



Your Fiber Optic Resource.

# FTTx Related Reading Materials

Written by the leaders and innovators of the fiber-optics industry

## Fiber To The Home: The New Empowerment

Written by Paul E. Green, Jr.; Wiley-Interscience, 2006.  
Light Brigade Part No. #W-27 — \$56.50

*Fiber to the Home* is a comprehensive examination of the technical and social implications of FTTH, the technology that extends the current fiber optic backbone to optically connect it directly to homes and offices.

This book addresses the payoffs expected from this impending technological revolution; provides a detailed guide to the optoelectronic components and architectures of which the system is made; and includes a thorough guide to the mechanics of deploying the fiber paths, whether underground or elevated. The book concludes with a country-by-country survey of the legalities and the state of play in this important new trend.

Green points out how completing the "last mile" between today's fiber network backbone and customer premises will not only unleash new usage modes for consumer computers, TVs, phones, and other terminal types, but will also empower both the computer and telecommunication industries toward new levels of investment and profitability.

Aimed at a general audience, *Fiber to the Home* uses essentially no mathematics, and all terms are carefully explained and reinforced with a vocabulary quiz at the end of each chapter. Because of the tutorial emphasis of the explanations, a wide spectrum of readers will gain a thorough understanding of the technical details of FTTH that will aid them in the practice of their professions.

## FTTX Concepts and Applications

Written by Gerd Keiser; Wiley-Interscience, 2006.  
Light Brigade Part No. #W-28 — \$112.50

The ever-growing requests for more bandwidth from applications running over the Internet are driving the need to upgrade access networks with high-capacity connections.

This book presents fundamental passive optical network (PON) concepts, providing readers with the tools needed to understand, design and build these new access networks. The logical sequence of topics begins with the underlying principles and components of optical fiber communication technologies. Next, the book progresses from descriptions of PON and Fiber-to-the-X (FTTX) alternatives to their application to fiber-to-the-premises (FTTP) networks and, lastly, to essential measurement and testing procedures for network installation and maintenance.

With global telecommunications companies racing to install cost-effective FTTP networks, this is essential reading for engineers and managers involved in telecommunications and signal processing. Moreover, the 126 homework problems make this an excellent textbook for senior-level courses covering the principles and applications of PON technology.

## FTTx PON Technology and Testing

Written by Andre Girard, Ph.D.; EXFO Electro-Optical Engineering Inc., 2005.  
Light Brigade Part No. #W-26 — \$69.95

Fiber-optic telecommunications began generating interest in the late 70s, but it wasn't until the mid-90s that the real breakthrough occurred. The optical amplifier and narrowband filter, for example, were the basis of WDM and DWDM, which would become some of the biggest buzzwords of all time. Indeed, the era of wavelength- and dense wavelength-division multiplexing was born and it would change the telecommunications world forever. The success of these innovations caused a tremendous increase in communication traffic and consequently, constant bandwidth demand and growth. This quickly led service providers to respond by bringing the optical fiber closer and closer to the premises, and finally to the premises itself and directly to home. New buzzwords — FTTx and PON — have emerged and a new era is beginning.

Telecom engineers, technicians, managers and scholars alike will find in this book a detailed review of what has been done so far in this relatively new area of expertise, including all technical aspects, specifications, and performance requisites of the passive optical network. It also covers the different types of PONs (broadband, gigabit-capable and Ethernet-read) and, for each type, discusses the optical and protocol network layers in great detail. In addition, related testing requirements and solutions are presented and illustrated not only from the point of view of the network service provider, but also from the installer's and maintainer's standpoint. Finally, the reader will also find a list of available international standards, as well as useful definitions and acronyms.



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