the university studied. Students mostly use and understand a range of explicit and implicit temporal structures in their personal time management. Faculty members focus on using explicit temporal structures and creating their own temporal structures to support their time management. Staff members only utilize the temporal structures to do time planning. Implicit temporal structure understanding helps them avoid procrastination in their work. These results are interpreted as follows. The students are greatly constrained by a large number of tight and short deadlines which they do not have power to adjust, e.g., assignment due dates. Faculty members have much more time control and flexibility to create their own temporal structures. Except for meeting classes and turning in grades, they set their own schedules. Staff members are mainly concerned with meeting deadlines. They have constantly shifting instantaneous demands, part of which are responding to others’ temporal structure needs. Thus, their temporal structures only support their time planning, and avoid potential work delay. This survey study concluded that people exhibit different time experiences based on their professions. Furthermore, effective time managers demonstrate more skill in capturing and using their temporal structures than ineffective time managers. Current information technologies do not provide much support to capture temporal structures explicitly, therefore this study implies that it will likely be valuable to integrate temporal structure features into personal time management systems such as electronic calendar tools.

Additional data collected from open-ended questions of the large survey were also reported to identify the practical time management strategies for being an effective time manager. The preliminary findings indicate that useful hints for effective time management are: (1) planning in advance; (2) prioritizing tasks; (3) controlling time; (4) stopping procrastination; (5) understanding temporal structure relationships and (6) communicating and coordinating time with others. These additional data analyses confirmed the main survey findings on the key components of the individual time management and the process of temporal structure capture and utilization impacts the quality of time management. In addition, users’
desired calendar tool features provide new opportunities for HCI researchers and practitioners to further enhance current electronic calendar tool design and implementation.

Lastly, a small-scale longitudinal study with two selected subjects was conducted to further confirm the validity of the findings from the intensive interview field studies and the large survey. After five months of practice utilizing temporal structures in their personal calendar tools, the two subjects reported very positively that the quality of their personal time management improved dramatically. The results of this small study again demonstrate a real need for enhancing electronic calendar systems from a temporal structure point of view.

At the end of this book, study conclusions are made and future research directions are proposed. Some information technology implications for improving both individual and organizational levels of productivities are further discussed.

ORGANIZATION OF THE BOOK

Temporal Structures in Individual Time Management: Practices to Enhance Calendar Tool Design consists of thirteen chapters (and two previous published) and is characterized by the following chapters:

Chapter 1: Understanding Time and its Relationship to Individual Time Management

Time never has been an easy concept, since each of us has different time perceptions and experiences. Individual time management stories can vary dramatically for a variety of reasons, such as different backgrounds, professions, social roles, cultures, gender and so on. The main focus of this book is on socially-constructed time, which demonstrates how humans interact with time in their social contexts. This perspective of time provides a good basis to understand how individuals experience time and furthermore manage their time. This chapter introduces the concept of time based on prior time research and its related concepts. First, it describes how difficult it is to interpret what time is and how scientists in different disciplines explain the nature of time.

This chapter also explains what time dichotomies are by providing examples. The time dichotomies described include quantitative and qualitative time, clock-based and event-based time, and linear and cyclical time, which are different forms or representations of the main stream time dichotomy - objective and socially-constructed time. A key contribution that social psychologists bring into time research is to have a convergent understanding of time instead of separating the dual aspects of time. As primary time artifacts, clocks and calendars are also introduced in this chapter. A clock is a common metaphor for measuring objective time with seconds, minutes, and hours, while a calendar is another popular tool for recording subjective or socially constructed time with meaningful schedules.

Furthermore, in order to interpret individual time management practices, a conceptual research framework is proposed by integrating a few key time concepts (such as socially-constructed time, temporal structures and calendar tools, etc.), in order to understand what relationships exist between temporal perception and individual time management involving calendar tools. The main assumption is that individuals utilize their personal calendar tools to capture, manipulate, and create various temporal structures or sociotemporal patterns for achieving their time management goals.

Another objective of this chapter is to give an introduction of the primary concepts utilized in this research and to serve as a precursor for later chapters, which interpret the complexity of temporal phenomena that individual time managers experience in their daily practices and explain how current electronic calendar tools could be better designed from a human-computer interaction point of view.
Chapter 2: What are Temporal Structures?

