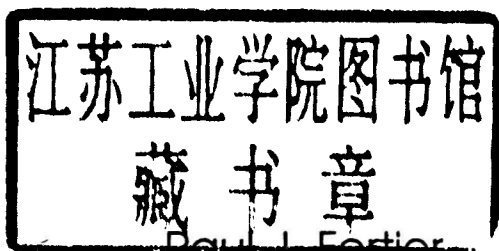


**Handbook of LAN  
Technology**  
2nd Edition

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# Handbook of LAN Technology

## 2nd Edition



Paul J. Fortior

Editor

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# Preface

Since the first edition of this book, much has occurred in applications and technology applied to Local Area Networks. The user population has shifted from strictly scientific and computing professionals and their needs to a wider more diversified population. Users do not wish to be concerned with or even know that a LAN is being used for their applications; they wish only that the application be responsive and perform as intended.

Personal computers have become the dominant area for LAN growth as well as in the linking together of numerous PC, minicomputer, and mainframe LANs in metropolitan and wide area networks. Much effort has been put forth on standardizing the protocols for individual LANs as well as for the development and refinement of standard protocols for internetworking. This has become an explosive growth area for LAN vendors.

This expansion of internetworks has not been without its problems. LAN users that were not connected to multiple or wide area networks in the past had little problems with security, since users were from the local company that operated the LAN. With the advent of wide area network linkages, LAN operators and users now must be concerned with LAN security. The assets of the LAN could, without adequate protection, be compromised by outside elements.

In addition to these developments, LANs themselves have grown in variety and in services provided. In the past, selection of a LAN vendor to purchase a LAN from was limited. Now there are hundreds of vendors advertising thousands of configurations for their LAN products. This has made the job of selecting a proper LAN and services even more difficult. LAN selection must be based on a combination of factors using analytical or simulation analysis, as well as recommendations from past user's experiences with LAN vendors and their products.

Along with new LAN offerings has come a variety of new software and environments. LAN operating systems were extremely simple as little as five years ago, but have seen drastic improvements in services offered and cleanliness of presentation and packaging. Many new add-on services are available for LANs for PC networks as well as for the minicomputers and mainframe networks. These services are becoming more integrated into the local operating systems architecture and are less dependent on the users knowledge of the underlying system.

LAN applications software has continued to evolve over the last few years as have languages and tools to aid in software development for local area networks. Languages are coming out of the research phases and becoming available for general use. Software tools to aid in the development of applications for LANs as well as for centralized computers has become more readily available.

This second edition addresses these developments through the addition of new chapters and sections to existing chapters, which discuss these changes in detail. The intent of this text is to provide an understanding of the underlying concepts for these new LAN developments and updates for the entire technology area.

Paul Fortier  
Portsmouth, RI  
January, 1992

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Part

**1**

# **LANs—Overview and Perspective**



