

## IEEE Communications Magazine 2010

Start Date of Analysis: Jan. 2004; Analyst: Avishek Nag

### 2010

*April:*

- “Deployment of Contextual Corporate Telco Services Based on Protocol Adaptation in the NGN Environment” by A. Cadenas and A. Sanchez-Esguevillas: Reports a novel context-aware call routing mechanism based on the physical presence, emotional situation and time-dependency of the user; may be of interest to Sayeem, Shraboni, Eiman.

*March:*

- “Ultra-High-Capacity DWDM Transmission System for 100G and Beyond” by J. Yu and X. Zhou: Review of enabling technologies for 100G transmission and latest research results on 400Gb/s and 1Tb/s per channel transmission technologies; of interest to Avishek.
- “A Context Management Architecture for Large-Scale Smart Environments” by Y. Oh et al.: Context-aware architecture to integrate large-scale contexts from multiple heterogeneous sensors; may be of interest to Sayeem, Shraboni, Eiman.

*February:*

- “Perspective in Next-Generation Home Networks: Toward Optical Solutions?” by R. Gaudino et al.: Reviews the requirements for next-generation Home Area Networks (HANs) and show that this environment may end up taking advantage of optical cabling solutions as an alternative to more traditional copper or pure wireless approaches; of interest to Rajesh.
- “Cost vs. reliability performance study of fiber access network architectures” by J. Chen et al.: CAPEX and OPEX analysis that can be applied to any type of fiber access networks; may be of interest to Rajesh.
- “Moore's Law and energy and operations savings in the evolution of optical transport platforms” by S. Han: Application of Moore's law in optical transport platforms to save capacity, power, space and capital cost; of interest to Pulak, Uttam, Yi Zhang, Rajesh, Avishek.

*January:*

- “In search of energy-efficient mobile networking” by K. Pentikousis: Finds that current host-centric mobile networking paradigm, based on end-to-end always on connectivity is energy inefficient. Outlines open research issues in energy-efficient mobile networking; of interest to Sayeem, Shraboni, Eiman, Pulak.

### 2009

*December:*

- “Device-to-device communication as an underlay to LTE-advanced networks” by K. Doppler et al.: Study of device-to-device communication underlying a 3GPP LTE advanced cellular network; of interest to Adam, Sayeem.
- “Virtualization in energy-efficient future home environments” by A. Berl et al.: Proposes aggregating home user resources in an energy-efficient way; of interest to Pulak, Sayeem, Yi, Adam.

*November:*

- “Next generation PON: Parts I, II and III” (all three papers are relevant) by F. Effenberger et al.: General requirements, candidate systems, and system specifications for NG-PON; **of interest to Rajesh, Lei Shi.**
- “Spectrum-Efficient and Scalable Elastic Optical Path Network: Architecture, Benefits, and Enabling Technologies” by M. Jinno et al.: Propose a scalable spectrum-efficient optical transport network architecture called SLICE which can handle wide range of multiple-granular traffic demands; **of interest to Avishek.**
- “Hybrid wireless-broadband over power lines: A promising broadband solution in rural areas” by A. Sarafi: Presents a hybrid wireless-broadband over power lines network suitable for rural areas offering smart grid applications and broadband access; **of interest to Pulak.**

*October:*

- Nothing of Interest.

*September:*

- “Interference Management and Performance Analysis of UMTS/HSPA + Femtocells” by M. Yavuz et al.: Interference management techniques for both downlink and uplink of femtocells operating based on 3GPP Release 7 standards; **of interest to Sayeem, Eiman.**

*August:*

- “Next Generation PONs: A performance Investigation of Candidate Architectures for Next-Generation Access Stage 1” by J. Zhang et al.: Investigation of five NGA1 architectures from the perspective of MAC layer bandwidth allocation; **of interest to Rajesh and Lei Shi.**

*July:*

- Nothing of Interest.

*June:*

- Nothing of Interest.

*May:*

- “Toward Efficient Failure Management for Reliable Transparent Optical Networks” by N. Skorin-Kapov et al.: Failure management techniques in TONs and optical performance monitoring using concepts of self organization; **of interest to Ferhat, Menglin, Chaitanya.**

*April:*

- “Interference Coordination and Cancellation for 4G Networks” by W.J. Song et al.: Inter-cell interference coordination techniques in 4G-OFDM systems with emphasis on LTE; **of interest to Sayeem, Eiman.**

*March:*

- **“A comparison of dynamic bandwidth allocation for EPON, GPON, and next-generation TDM PON” by B. Skubic et al.:** Compare the typical characteristics of DBA, such as bandwidth utilization, delay, and jitter at different traffic loads, within the two major standards for PONs, Ethernet PON and gigabit PON. A new simple GPON DBA algorithm is used to illustrate GPON performance; **of interest to Rajesh, Lei Shi.**

*February:*

- “Fiber-Wireless Access Networks: A Survey” by N. Ghazisaidi et al.: Up-to-date survey of hybrid wireless access networks; **of interest to Shraboni.**

*January:*

- Nothing of Interest.