Temporal structure, a key notion in this book, is defined as a patterned organization of time, used by humans to help them manage, comprehend or coordinate their use of time. The objective of this chapter is to provide a theoretical overview for understanding the role temporal structures play in personal time management practices. This chapter discusses how temporal structures are aligned with personal temporal constraints and how to understand the impact of these structures on personal productivity. This chapter first introduces the concept of temporal structure, which is necessary to interpret individual time management practices. Individual temporal experiences contain many different forms of temporal structures, which can be either explicit or implicit. A good example of explicit temporal structures is a deadline, which most individuals write on their personal calendar tools. An example of implicit temporal structure can be an informal project meeting with a small group, which is not publically announced and is only known internally.

This chapter then discusses the existing temporal structure related terms, which are temporal norms, temporal structures and sociotemporal norms. However, this book adopts only temporal structure as its key concept in order to avoid potential ambiguity and confusion. Next, this chapter presents a comprehensive review of the existing temporal structure research, which serves as a theoretical base to understand how professionals are temporally restrained in a workplace. A few well-known studies in this area are reviewed, such as Roy’s banana time, Perlow’s quiet time and Zerubavel’s hospital time. Afterwards, the chapter describes three real personal time management stories with an emphasis on finding out where and how temporal structures are manipulated in personal calendar tools. The three profiles include a female professor also serving as a department chair, a male software developer, and a male network administrator. Following the three personal stories, two other main studies reported in this book (interview and survey) are briefly introduced. Finally, future trends and a short conclusion are presented.

Chapter 3: Time Management and Temporal Personalities

Personal productivity is achieved through an effective time management practice. Due to the advancement of modern telecommunication and information technologies, today’s professionals are taxed with more and more tasks and given shorter time periods to complete them than before. Companies strive to push their new products to the market in order to gain as much profit as possible in the shortest period.

Time is regarded as a primary factor to measure both personal and organizational successes. First, some common time management tactics for improving time management are introduced. In the existing literature, time management research is scant in that time is a fairly complicated concept with many variables involving in different contexts. In order to provide some theoretical foundation in this area, some empirical time management research is reviewed and four key constructs are identified to measure the quality of individual time management: planning, meeting deadlines, sensing a lack of time control and engaging in procrastination behavior. To further understand how individuals perceive time, psychological aspects of time are also explored, particularly focusing on individuals’ time urgency and time perspective, which indicates individuals’ perceptions on the passage of time and future time. These perceptions support how individuals exhibit meeting their deadlines and engaging in procrastination behaviors, and therefore, can be used to identify whether time managers are effective or not.

The main objective of this chapter is to provide theoretical foundations for later chapters in this book. It reviews and synthesizes time management and temporal personality literatures in organization behavior, experimental psychology and educational psychology fields as well as some practical time
management handbooks. It aims to provide support for key time management constructs identified and developed for this work.

**Chapter 4: Calendar Tools: Current Practices, New Prototypes and Proposed Designs**

The focus of this chapter is to review electronic time management or calendar tools. This review is presented to support the underlying motivation for this book, which is to improve time management by providing better electronic time management or calendar tools that incorporate more types of temporal structures than those being managed with existing tools. The chapter begins with a discussion of paper-based calendars which have served as the primary structure for representing time usage for all subsequent time management aids. This discussion relates time management practices to the types of temporal structures the paper calendar manipulates and to the paper calendar successor, the electronic calendar. A comparison is made between the advantages of paper-based tools and electronic tools to illustrate the types of advantages that were made by moving to electronic means. This comparison is also made to illustrate that the advantages developed for the electronic time manager are simplistic and somewhat obvious, such as simplifying repeated entries and announcing time-based events.

