

1. Record Nr.	UNINA9910830776503321
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Titolo	Connection-oriented networks [[electronic resource]] : SONET/SDH, ATM, MPLS, and optical networks // Harry G. Perros
Pubbl/distr/stampa	Hoboken, NJ, : Wiley, c2005
ISBN	1-280-26873-5 9786610268733 0-470-01636-1 0-470-02164-0
Descrizione fisica	1 online resource (358 p.)
Disciplina	004.6 621.382/1 621.3821
Soggetti	Telecommunication systems Computer networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Connection-oriented Networks; About the Author; Contents; Preface; List of Abbreviations; 1 Introduction; 1.1 Communication Networks; 1.2 Examples of Connections; 1.2.1 An ATM Connection; 1.2.2 An MPLS Connection; 1.2.3 A Telephone Connection; 1.2.4 A Wavelength Routing Optical Network Connection; 1.3 Organization of the Book; 1.4 Standards Committees; 1.4.1 The International Telecommunication Union (ITU); 1.4.2 The International Organization for Standardization (ISO); 1.4.3 The American National Standards Institute (ANSI); 1.4.4 The Institute of Electrical and Electronics Engineering (IEEE) 1.4.5 The Internet Engineering Task Force (IETF) 1.4.6 The ATM Forum; 1.4.7 The MPLS and Frame Relay Alliance; 1.4.8 The Optical Internetworking Forum (OIF); 1.4.9 The DSL Forum; Problems; 2 SONET/SDH and the Generic Frame Procedure (GFP); 2.1 T1/E1; 2.1.1 Fractional T1/E1; 2.1.2 Unchannelized Framed Signal; 2.2 SONET/SDH; 2.3 The SONET STS-1 Frame Structure; 2.3.1 The Section, Line, and Path Overheads; 2.3.2 The STS-1 Section, Line, and Path Overheads; 2.3.3 The STS-1 Payload; 2.4 The SONET STS-3 Frame Structure; 2.5

SONET/SDH Devices; 2.6 Self-healing SONET/SDH Rings
2.6.1 Two-fiber Unidirectional Path Switched Ring (2F-UPSR) 2.6.2 Two-fiber Bidirectional Line Switched Ring (2F-BLSR); 2.6.3 Four-fiber Bidirectional Line Switched Ring (4F-BLSR); 2.7 The Generic Framing Procedure (GFP); 2.7.1 The GFP Frame Structure; 2.7.2 GFP Client-independent Functions; 2.7.3 GFP Client-dependent Functions; 2.8 Data over SONET/SDH (DoS); 2.8.1 Virtual Concatenation; 2.8.2 Link Capacity Adjustment Scheme (LCAS); Problems; 3 ATM Networks; 3.1 Introduction; 3.2 The Structure of the Header of the ATM Cell; 3.3 The ATM Protocol Stack; 3.4 The Physical Layer
3.4.1 The Transmission Convergence (TC) Sublayer 3.4.2 The Physical Medium-Dependent (PMD) Sublayer; 3.5 The ATM Layer; 3.6 The ATM Switch Architecture; 3.6.1 The Shared Memory Switch; 3.6.2 Scheduling Algorithms; 3.7 The ATM Adaptation Layer; 3.7.1 ATM Adaptation Layer 1 (AAL 1); 3.7.2 ATM Adaptation Layer 2 (AAL 2); 3.7.3 ATM Adaptation Layer 5 (AAL 5); 3.8 Classical IP and ARP Over ATM; 3.8.1 ATMARP; Problems; Appendix: Simulation Project: AAL 2; 4 Congestion Control in ATM Networks; 4.1 Traffic Characterization; 4.1.1 Types of Parameters; 4.1.2 Standardized Traffic Descriptors
4.1.3 Empirical Models 4.1.4 Probabilistic Models; 4.2 Quality of Service (QoS) Parameters; 4.3 ATM Service Categories; 4.3.1 The CBR Service; 4.3.2 The RT-VBR Service; 4.3.3 The NRT-VBR Service; 4.3.4 The UBR Service; 4.3.5 The ABR Service; 4.3.6 The GFR Service; 4.3.7 ATM Transfer Capabilities; 4.4 Congestion Control; 4.5 Preventive Congestion Control; 4.6 Call Admission Control (CAC); 4.6.1 Classes of CAC Algorithms; 4.6.2 Equivalent Bandwidth; 4.6.3 The ATM Block Transfer (ABT) Scheme; 4.6.4 Virtual Path Connections; 4.7 Bandwidth Enforcement; 4.7.1 The Generic Cell Rate Algorithm (GCRA)
4.7.2 Packet Discard Schemes

Sommario/riassunto

A thorough knowledge of modern connection-oriented networks is essential to understanding the current and near-future state of networking. This book provides a complete overview of connection-oriented networks, discussing both packet-switched and circuit-switched networks, which, though seemingly different, share common networking principles. It details the history and development of such networks, and defines their terminology and architecture, before progressing to aspects such as signaling and standards. There is inclusive coverage of SONET/SDH, ATM networks, Multi-Protocol Label Switching
