Preface

COLLABORATION AS A CHANGE AGENT

Collaboration changes how people view and understand their contributions in any project. Suddenly, it is not the individual’s work that is most valued, but that of the team. Yet the individual’s work remains crucial as a necessary part of the whole. Without each part competently developed, the whole suffers.

Increasingly, distributed work settings have prompted the need to collaborate virtually on writing tasks. Collaborative writing, the subject of this book, is a process that often occurs both asynchronously (for example, by sharing a document) and synchronously (for example, in face-to-face or telephone communication). It increasingly occurs in virtual, distributed work settings. Those who write virtually distribute their processes across geographic locations and within the colocated space of an office or institutional setting. Unlike traditional document sharing and face-to-face or telephone interactions, virtual collaborative writing requires participants to communicate using computer-mediated communication (CMC) technologies, which include everything from instant messaging (IM) and e-mail to interactions that take place using Web pages, webcasts, and graphical user interfaces. Common virtual activities that make use of these technologies include sharing documents and desktops via virtual classrooms, developing content on wikis, writing and responding to blogs, talking through technical bulletin boards and chat rooms, videoconferencing, and developing and integrating information in content management systems (CMS).

This book investigates the use of CMC technologies and particular collaborative processes to facilitate effective, interdependent collaboration in writing projects, especially in virtual workplace settings.

To this end, this book identifies and theorizes how CMC technologies and explicit collaborative processes can promote interdependent virtual collaboration, particularly collaborative writing. The kinds of writing addressed herein typically occur in work-based settings, such as academic institutions, private and for-profit industry, and the government (including the military), in which the purpose of the writing is to convey information or argue a position rather than to socialize or entertain. The chapters in this book specifically define collaboration and collaborative writing relative to virtual settings. They present core principles for how to collaborate in technology-based virtual settings, and they suggest practices for effective virtual collaborative writing that include rhetorical strategies, roles, and activities among participants. Additionally, these chapters identify practices that use CMC technologies for building consensus so that people can function in integrated and interdependent virtual settings to create texts. Finally, in a meta-analysis of CMC technologies and processes, this book explains how such practices and technologies were used by the editors and writers to develop a coherent, collaboratively written book.
VIRTUAL COLLABORATIVE WRITING

It seems fitting to examine the subject of virtual collaborative writing during the information age, a time with unprecedented access to knowledge through technology. Information is important to us—whether it is an end product, a means to an end, or something in between. No matter the scenario, workplace professionals rely on technology to use, manage, and exchange information. And while technology makes accessing information seem quick and easy, knowing what technology works best to develop and share information is not so easy. Nor is it straightforward to manage, update, and archive information even knowing that the right a combination of tools is available.

Positioning information in the context of an age underscores the vast nature of the term information and the array of overlapping meanings related to the word. In his book, Boiko (2005) suggested that the term information is broader, more complex, and richer than the term content, which in contrast to information presupposes an underlying aim or use. Insofar as content is contextualized information, it is more streamlined and thus more easily managed by a computer (pp. 11-12). Hackos (2002) made a similar distinction when describing the concept of the information model, a framework for organizing content. Her stratified view of the information model placed content units, the smallest building block use to create documents, at the center of the model (p. 126).

Interestingly, theorists and practitioners alike frequently draw distinctions between the terms information and content while using the terms interchangeably. For instance, both terms are used to modify developer, a role used to define the work of the technical writer, who is gaining more skill in computer programming by using XML technology and content management software.

In this text, we follow the lead set by Boiko (2005) and Hackos (2002), treating information as the broader term and content as one that is more specific. We have sought consistency in the use of these terms throughout the book. That said, because growth continues in the area of workplace writing, as it should, we understand the importance of ever-changing terminology and recognize that these terms may evolve accordingly.

It is not only the increasing incidence of distributed work settings that prompts a need for a book such as this one, however. The fact is that in many venues, the very nature of written products is changing from that of a completed book individually “owned” by one writer to that of specialized writers who produce particular chunks of content, or topics, in a CMS. This change stems, in large part, from technological advances that enable writers to produce information products more efficiently and readers to demand information in multiple formats and for a range of media. These technological advances, in part, have encouraged reader to request documents in digital formats. From Web pages and online help to mobile devices, these formats present information in short, content-rich chunks. Such tools as Web-ready cell phones and laptop computers with wireless access enable readers to access the information they need anytime and anyplace, thus creating a demand for text that is chunked in smaller bits.