Following this comparison, a list of the types of computer-based features that are found in most existing electronic calendar tools is provided. This list is used to characterize the types of improvements that electronic calendar tools have brought to individual time management and also to demonstrate that these improvements are not based on a person’s understanding and use of temporal structures. This electronic calendar feature discussion is followed by a presentation of user studies on calendar usage which begins to suggest the type of temporal structure features that might be included in new electronic calendar designs. A set of creative new electronic time management designs is presented following the user studies. These are organized into tools which help a user to visualize schedules better and tools which help a user coordinate schedules with other users. Throughout each new design presentation and at the conclusion of this chapter, an additional analysis points out where the designers have implicitly tried to incorporate temporal structures as a key element in the design. Since a key proposal of this research work is to design electronic calendars that incorporate more types of temporal structures than the limited explicit temporal structures they now support, the review is focused on identifying what attempts, if any, have been made to do this by other researchers with a temporal structure perspective.

**Chapter 5: Investigating Temporal Structure Usage in Individual Time Management Practices: Two In-Depth Field Interviews**

Researchers in management and organizational behavior have shown that temporal rhythms and norms exist and that they collectively impact multiple aspects of an organization. They have also shown that individual productivity is hampered if temporal cycles clash. This suggests that individual time management is related to the temporal structures that govern and restrain an individual’s life. At its simplest form, individuals use external records to capture explicit temporal structures that allow them to view this constraint. This external record then allows individuals to view the relationships between the temporal structures affecting their lives and also the relationships between the different temporal structures. Thus, knowing these relationships can help an individual build a personal schedule in a calendar tool that optimizes his or her use of time while still abiding by the temporal structure that cannot be controlled. It is expected that people who are very busy or very interested in personal advancement want to optimize their time usage and, therefore, spend time learning about the myriad of temporal structures that affect their lives so that they can best control them. It follows that people who are effective time managers
are likely to use and understand temporal structures in a more sophisticated fashion than people who are not. This research investigates this possibility through two sets of intensive field interviews with a group of academic professionals at a US public research university. The focus of this work is on investigating types of temporal structures being used in individual time management with calendar tools.

The chapter has this focus because its underlying motivation is that of developing new information technology to support better personal time management. In particular, this research is designed to provide evidence that offering the support of additional temporal structure features in electronic time management or calendar tools will help users be better time managers. It recognizes that being an effective time manager also involves personal commitment. This research seeks to find evidence that additional temporal structure management tools will help such a person better achieve this goal. Therefore, it mainly focuses on collecting temporal structure requirements at the task analysis stage in the systems analysis and design process through intensive user studies.

This research examines (1) how the temporal structures discussed in the literature review are used in personal time management, (2) what types of temporal structures are being used in individual time management practices, (3) what kind of support the current time management tools provide for capturing and managing the temporal structures, and (4) what design implications can be drawn from human studies for the inclusion of multiple types of temporal structures in electronic time management or calendar tools. In the field study, twenty busy professionals from a US public research university were interviewed about their time management strategies and time management tool usage.

Chapter 6: Individual Time Management Profiles: Electronic Calendar Tool Selection, Use and Issues

Today’s users have many options in choosing electronic calendar tools. They can adopt free online calendar tools for personal use, such as Google, Yahoo, or MSN online calendars, which can be synchronized with their mobile devices, e.g., iPhone, Blackberry, PDA etc. At work, electronic calendars tools, such as Outlook and GroupWise, are often mandated by employers. Individual users can readily record meetings, appointments, or tasks with their electronic calendar tools, which usually provide easy recording, editing, repeating, and archiving functions. Despite the many advanced features and benefits provided by current electronic calendar tools, some people still keep traditional paper-based calendars. This chapter presents selected personal profiles regarding personal time management and describes the reasons why each individual chose her or his current calendar tools. These profiles were selected from a set of field interviews conducted with professionals in the US. Four identified basic needs for choosing different calendar tools are (1) portability, (2) ability to gain an overview, (3) ability to better coordinate between multiple tools via convenient synchronization features, and (4) collaborative scheduling. Users’ comments about their calendar tool experiences give valuable insights for enhancing the current electronic calendar tool design.

Chapter 7: Identifying what Constitutes the Quality of Individual Time Management and How Individuals Process Temporal Structure Information: A Survey Study Design

The purpose of this book is to provide useful user requirements for capturing and designing more extensive temporal structures into the current electronic calendar systems through a series of in-depth user studies. Chapter 5 presents the study results of two in-depth interviews with twenty professionals for identifying what types of temporal structures are being used in their personal time management prac-
tices and possible design implications to further design the current electronic calendar tools. In order to deepen our understanding on how individual time management quality is related to the various temporal structures, it is necessary to conduct a much larger scale of user study to further support the findings reported in Chapter 5. If we could possibly obtain solid support from a larger user study, we will be more confident to state that we need to enhance the design of the current electronic calendar systems through incorporating more extensive temporal structure features.

