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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 Switchi