NEED FOR A PARADIGM SHIFT

The distributed writing process represents a paradigm shift with respect to a writer’s relationship to the written material. As such, it requires a similar paradigm shift in terms of the writer’s relationship to other team members writing content and to those who manage that content for the group. Hence, to varying
degrees, the chapters in this book emphasize this paradigm shift as paramount in virtual collaborative writing, and all of the chapters within can be understood best as guidance for moving virtual collaborative writers toward embracing and working within the constraints of that shift.

The use of technologies to manage the production and distribution of information thus requires carefully honed and collaborative skills. By collaboration, we mean that writers who contribute virtually to a text must learn to work interdependently using rhetorical strategies. To the extent that individuals typically are more accustomed to producing whole texts rather than smaller pieces of content, many writers do not understand how to contribute efficiently to jointly developed written materials. Furthermore, many geographically distributed writing teams lack guidance and experience on how to coordinate complex activities across space and time. Because they have honed their skills differently over the years, they now need new ways to write collaboratively. Expertise in virtual collaborative writing entails knowing how and when to interact, and how and when to work independently so that the team reaches its goal of developing coherent texts. Guidance on an interdependent writing process that effectively combines contributions from various writers thus is essential for writing collaboratively. Writers must synchronize their thinking, activities, and values about their work and make the CMC technologies serve their mutual goals. Despite geographical distance, they must learn how to work closely with each other, trust and respect each other’s ideas, and to depend symbiotically upon each other’s feedback to develop ideas and integrate textual elements into a whole. Writers must come to understand their roles and to contribute accordingly. Thus, in a virtual setting and using synchronous tools in particular, writers can learn to express their ideas simultaneously rather than serially to help shape the direction and development of ideas. Interdependence does not mean that writers cannot work independently at times, but that the contributions they make to the overall goal shape more efficient, effective, and collaborative texts.

When writers do not know how best to use technology to communicate collaboratively and interdependently, several problems may ensue. The writing process may be strained; the text may not accurately represent the team’s intended purpose; the product and the information may not be useful; and, ultimately, the intended audience may be confused or poorly served. The circumstances that create these communication problems are not going away and will continue to multiply in complexity as long as globalization and the use of online media to develop and receive texts persist. For example, companies both are hiring staff from other countries and encouraging their staff to work from home; similarly, academic institutions are providing more distance-based educational opportunities for both teachers and students. These working situations require that writers make the best use of the CMC tools and collaborative processes available to them. Consider also that the reliance on database technology, especially the CMS, to create information products out of small, reusable units of information promotes a great need for effective collaborative techniques. Yet, insofar as many writers still email each other about the development of content as a way to collaborate, they rely primarily on asynchronous practices, which can be less efficient for coordinating activities. More effective collaboration would entail purposefully engaging both synchronous and asynchronous CMC modes while choosing among a wider variety of technologies and collaborative processes. For example, engaging effective virtual collaborative writing processes would entail defining and developing various roles among writers on a team, roles that align with their skills and abilities so that they are prepared adequately for those roles. Effective virtual collaborative strategies would also entail assessing and rewarding staff for how they perform in these roles as members of a working team.
PRINCIPLES OF VIRTUAL COLLABORATION

Documenting the development of an interdependent writing process requires engaging a variety of technology-savvy writers who have imagined and practiced such interdependency in their collaborative writing. Therefore, this edited collection presents the thinking and experiences of writers from a variety of disciplines, such as academics, corporate work, nonprofit enterprises, online journal editing, and the like. Together, we explore interdependent virtual collaboration from a variety of perspectives and our chapters comprise topics that identify, synthesize, and theorize the convergences among them. From our collaboration for the development of this book, we have synthesized six principles for virtual collaborative writing as based on this paradigm shift from a single document, or book, to content chunks, or information. These six principles, outlined here, ground the chapters of this book to provide guidance for writing collaboratively in virtual work settings so that despite the rapidly changing technology and the increase in globalization that writers encounter, they can have a stable baseline for being productive in various workplace environments.