This chapter describes a theoretical base for conducting a large user survey on whether the quality of individual time management is being impacted by individual temporal structure usage. In other words, this study would seek to find out whether temporal structure is an important component of individual time management practices. In this chapter, we attempt to answer four questions: (1) what constitutes the quality of individual time management; (2) how individuals process and utilize their external and internal temporal structures; (3) what temporal structures have been created and used in the researched site; and (4) what the exact temporal structures restrict the three main groups of people consisting of faculty, staff and student at the researched university. A large survey study is therefore proposed to investigate: (a) how effective vs. ineffective individual time managers could be distinguished based upon their perceptions of time management quality components and temporal structure usage, and (b) what are the overall construct relationships between the quality of individual time management and different levels of temporal structure knowledge and its usage. This chapter serves as a theory basis and a precursor for the next three chapters (8, 9 and 10), which primarily report the results of the proposed large survey study on different perspectives.

Chapter 8: How Academics Exhibit their Time Management Behaviors through Various Temporal Structure Usage: Descriptive Analysis Results from a Large Survey

Following the survey study proposed in Chapter 7, a large data set was collected from academics including faculty, staff, and students at a US public research university. This chapter primarily reports descriptive data analyses, constructs independence and univariate analyses for this large survey study. The survey respondents from the researched university included over seven hundred students, faculty, and staff. The survey was designed for the three different groups of people individually, since they experienced different time requirements based upon their different roles at this academic research site. Their temporal requirements are various types of temporal structures in this research. A number of comparison figures were drawn to compare the time management and different temporal structure usage behaviors among students, faculty, and staff based on the univariate data analysis results. This chapter also describes the process of normality tests, skewness and kurtosis analyses. The detailed survey questions and most data analysis tables (7-19) for students, faculty, and staff are presented in Appendix D.

Chapter 9: Who are Effective Time Managers? Bivariate Correlation Analysis and Hypotheses Testing

This chapter presents the bivariate analysis results, and compares the differences between effective time managers and ineffective time managers based upon their temporal structure knowledge, usage, and relationship understanding. The hypotheses to compare effective time managers and ineffective time managers developed for this research are examined in this chapter.
Chapter 10: What is the Relationship Between the Quality of Individual Time Management and Temporal Structure Usage? Building and Testing a Research Model

This chapter introduces the partial least square (PLS) research model designed for this study. A test of the measurement model is presented in detail. The software utilized in this research is the PLS-Graph version 3.0. A partial least square (PLS) data analysis was run on students, faculty, and staff datasets respectively. This chapter also reports all results on the building of the structural model that represents the relationship between time management quality and understanding of temporal structures. PLS results for students, faculty, and staff members are reported separately. This chapter also summarizes the differences among students, faculty, and staff in their capture, use and understanding of different types of temporal structures.

Chapter 11: Input from Users: Personal Time Management Hints, Current Electronic Calendar Tool Difficulties and Desired Features

The main objectives of this chapter are to present useful and practical time management hints from users that were surveyed, to identify user difficulties with the current electronic time management or calendar tools and users’ desired calendar features. Consistent with the main findings from our large survey with students, faculty, and staff members in a US public research university (see Chapter 10), additional data collected from open-ended questions with the same user population also reflect the reality that users are experiencing dynamic time management demands, and demonstrate how they respond to these demands and problems of meeting deadlines. Users’ input on time management hints indicate again that an effective time manager is also a good temporal structure manipulator. The key strategies offered by the users for effective time management are (1) plan in advance, (2) prioritize tasks, (3) control time, (4) stop procrastination, (5) understand temporal structure relationships, and (6) communicate and coordinate time with others. These strategies are interpreted from a temporal structure point of view respectively in this chapter.