**2008**

*December:*

- Nothing of Interest.

*November:*

- “Value-added services in next-generation SONET/SDH networks” by N. Ghani et al.: Looks at the evolved next generation SONET/SDH framework with a particular focus on value-added services creation. Results from a sample performance evaluation study also are presented to quantify some of the achievable gains; **of interest to Avishek.**
- “Discovery process for emerging 10 Gb/s EPONs” by M. Hajduczenia et al.: Present the existing discovery process for 1G-EPON systems and propose a series of extensions required to support the extended discovery process, which include detection of the upstream and downstream data rates, as well as an extension of the existing registration handshake; **of interest to Rajesh, Lei Shi.**

*October:*

- Nothing of Interest.

*September:*

- Nothing of Interest.

*August:*

- “An Overlay Photonic Layer Security Approach Scalable to 100Gb/s” by S. Etemad et al.: Proposes an optical code-division multiplexed photonic layer security system for high-data-rate systems; **of interest to Avishek.**
- “Cooperative Coded Video Multicast for IPTV Services under EPON-WiMAX Integration” by J. She et al.: Proposes a framework for provisioning IPTV services in metropolitan area access networks based on integration of EPON and WiMAX; **of interest to Sayeem.**

*July:*

- “Enabling Highly Survivable Automated On-Demand Dynamic Network Services with Intelligent Optical Control Planes” by J. Zik: Proposes an intelligent optical control plane for survivable on-demand mesh networks; **of interest to Menglin, Chaitanya, Ferhat.**

*June:*

- “Control plane design in multidomain/multilayer optical networks” by N. Ghani et al.: Addresses control plane design for heterogeneous infrastructures and describes new challenges in the areas of state dissemination, path computation, and survivability. Sample results from a recent study also are presented; **of interest to Chaitanya, Menglin.**
- “Toward a new route control model for multidomain optical networks” by M. Yanuzzi et al.: Presents a route control model replacing BGP/OBGP. Extensive simulations confirm that this route control model is able to drastically reduce the blocking experienced with OBGP, and this can be accomplished without

increasing the number or frequency of routing updates exchanged between domains; **of interest to Chaitanya, Menglin.**

- “Recent progress in dynamic routing for shared protection in multidomain networks” by T. Dieu-Linh et al.: Reviews recent works on dynamic routing for shared protection in multidomain networks, and proposes a quantitative comparison among the most efficient approaches. Some remaining challenges are discussed at the end of the article; **of interest to Chaitanya, Ferhat, Menglin.**

*May:*

- “Service Differentiation and Traffic Engineering in IP over WDM Networks” by S. Androulidakis et al.: Demonstrates the complexities of and proposes a possible solution for optimizing the next-generation core network, evolving the management plane IP/WDM integration model proposed in the 1ST WINMAN project. We concentrate on making the core network efficient for transporting differentiated service traffic, adaptive to changes in traffic patterns and resilient against possible failures, which would disrupt its operation; **of interest to Rajesh, Avishek, Ferhat, Menglin.**

*April:*

- Nothing of Interest.

*March:*

- “Network high availability for ethernet services using IP/MPLS networks” by M. Bocci et al.: Describes new pseudo-wire redundancy and MC- LAG mechanisms, showing how they work together to enable end-to-end protection for Ethernet virtual private wire services and VPLS; **of interest to Chaitanya, Menglin.**
- “OAM and its performance monitoring mechanisms for carrier ethernet transport networks” by R. Jeong-Dong et al.: Outlines Ethernet OAM functions and mechanisms, and explains how its performance monitoring schemes work. In addition, this article introduces open issues and their potential solutions in the performance monitoring of Ethernet OAM for the next phase of standardization; **of interest to Chaitanya, Richard.**

*February:*

- “Bandwidth virtualization enables long-haul WDM transport of 40 Gb/s and 100 Gb/s services” by S. Melle et al.: This article describes how bandwidth virtualization can enable transmission of ultra-high bandwidth 40 Gb/s and 100 Gb/s services over existing optical transport networks independently of the underlying network infrastructure; **of interest to Avishek.**

*January:*

- “PON in adolescence: from TDMA to WDM-PON” by K. Grobe et al.: This article analyzes WDM-PON variants and proposes they be used for a unified optical access and back-hauling network; **of interest to Rajesh, Lei Shi.**
- “Digital optical networks using photonic integrated circuits (PICs) address the challenges of reconfigurable optical networks” by M. Allen et al.: This article provides an overview of typical all-optical ROADM systems and their associated network issues; **of interest to Avishek.**
- “Storage area network extension over passive optical networks (S-PONS)” by Y. Si et al.: Proposes an S-PON architecture based on the existing point-to-multiple-point (P2MP) PON infrastructure. To address the bandwidth bottlenecks in SAN

extension, three solutions for carrying storage signals with gigabit-level transmission are proposed; **of interest to Rajesh, Lei Shi.**

## **2007**

### *December:*

- Nothing of Interest.