• **Principle 1: Develop a Culture of Collaboration.** The shift to a topic-based paradigm requires a culture that supports virtual collaborative interactions. Growing such a culture takes time, as writers learn (1) how to plan working as a team, (2) how to become skilled working interdependently, and (3) how to value the time spent cultivating this expertise. The cultural shift will not occur in the short term but requires a commitment to longer-term thinking—that in time, the virtual collaborative interaction will produce greater efficiencies than when writers work independently on books.

• **Principle 2: Find and Promote Leadership.** Only with effective leadership will a collaborative culture form. Effective managers will value both the importance and benefits of collaboration, imparting their values to inherent talent within the team, who will support collaboration throughout the organization. Writers who understand the paradigm shift that is required can gather feedback from the teams and shape team behavior during the course of writing projects. Leaders need leaders to establish a new writing context.

• **Principle 3: Establish Trust.** To write collaboratively, writers need to achieve a level of comfort with the abilities, competencies, and intentions of fellow team members. They must be confident that teammates will pull their own weight and produce high-quality content so that the whole team can focus on completing tasks rather than on protecting individual interests. To achieve trust requires ample communication among all participants and consistent processes to ensure effective interactions.

• **Principle 4: Use Tools and Collaborative Modes Effectively.** For writing teams to collaborate efficiently in distributed environments, they must have a sophisticated command of virtual technology and of the types of collaboration needed for topic-based writing. Moving beyond the standard use of tools is essential to create interdependent work habits. Writers must understand not only when to interact with key players on their team but what forms of virtual collaboration will best serve the goals of their team.

• **Principle 5: Create Structure.** Writing teams need structure to collaborate virtually. If new habits are not established, the culture will not grow, trust will unravel, and collaborative work will become unstable. Structure means having scripted processes that articulate what tasks are required and what tools and techniques optimize performance. Structure entails effective work patterns, practice
sessions to find the right patterns, repetition—“the new autopilot”—discipline, accountability, and an infrastructure for normalizing perspectives.

- **Principle 6: Measure and Track Performance.** Expectations about how performance is measured guides performance itself. If teams do not have clear expectations about how to write collaboratively in virtual environments, their chances for success are slim. To move past the book paradigm, teams need to know the new rules of the game and how their performance will be assessed and tracked. Good performance deserves recognition; without it, teams will lack motivation to do well. For years, writers have taken pride in owning their books. Finding a new collaborative paradigm depends on recognizing team performance—appreciating the whole as well as the sum of its parts.

**UNIQUE QUALITIES OF THIS BOOK**

Not only does this book focus on the CMC technologies and processes necessary for implementing and managing collaborative writing in virtual settings, but it does so using CMC technology in a collaborative manner—engaging virtual collaboration among the editors and writers. Prior to writing a single chapter, the writers and editors talked by phone in small groups about our ideas and attempted to blend the chapters more seamlessly than is found in most edited collections. We used virtual communications and various CMC technologies and collaborative processes throughout the fifteen months of the book’s development—to varying degrees of success—in order to enact the virtual collaborative writing principles that we propose and to discern the challenges that readers will themselves encounter in their own virtual collaborative writing settings.

The reasons for this actively collaborative process include helping the writers to think metacognitively about their chapters’ subject matter, providing opportunities for them to see and discuss each other’s chapters before submission for publication, and enabling the editors to develop a more coherent book overall. Additionally, this actively collaborative process provided the opportunity to learn more about virtual collaborative writing—to learn by doing, so to speak. We knew that there would be challenges and that we would hit substantial roadblocks and make mistakes. We hoped, of course, that we also would find some successes. Hence, the very process of writing the book has led to organically developed chapters, and the end product exemplifies the book’s underlying themes.

In sum, the book provides practical information, poses theoretical questions, and addresses implications of virtual interdependent collaboration that occurs through CMC technologies. The final section of the book, written by the editors and encapsulating their experiences and those of the writers, pulls together and interprets the uses of virtual collaborative writing technologies and processes. Consequently, this book both describes theory and demonstrates practice through the actual CMC technologies.