This chapter also discloses users’ difficulties with current electronic time management tools. In essence, users’ complaints can be transferred to a whole set of desired tool features, which are (1) better integration with other existing tools that they often need for their jobs, such as project management tools and organizational calendaring tools, (2) flexibility for scheduling more complicated activities, as there is no flexible template in the existing tools for setting up and modifying a series of events easily, (3) better synchronization with different devices, especially for travelers who often have to install different operating systems and calendar software for their mobile and their desktop calendar tools, (4) more user-friendly calendar interfaces (e.g. the stylus used in small devices is difficult for seniors and visually-impaired people), (5) truly built-in time management features (e.g., the ability to assess a person’s time management quality, and to advise how to enhance personal time management practices). In other words, the current electronic calendar tools do not behave intelligently enough to meet users’ time management needs, and (6) more convenient collaborative calendaring features for more effective team scheduling.

This chapter therefore describes additional stories and evidence from individual users regarding their time management practices and their expectations about what ideal calendars or time management tools are needed.
Chapter 12: Relationship between Calendar Tool Design and Temporal Structure Usage: A Small Longitudinal User Study

This chapter supports the argument that began in Chapter 4 for the need to design and implement electronic time management/calendar tools that incorporate more temporal structures than the limited ones that are now being used. The support is based upon the survey data analysis, upon the pilot interviews, and upon a small longitudinal study that was conducted. This chapter first describes the correlations between perceived time management tool usefulness and individual time management quality. It also documents a few significant correlations that occurred between perceived time management tool usefulness and the four temporal structure constructs investigated in this research. A longitudinal study is presented in this chapter. It examines whether capturing and utilizing temporal structures in an electronic time management tool improves individual time management quality. This chapter also summarizes and extrapolates the results presented and combines this data with salient results from the interviews presented in this book. The results that are used and summarized are those that apply to the arguments being made that designing better electronic time management tools that make it easier for people to capture a wider range of temporal structures will lead to better time management. Explicit suggestions are made for design opportunities that would capture currently unavailable or difficult to capture temporal structures.

Chapter 13: Conclusion, Contribution and Implications to Future Electronic Calendar Tool Design

The key findings for this research are summarized in Chapter 13. Overall, this research shows there is a strong relationship between the quality of individual time management and the use and understanding of various temporal structures based upon three different population samples (student, faculty and staff). Based on these results, it is argued that current time management tools (e.g., calendars) do not provide sufficient support for people to easily capture and use the wide range of temporal structures that restrict their lives. This chapter also demonstrates how this work is related to the fields of information systems, computer science and human computer interaction. It discusses the limitations of this research and then describes future research directions that arise from the results of this research.

Chapter 14: E-Scheduling

Chapter 14, is written by Gerhard F. Knolmayer from the University of Bern, Switzerland. Collaboration between business partners can take many forms, ranging from simple exchange of elementary data to collaborative work on product development and division of labor in production and distribution processes. This article describes concepts, systems, and experiences with computer-aided collaborative scheduling.

Chapter 15: Management of the Learning Space

Chapter 15 is by Susan M. Powers and Christine Salmon. Dr. Villez looks up from her papers and sighs as her e-mail beeps again for what seems the 100th time this morning with yet another incoming mail message. She checks the subject line and sender—yes, it is from another student in one of her online courses. She sighs again. She has barely started reading the last assignment that came in 20 minutes ago, and here is yet another assignment being turned in that needs to be graded and feedback given to the student as soon as possible. Dr. Villez looks at her watch and then back at her pile of e-mail. She might
need to rethink her agreement to participate in her institution’s online programs. The online courses were
taking so much of her time; it was beginning to cut into her time for scholarship.

This scenario presented above may seem extreme, but it is not unusual on college campuses (Moore, 2000; Moore & Kearsley, 2005). Many faculty are reluctant to move into Web-based instruction (WBI) because they have heard from peers about the overwhelming time demands of this form of instruction (Visser, 2000). However, we contend that the time involved in delivering and maintaining online courses is not greater than well-maintained face-to-face courses. Rather, WBI requires a different kind of time. The key to a successful distance education experience for both faculty and students is to effectively manage the learning space. There are three principal issues involved in effective learning space management of an online course: workload management, student management, and time management.

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