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GPON Portrayed as Sequences of Events; 2.6.4 GPON Encryption; 2.7 IEEE Ethernet Passive Optical Network (EPON) Standard 802.3ah; 2.7.1 EPON Portrayed as Layers; 2.7.2 EPON Portrayed as Formats; 2.7.3 EPON Portrayed as Sequences of Events; 2.8 Comparison of ATM-Based and Ethernet-Based PONS; 2.9 An Example of Architecture vs. Implementation; References; Vocabulary Quiz; CHAPTER 3 Base Technologies; 3.1 Optical Fiber Basics; 3.2 Impairments 3.2.1 Chromatic Dispersion 3.2.2 Loss and Rayleigh Scattering; 3.2.3 Stimulated Brillouin Scattering (SBS); 3.2.4 Stimulated Raman Scattering (SRS); 3.2.5 Self- and Cross-Phase Modulation (SPM and CPM); 3.2.6 Four-Wave Mixing (FWM); 3.3 Optical Amplifiers; 3.4 Splitters and Couplers; 3.5 Connectors and Splices; 3.6 Lasers and Transmitters; 3.7 Photodiodes and Receivers; 3.8 The Physics of Lasing and Photodetection; 3.9 Summary; References; Vocabulary Quiz; CHAPTER 4 Deploying the System; 4.1 Introduction; 4.2 The Link Budget; 4.3 Aerial Deployment; 4.4 Underground Deployment 4.5 Reuse of Underground Facilities 4.6 Cabinets, Pedestals, Closures, and Vaults; 4.7 Subscriber Premises Optical Network Unit; 4.8 Head-End Optical Line Terminal; 4.9 Slack Management; 4.10 In-Building Installation; 4.11 Safety Considerations; 4.12 Powering; 4.13 Testing and Maintenance; 4.14 Costs; References; Vocabulary Quiz; CHAPTER 5 Current Deployments; 5.1 Introduction; 5.2 United States; 5.3 Japan; 5.4 Korea; 5.5 China; 5.6 Australia; 5.7 Europe; References; Vocabulary Quiz; CHAPTER 6 The Future; Index

Sommario/riassunto

A compelling treatment of FTTH Written by telecommunications pioneer Paul Green Jr., *Fiber to the Home* is a comprehensive examination of the technical and social implications of fiber to the home (FTTH), the technology that extends the current fiber optic backbone to optically connect it directly to homes and offices. *Fiber to the Home* 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 an equally thorough guide to the mechanics of deploy