**INTENDED AUDIENCE FOR THIS BOOK**

While journal articles are available, few comprehensive discussions exist about technologies and practices for virtual collaborative writing in various work settings. Yet such writing is a part of a wide array of workplaces, multinational companies, nonprofit business, and academic institutions. Indeed, writing provides the glue for the communications and products of such enterprises. And writing collaboratively presupposes a uniform mindset, which in reality is hard—if not impossible—to achieve. Writers need
effective rhetorical strategies that enable them to work interdependently so that they can collaborate ef-
fectively. While the CMC technologies and virtual collaborative processes for writing are the subject of
this book, the guidance that we provide for virtual collaborative writing might apply to any discipline.

To this end, a range of fields—such as business, technical writing, information science, technology,
and management—share a need for a book that examines strategies for using virtual tools to create a
culture of collaboration and interdependence necessary for working (and writing) in the twenty-first
century. The intended audiences for this book include professional writers and editors in both corporate
and nonprofit sectors, scholars whose work is focused on writing collaboratively, scholars of technical
communication, researchers with academic appointments, and technology professionals. Individuals
from these diverse backgrounds will benefit from understanding how best to improve virtual collabora-
tive writing enterprises that rely on CMC technologies. Finally, we hope that readers will find this book
to be an important managerial resource in business settings, reference libraries, upper-level technical
writing courses, and various academic and nonacademic training settings.

HOW TO USE THIS BOOK

As Pullman and Gu (2009) have suggested, there is a gap between theory and practice as it relates to
workplace writing. Industry needs strong technical writers who are trained in school and who have
a strong foundation for being effective in the workplace. Academic scholars and instructors need to be
able to believe that they have the right tools to prepare students for business and workplace writing. It
is important that they have the right tools because much is changing rapidly in terms of how writing is
created, the tools that are used, the processes that work effectively, the means and types of delivery, and
the expectations for how it will be received. Undoubtedly, a more integrated approach to theory and
practice would be especially helpful for industry and academic institutions alike.

Underlying many changes, as this book illustrates, is the idea that the writing often is accomplished
virtually and needs to be more collaborative. As a result, we have drawn on the knowledge and expertise
of a combination of professionals in industry and research so that we can contribute to the process of
bridging the gap. Working together with the two different cultures fully exposed that gap, which might be
readily apparent in some of the chapters presented—in other words, some chapters are more theoretical
and reflective while others are more action-oriented and check list-based (all chapters, however, provide
some form of takeaway for writers in both types of profession). Although we have worked to find a
common voice, integrate the material, and create a sense of balance among the chapters, the professional
cultural differences we have experienced were pronounced nonetheless. To assist our readers, we offer
some recommendations about the ways to use this book depending on preferences or background and
on the practical applications readers might have in mind.

Chapter 1 offers a good overview for all readers; it has a minimal review of literature on the subject
of virtual collaboration, and it provides a full discussion of definitions and principles that guide our
understanding of virtual collaborative writing. Chapter 2, on the other hand, provides a more in-depth
framework of theory for those who want to connect workplace writing to theory. Regarding the rest of
the book, readers can expect to gain a sense of place and experience from the case studies that lead Sec-
tions 2 – 7. Following each case study are two or three chapters that address the types of issues raised in
the case study. As often as they could, writers made chapter connections among the other book chapters.
They also made connections to the six principles of virtual collaborative writing that ground this book,
as described earlier in this Introduction and more completely at the end of Chapter 1.
Virtual Collaborative Writing: Computer-Mediated Communication Technologies and Processes is organized to help readers understand and use the grounding principles of the book. Chapters can be read in the order presented or more randomly according to readers’ needs and/or interests. In each chapter, there is a mix of practice and theory while others are more theory-based.

Table 1 provides a roadmap for accessing content in this book. Some might argue that the use of a roadmap to guide readers who might be seeking either practical or theoretical information might seem to conflict with the idea of bridging a gap. In providing a roadmap, however, we are not inviting readers to limit their experience only to a specific kind of information. Rather, the roadmap is intended to achieve the opposite; that is, if readers can orient themselves in the information that is familiar to them, they might be more willing to consider information that seems foreign, insufficient, or irrelevant in some way. We make this assumption having observed disparity in our own team between writers from industry and academia. Practitioners admitted to feeling intimidated by theoretical constructs advanced by researchers, who conversely believed that their frameworks were a logical place to begin writing. To that end, we offer the roadmap both as a way to access topics of interest and as a way to penetrate differing approaches to virtual collaborative writing.