### *November:*

- “Internet Protocol Television (IPTV): The Killer Application for the Next-Generation Internet” by Y. Xiao et al.: Survey of IPTV services and underlying technologies. Technical challenges are also identified; **of interest to Sayeem.**

### *October:*

- “Discussion on design aspects for free-space optical communication terminals” by B. Epple et al.: In this article terminal design aspects are discussed, and problems that occur when building FSO terminals are highlighted; **of interest to Shraboni.**
- “Toward autonomic management of communications networks” by B. Jennings et al.: This article provides an introduction to the FOCAL autonomic network management architecture, which is designed to address challenges in managing increasingly dynamic, heterogeneous, and large scale without relying on human monitoring and intervention; **of interest to all.**

### *September:*

- Nothing of Interest.

### *August:*

- “OCDMA and Optical Coding: Principles, Applications, and Challenges” by K. Fouli et al.: Survey of the current trends in OCDMA and optical coding through their applications; may be **of interest to Avishek.**
- “Sub-Wavelength Solutions for Next-Generation Optical Networks” by N. Bouabdallah: The recent trend in optical networks is switching packets directly in the optical domain. The aim is to benefit from both packet flexibility and optical transparency. In this article, current optical architectures that try to reconcile these two requirements are reviewed; **of interest to Chaitanya.**

### *July:*

- Nothing of Interest.

### *June:*

- Nothing of Interest.

### *May:*

- “The Next Evolutionary Step toward Unleashing the Potential of WDM EPONs” by M. Maier et al.: In this article the state of the art of cost reduction, colorless ONUs, and WDM PONs are presented. Elaboration on evolutionary cost-effective upgrades of WDM EPONs and their all-optical WDM integration with Ethernet-based metropolitan area networks to provide transparent connections at the wavelength and sub-wavelength granularity on demand between ONUs residing in different WDM EPONs; **of interest to Rajesh and Lei Shi.**

### *April:*

- Nothing of Interest.

### *March:*

- Nothing of Interest.

*February:*

- “Integrated design and operation of a transparent optical network: a systematic approach to include physical layer awareness and cost function” by C. T. Politi et al.: The manner and exact timing of the evolution of the widely used DWDM infrastructure to a transparent optical network is judged on economic circumstances and network performance; **of interest to Avishek.**
- “Translucent optical networks: the way forward” by G. Shen et al.: This article reviews a range of translucent optical networks and discusses various research issues, particularly involving network planning, lightpath routing and wavelength assignment, and network survivability. Also suggests other potential research topics such as traffic grooming, fault detection, and multicasting for translucent networks; **of interest to Avishek, Chaitanya, Menglin.**
- “Radio-over-fiber-based solution to provide broadband internet access to train passengers” by B. Lannoo et al.: Proposes a cellular trackside solution for providing broadband multimedia services to train passengers. A radio-over-fiber network in combination with moving cells forms the base of this realization; **of interest to Shraboni.**

*January:*

- Nothing of Interest.

**2006**

*December:*

- Nothing of Interest.

*November:*

- “Free-Space Optical Communications for Next-generation Military Networks” by J. C. Juarez et al.: FSO communications has potential to meet emerging military needs by offering dramatic increase in capacity. But there are many technical challenges at multiple layers of the communications protocol stack. This article describes these challenges and discusses some mitigation approaches to provide a path to realizing this capability on the battlefield; **of interest to Shraboni.**
- “Fault and attack management in all-optical networks” by R. Rejeb et al.: Presents an algorithm for multiple attack localization and identification that can participate in some tasks for fault management of all-optical networks; **of interest to Chaitanya, Ferhat, Menglin.**
- “Network design in realistic "all-optical" backbone networks” by J. M. Simmons: Studies the optical network design problem for realistic backbone networks, with a focus on the impact of regeneration; **of interest to Avishek.**
- “Algorithms for multicast traffic grooming in WDM mesh networks” by A. E. Kamal: The article addresses network design and session provisioning under both static and dynamic multicast traffic. Under static traffic conditions, the objective is to accommodate a given set of multicast traffic demands, while minimizing the implementation cost. Optimal and heuristic solution techniques for mesh network topologies are presented. Under dynamic traffic conditions, techniques for dynamic routing and session provisioning of multicast sessions whose objective is to minimize session blocking probabilities are explained. The article also presents a number of open research issues; **of interest to Rajesh, Avishek, Chaitanya.**

