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Titolo	Next generation SDH/SONET [[electronic resource]] : evolution or revolution? / / Huub van Helvoort
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Soggetti	Synchronous digital hierarchy (Data transmission) SONET (Data transmission) Electronic books.
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Next Generation SDH/SONET; Contents; Preface; Acknowledgements; 1 Introduction; 1.1 History; 1.2 Conventions; 2 Concatenation; 2.1 Payload container concatenation; 2.2 Contiguous concatenation; 2.2.1 CCAT of VC-4 and STS-1 SPE; 2.2.2 CCAT of VC-2; 2.3 Virtual concatenation; 2.3.1 Payload distribution and reconstruction; 2.3.2 VCAT of VC-n; 2.3.3 VCAT of VC-m; 2.3.4 VCAT of PDH; 2.4 Applications of concatenation; 2.4.1 Contiguous to virtual to contiguous conversion; 2.4.2 VCAT and data transport; 2.4.3 VCAT and OTN signal transport; 3 Link capacity adjustment scheme; 3.1 Introduction 3.2 LCAS for virtual concatenation3.2.1 Methodology; 3.2.2 Control packet; 3.3 Changing the size of a virtual concatenated group; 3.3.1 Planned addition of member(s); 3.3.2 Planned deletion of member(s); 3.3.3 Temporary removal of member; 3.4 LCAS to non-LCAS interworking; 3.4.1 LCAS Source and non-LCAS Sink; 3.4.2 Non-LCAS Source and LCAS Sink; 3.5 LCAS control packet details; 3.5.1 The higher order VLI; 3.5.2 The lower order VLI; 3.5.3 The OTN VLI; 3.5.4 The PDH

VLI; 4 The LCAS protocol; 4.1 Introduction; 4.1.1 Asymmetric connections; 4.1.2 Symmetric connections
4.1.3 Unidirectional operation4.2 The size of a VCG; 4.3 The LCAS protocol described using SDL; 4.3.1 Used SDL symbols; 4.3.2 LCAS state machines; 4.3.3 LCAS events used in the SDL diagrams; 4.3.4 The SDL diagrams; 5 LCAS time sequence diagrams; 5.1 Introduction; 5.2 Provisioning a member; 5.3 VCG state transition examples; 5.3.1 An increase of the bandwidth of a VCG; 5.3.2 A decrease of the bandwidth of a VCG; 5.3.3 Decrease of bandwidth due to a network problem; 6 Generic framing procedure; 6.1 Introduction; 6.2 Common aspects of GFP for octet-aligned payloads
6.2.1 Basic signal structure for GFP client frames6.2.2 GFP client frames; 6.2.3 GFP control frames; 6.2.4 GFP frame-level functions; 6.3 Client specific aspects for frame-mapped GFP; 6.3.1 Ethernet MAC payload; 6.3.2 IP/PPP payload; 6.3.3 RPR payload; 6.3.4 Fibre Channel payload via FC-BBW; 6.3.5 Direct mapping of MPLS; 6.3.6 Error handling in frame-mapped GFP; 6.4 Client specific aspects for transparent-mapped GFP; 6.4.1 Common aspects of GFP-T; 6.4.2 Client-specific signal fail aspects; 6.5 Server specific aspects of GFP; 6.6 GFP PDU examples; 6.6.1 GFP-F PDU; 6.6.2 GFP-T PDU
6.6.3 GPT CMF PDU7 Functional models for LCAS and GFP; 7.1 Virtual concatenation functions; 7.1.1 Sn-Xv Trail Termination function; 7.1.2 Sn-Xv/Sn-X adaptation function; 7.1.3 Sn-X Trail Termination function; 7.1.4 Sn Trail Termination function; 7.2 S4-Xc to S4-Xc interworking function; 7.3 LCAS-capable VCAT functions; 7.3.1 Sn-Xv-L Layer Trail Termination function; 7.3.2 Sn-Xv/Sn-X-L adaptation function; 7.3.3 Sn-X-L Trail Termination function; 7.3.4 Sn Trail Termination function; 7.3.5 Sn-X-L to Client adaptation function; 7.4 GFP adaptation functions
7.4.1 Source side GFP adaptation processes

Sommario/riassunto

Since the turn of the twentieth century, telecommunications has shifted from traditional voice transport to data transport, although digitized voice is still a large contributor. Instead of an evolution of existing transport standards, a revolution was necessary in order to enable additional data-related transport. Next Generation SDH/SONET provides a detailed description of the enablers of efficient data transport over any synchronous network. These include virtual concatenation (VCAT), the operation to provide more granularity, and the link capacity adjustment scheme (LCAS), an exte

2. Record Nr. UNINA9910595067503321

Autore	Tropea Alessia
Titolo	Biofuels Production and Processing Technology
Pubbl/distr/stampa	Basel, 2022
Descrizione fisica	1 online resource (250 p.)
Soggetti	Biotechnology Technology: general issues
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	The negative impacts of global warming and global environmental pollution due to fossil fuels mean that the main challenge of modern society is finding alternatives to conventional fuels. In this scenario, biofuels derived from renewable biomass represent the most promising renewable energy sources. Depending on the biomass used by the fermentation technologies, it is possible to obtain first-generation biofuels produced from food crops, second-generation biofuels produced from non-food feedstock, mainly starting from renewable lignocellulosic biomasses, and third-generation biofuels, represented by algae or food waste biomass.Although biofuels appear to be the closest alternative to fossil fuels, it is necessary for them to be produced in competitive quantities and costs, requiring both improvements to production technologies and the diversification of feedstock. This Special Issue is focused on technological innovations, including the utilization of different feedstocks, with a particular focus on biethanol production from food waste; different biomass pretreatments; fermentation strategies, such as simultaneous saccharification and fermentation (SSF) or separate hydrolysis and fermentation (SHF); different applied microorganisms used as a monoculture or co-culture; and different setups for biofuel fermentation processes.The manuscripts collected represent a great opportunity for adding new knowledge to the scientific community as

well as industry.