Table 1. Roadmap for using this book

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Area of focus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topics with an industry focus</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Addresses the nature of collaboration, virtual collaborative writing, basic principles for effective collaboration.</td>
</tr>
<tr>
<td>3</td>
<td>Presents a case study that highlights the importance of writing in solving problems and inventing new ideas even when developing software.</td>
</tr>
<tr>
<td>4</td>
<td>Illuminates factors useful for virtual collaborators to consider when initiating a new writing project, including the challenges common to getting to know others virtually.</td>
</tr>
<tr>
<td>8</td>
<td>Outlines practical methods that will help develop a manager’s skills for virtual collaborative writing teams.</td>
</tr>
<tr>
<td>9</td>
<td>Offers CMS case studies involving collaboration within a department, between multiple departments, within a division, and across several divisions.</td>
</tr>
<tr>
<td>10</td>
<td>Considers the essential components needed to establish an infrastructure that supports virtual collaborative writing efficiency.</td>
</tr>
<tr>
<td>11</td>
<td>Examines how virtual writing teams move through the decision making process and what teams can do to improve their decision-making abilities, drawing on experiences implementing a CMS at Symantec.</td>
</tr>
<tr>
<td>12</td>
<td>Addresses why information models are a critical component to successful collaborative writing, including how to propose, evaluate, develop, test, and enforce new information models.</td>
</tr>
<tr>
<td>13</td>
<td>Considers the methods, advantages and challenges of developing rules around content, work processes, and the choices and configuration of tools to support virtual collaborative writing and content reuse in a virtual environment.</td>
</tr>
<tr>
<td>14</td>
<td>Explains why an effective reuse environment depends on collaborative input from writing teams and it provides insight into the principles of reuse.</td>
</tr>
<tr>
<td>15</td>
<td>Presents a case study that describes the results that real-world virtual collaborative writing teams have realized when using a quality management tool.</td>
</tr>
<tr>
<td>16</td>
<td>Examines collaborative review in today’s user empowered Web 2.0 world, including how CMC tools can facilitate the review process.</td>
</tr>
<tr>
<td>17</td>
<td>Reviews methods and processes to ensure successful virtual collaboration with customers.</td>
</tr>
<tr>
<td>19</td>
<td>Offers a case study of virtual collaboration that focuses on a team’s approach to making choices about what technologies support interactivity for an academic online journal.</td>
</tr>
<tr>
<td>Chapter</td>
<td>Topics with an academic focus</td>
</tr>
<tr>
<td>---------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Addresses some theoretical underpinnings related to virtual collaborative writing, including basic definitions and principles for effective collaboration.</td>
</tr>
<tr>
<td>2</td>
<td>Provides a theoretical discussion of some of the rhetorical, social, and media-based theories relative to virtual collaborative writing.</td>
</tr>
<tr>
<td>3</td>
<td>Offers a case study that points up the important role between language and meaning in the development of software products.</td>
</tr>
<tr>
<td>5</td>
<td>Examines the concept of a team, the constituents of quality teams, different types of teams, importance of and social presence in creating shared understanding.</td>
</tr>
<tr>
<td>6</td>
<td>Provides a case study about the value of social presence in a collaborative multimedia project preparing content to teach faculty various strategies for improving their students’ reading comprehension among.</td>
</tr>
<tr>
<td>7</td>
<td>Draws some conclusions about technological, organizational, and psychosocial barriers to effective collaboration based on observations of the TOPIC / ICON project at Texas Tech University and of Army personal at Fort Sill, Oklahoma, using collaborative writing software.</td>
</tr>
<tr>
<td>16</td>
<td>Examines collaborative review in today’s user empowered Web 2.0 world, including how CMC tools can facilitate the review process.</td>
</tr>
<tr>
<td>18</td>
<td>Reviews methods and processes to ensure successful virtual collaboration with customers.</td>
</tr>
<tr>
<td>19</td>
<td>Considers a case study of virtual collaboration related to technology choices for the online journal, Kairos, highlighting the need for well-defined roles and understanding the institutional context to connect to the goals and expectations of the journal’s editors and readers.</td>
</tr>
<tr>
<td>20</td>
<td>Examines the idea that collaborative environments require more from interfaces if texts are to be invented that become edited images, Web pages, films, and/or animations.</td>
</tr>
<tr>
<td>21</td>
<td>Explores the role of virtual technology and the use of collaborative writing among doctors at different hospitals mediated by the RP-7 robot to evaluate vital signs and diagnose a patient.</td>
</tr>
</tbody>
</table>

