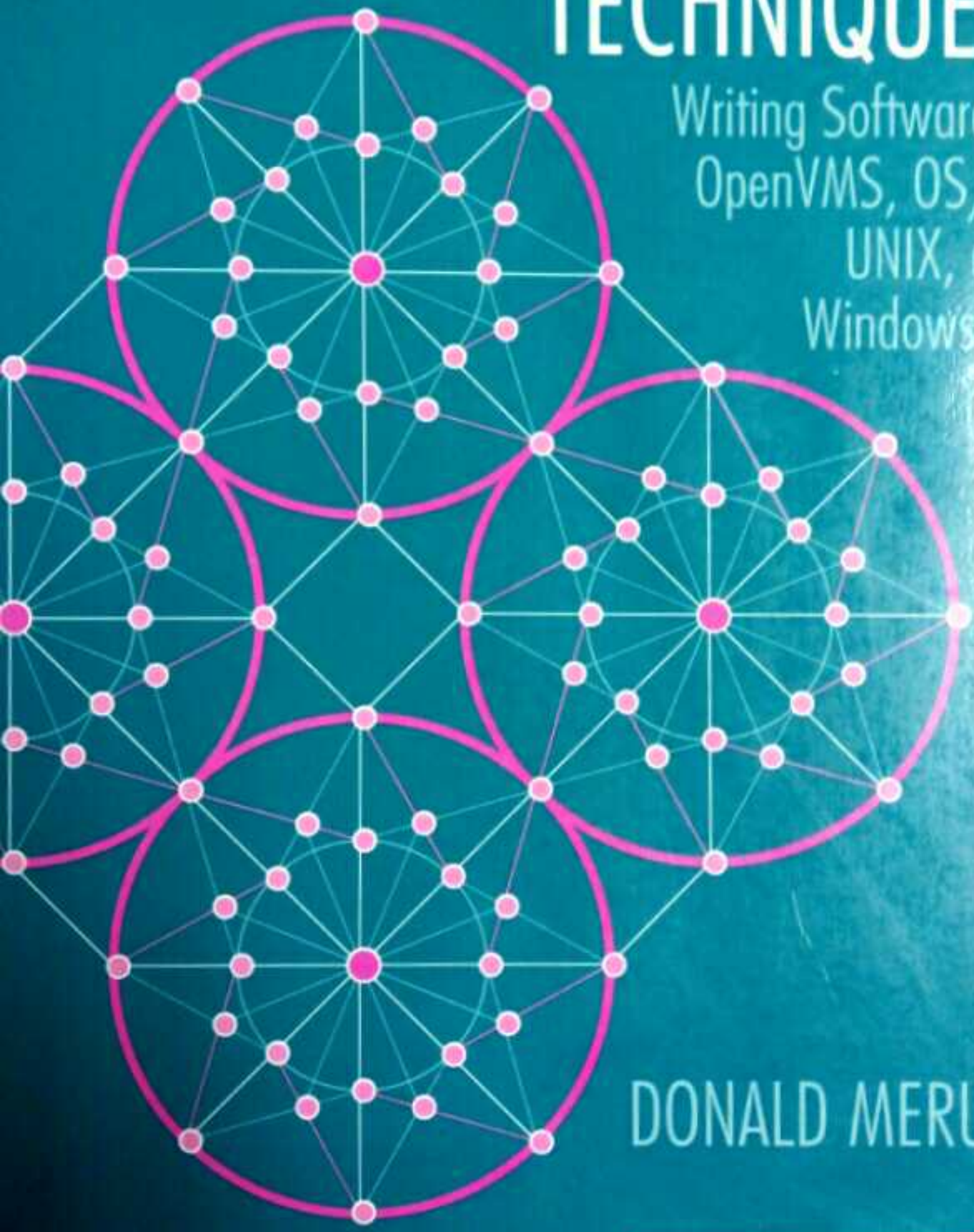
SECOND EDITION

SOFTWARE IMPLEMENTATION TECHNIQUES

Writing Software in OpenVMS, OS/2, UNIX, and Windows



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Software Implementation Techniques, Second Edition

Writing Software in OpenVMS, OS/2, UNIX, and Windows NT

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Preface

The second edition of this book required several changes from the first edition. Some of these changes were based on technological advancements in the field of operating systems, others were based on reconsideration by the author as to what topics would be more meaningful and useful to the reader.

The first edition of this book discussed MS-DOS as one of the four operating systems environments. Although MS-DOS is an integral part of many computing platforms, it is technologically obsolete. MS-DOS contains just too many limitations that prevent contemporary programmers from writing the kind of sophisticated code required to support today's complex applications. Because of such limitations as the proverbial 640K memory bottleneck, lack of memory protection, as well as support for a true multitasking environment, MS-DOS has been replaced by Windows NT in the second edition of this book.

The original Chapter 4, *I/O Drivers and Handlers*, has been eliminated. Although this topic made for a very comprehensive first edition, it is beyond the scope of this book. Writing I/O drivers and handlers is a very specialized process–an entire book of this size– could be dedicated to just one of the operating system environments we discuss here.

The original Appendix K, *Kerberos Example*, has been eliminated for several reasons. A comprehensive discussion of writing Kerberos applications in ULTRIX is beyond the scope of this book. The Kerberos example presented in the first edition was considered too overwhelming to provide a reasonable understanding by anyone attempting to implement such an application. Digital's latest UNIX operating system, Digital UNIX (formally OSF/1), does not support writing such Kerberos applications. Last, Kerberos administration and enforcement are appearing more often now as part of the operating system environment.

The original Appendix L, *The VAX OSI Application Kernel*, has been merged into the new Chapter 6, *Networking Facilities*, along with an example. When the first edition of this book was published, OSI was just starting to appear and programming examples were rare.

The original Chapter 11, *Window Environments*, has been merged into the new Chapter 7, *User Interface*. The discussion on writing DECwindows applications, Xlib applications, and Microsoft Windows applications has been omitted. Most X windows application writers today are primarily interested in producing OSF/Motif programs, and that section has been carried over from the first edition. Although writing Microsoft Windows applications is widely practiced, many program development tools are available today that make writing such graphical user interface applications for the desktop very straight–forward, such as Microsoft's Visual Basic or Visual C/C++.

Most of the chapters have been enhanced and updated. For example, with the advent of threads in many contemporary operating system environments, DECthreads has been added