Finally, Chapter 22 in Section 8 speaks to all readers who are interested in the practical lessons that we have learned about virtual collaborative writing from the CMC technologies and processes engaged in this book.

A glossary of terms, a list of references used, and an index complete this book.

Section 1: Intersections of Virtual Settings, Collaboration, and Writing

The chapters in Section 1 present an introduction to the nature of collaboration and virtual collaborative writing as we understand them. Section 1 opens with a vignette that describes how the editors, Beth and Charlotte, came to recognize the need to develop this book: “Insight into Virtual Collaborative Writing: Learning by Doing.” This scenario leads to questions about the nature of collaboration and virtual collaborative writing that the first two chapters of the book attempt to address.

- **Chapter 1, “Principles for Exploring Virtual Collaborative Writing”** is written by Beth L. Hewett, Charlotte Robidoux, and Dirk Remley. It defines and discusses the nature of virtual collaborative writing. It provides a detailed discussion about the principles that we believe are necessary to effective virtual collaborative writing in any kind of workplace setting.

- **Chapter 2, “Frameworks for Talking about Virtual Collaborative Writing”** is written by Beth L. Hewett, Dirk Remley, Pavel Zemliansky, and Anne DiPardo. It provides a theoretical discussion of some of the rhetorical, social, and media-based theories relative to virtual collaborative writing.
Section 2: Building a Virtual Writing Team

- Chapter 3, “Case Study: “Can You See Me?” Writing toward Clarity in a Software Development Life Cycle” is written by Anne DiPardo and Mike DiPardo. This case study details how geographically dispersed software developers employ collaborative writing in the process of creating and troubleshooting products for use in the healthcare industry. It focuses on their efforts to arrive at language that unambiguously reflects functional requirements and optimal design principles.

- Chapter 4, “Engaging in Virtual Collaborative Writing: Issues, Obstacles, and Strategies,” is written by Patti G. Wojahn, Kristin A. Blicharz, and Stephanie K. Taylor. They discuss factors useful for virtual collaborators to consider when initiating a new writing project, identifying key challenges common to getting to know others virtually.

- Chapter 5, “Forming Trust in Virtual Writing Teams: Perspectives and Applications,” is written by Sean D. Williams. This chapter explores collaborative writing in virtual teams, and, particularly, trust formation in virtual writing teams, including the importance of social presence in creating shared understanding within teams.

Section 3: Managing Team Dynamics

- Chapter 6, “Case Study: A Collaborative of Content Designers and Developers,” is written by Beth Brunk-Chavez and Sunay Palsole. This case study considers the value of social presence in a collaborative multimedia project preparing content to teach faculty various strategies for improving their students’ reading comprehension among.

- Chapter 7, “Removing Barriers to Collaborating in Virtual Writing Projects,” is written by William Carney. This chapter considers some technological, organizational, and psychosocial barriers to effective collaborative writing, draws conclusions based on observations of the TOPIC/ICON project at Texas Tech University and of Army personnel at Fort Sill, Oklahoma, using collaborative writing software.

- Chapter 8, “Facilitating Virtual Collaborative Writing through Informed Leadership,” is written by Catherine Lyman. This chapter captures practical methods that will help develop a manager’s skills for virtual collaborative writing teams; the techniques described in this chapter were developed and tested by actual collaborative teams, most notably by the Information Engineering team at NetApp, Inc.

Section 4: Planning and Making Decisions Virtually

- Chapter 9, “Case Study: Putting their Heads Together Virtually: Case Studies on Collaboration using Content Management Technology,” is written by Suzanne Mescan. This series of case studies provide a look at how some small and large writing teams have successfully implemented content management technology and improved collaboration in varying environments—within a department, between multiple departments, within a division, and across several divisions of their respective organizations.

- Chapter 10, “Optimizing Team Performance: Virtual Collaborative Writing,” is written by Charlotte Robidoux. This chapter explores the essential components needed to establish an infrastructure that supports collaborative writing efficiency in virtual settings.
Chapter 11, “Making Collaborative Writing Decisions Virtually,” is written by Alexia P. Idoura. Drawing in experiences implementing a CMS at Symantec, this chapter examines how virtual writing teams move through the decision making process and what teams can do to improve their decision-making abilities.

Section 5: Developing Content Virtually

Chapter 12, “Case Study: Advancing New Authoring Strategies through Virtual Collaboration” is written by Judith Kessler. This case study discusses why information models are a critical component to successful collaborative writing, especially for topic-oriented content. It also describes the collaborative processes and tools by which Sybase® Technical Publications team members propose, evaluate, develop, test, and enforce new content models, challenges encountered, and key success factors.

Chapter 13, “Using Standards to Promote Collaboration among Writers,” is written by France Baril. This chapter addresses how consistency is required to produce publications of quality in a collaborative environment; it explores the methods, advantages and challenges of developing rules around content, work processes, and the choice and configuration of tools to support virtual collaborative writing and content reuse in a virtual environment.

Chapter 14, “Developing Content in a Reuse Environment,” is written by Norma Emery. This chapter explains why an effective reuse environment depends on collaborative input from writing teams and it provides insight into the principles of reuse and how virtual collaboration is essential to making content reusable.

Section 6: Supporting Quality Writing through Virtual Collaboration

Chapter 15, “Case Study: Managing Content Quality and Consistency in a Collaborative Virtual World,” is written by Kent Taylor. This case study of a product developed by acrolinx GmbH describes the results that real-world virtual collaborative writing practitioners have realized in by applying quality management principles and processes to their information supply chains.

Chapter 16, “Caution! Empowered Reviewers Ahead: The Challenges of the Review Process in Collaboration,” is written by Robbin Zeff Warner, Beth L. Hewett, and Charlotte Robidoux. This chapter explores collaborative review in today’s reader-empowered Web 2.0 world, including how CMC tools can facilitate the review process.

Chapter 17, “Collaborating with Customers Virtually to Improve Content,” is written by Mirhonda Studevant. This chapter explores the methods and processes to ensure successful virtual collaboration with customers.

Chapter 18, “Preparing Writers for Virtual Environments,” is written by Pavel Zemliansky. This chapter offers practical strategies for instructors, trainers, and managers to use while preparing writers for virtual collaboration.

Section 7: Using New Media in Virtual Collaborative Writing

Chapter 19, “Case Study: Writing, Rhetoric, and Design: A Virtual Collaboration Case Study,” is written by Douglas Eyman. This case study focuses on a research and production team’s approach to making choices about the most appropriate technologies to support the team’s interactions for
the online journal, *Kairos*. The chapter highlights the need for well-defined roles and understanding the institutional context to connect to the goals and expectations of the journal’s editors and readers.

- **Chapter 20, “Inventing Nondiscursive Text in Collaborative Environments,”** is written by Joddy Murray. This chapter considers how today’s collaborative environments require more from interfaces if texts are to be invented that become edited images, Web pages, films, and animations.

- **Chapter 21, “The Mutual Presence of RP-7 and the Future of Collaborative Writing,”** is written by David W. Overbey. This chapter examines virtual collaboration, including the production and use of writing, among doctors at different hospitals mediated by RP-7, a robot that enables a specialist at one hospital to evaluate the vital signs of and provide diagnosis for a patient at another hospital.

### Section 8: Collaborating Virtually to Develop This Book: A Discussion

- **Chapter 22 completes the vignette begun before Section 1.** It offers a metadiscussion about the technologies and processes involved in the virtual collaborative writing of this book, providing both writers’ feedback about these and a list of recommendations for virtual collaborative writing that has emerged from our hard-earned experiences.

### Back Matter

The book ends with a glossary of important terms, a list of general references, and an index.

### REFERENCES


_Beth L. Hewett_

*University of Maryland University College, USA*

_Charlotte Robidoux_

*Hewlett-Packard Corporation, USA*