*October:*

- “Common technical specification of the G-PON system among major worldwide access carriers” by A. Cauvin et al.: This article describes the G-PON standard and underlines the scope and results of the CTS; **of interest to Rajesh, Lei Shi.**
- “Options for future optical access networks” by R. Davey et al.; **of interest to Rajesh, Lei Shi, Shraboni.**

*September:*

- “Optical networking technologies: what worked and what didn't” by R. Ramaswami: This article takes a broad look at a variety of optical network technologies that have been developed over the past two decades and comments on why some were successful in the real world while others have yet to make it beyond research laboratories or paper publications; **of interest to all.**

*August:*

- “Overview of the optical broadband access evolution: a joint article by operators in the IST network of excellence e-Photon/One” by P. Chanclou et al.: This article presents an operators' view of the evolution towards broadband optical access networks; **of interest to Rajesh, Lei Shi, Shraboni.**
- “Hybrid optical network architectures: bringing packets and circuits together” by C. M. Gauger et al.: Hybrid optical network architectures, which employ two or more network technologies, are proposed; **of interest to Chaitanya, Menglin.**

*July:*

- Nothing of Interest.

*June:*

- Nothing of Interest.

*May:*

- “VCAT-LCAS in a clamshell” by G. Bernstein et al.: In this paper, the authors have given a quick overview of VCAT/LCAS technology and just a few examples of its applications; **of interest to all.**
- “The OptIPuter: high-performance, QoS-guaranteed network service for emerging E-science applications” by N. Taesombot et al.: The OptIPuter project is pioneering a new type of distributed application paradigm that exploits dedicated optical circuits to tightly couple geographically dispersed resources. These private optical paths are set up on demand and combined with end resources to form a distributed virtual computer (DVC). In this article the OptIPuter's approach (DVC), which exploits network resources to deliver higher-quality network services, is compared to several alternative service models (intelligent network and asynchronous file transfer); **of interest to all working on core networks.**
- “Tunneling techniques for end-to-end VPNs: generic deployment in an optical testbed environment” by T. Saad et al.: Tunneling is a technique for encapsulating a packet or frame within another packet of the same or a different network layer. One of the motivations for tunneling is bridging various heterogeneous networks that use different protocols for communication. Tunneling is also used for providing private and secure communications over a publicly shared network. This article investigates the interactions between different tunneling technologies in order to provide end-to-end virtual connectivity to end clients; **of interest to all.**

*April:*

- “Telemedicine in the USA: standardization through information management and technical applications” by Y. B. Choi et al.: Describes the need for telemedicine standards and classify various standards of telemedicine. The emerging issues in telecommunications standards, the application of these standards in the health care industry, and future development directions of telemedicine standards are described; **of interest to all.**

*March:*

- “Deployment of the GMPLS control plane for grid applications in experimental high-performance networks” by I. W. Habib et al.: The purpose of this article is to share the authors’ experiences in the deployment of the GMPLS control plane in these experimental optical networks; **of interest to all.**
- “Optical dynamic intelligent network services (ODIN): an experimental control-plane architecture for high-performance distributed environments based on dynamic lightpath provisioning” by J. Mambretti et al.: An experimental prototype of ODIN has been designed, developed, and implemented on several optical network testbeds; **of interest to all.**
- “Topology discovery services for monitoring the global grid” by L. Valcarengi et al.: This study first reviews some measurement methodologies and network sensors suitable for implementing NIMS components, and then describes some tools currently utilized for monitoring grid network infrastructures. Finally, two implementations of a NIMS component, called the topology discovery service (TDS), are proposed and evaluated; **of interest to all.**
- “On the use of connection-oriented networks to support grid computing” by M. Veeraraghavan et al.: This article considers the suitability of CO networks equipped with generalized multiprotocol label switching (GMPLS) control-plane protocols for grid computing; **of interest to all.**

*February:*

- “WDM Ethernet passive optical networks” by M. P. McGarry et al.: Describes and compares online and offline scheduling paradigms for WDM EPONs. Simulation results indicate that online scheduling can achieve lower delays, especially at high loads. Outline areas of future research on WDM EPONs; **of interest to Rajesh, Lei Shi.**

*January:*

- Nothing of Interest.

**2005**

*December:*

- Nothing of Interest.

*November:*

- “Interoperability update: dynamic ethernet services via intelligent optical networks” by J. D. Jones et al.: The article describes the global test network, services, architecture, and overall test approach. It also describes innovations made to the optical control plane to handle multilayer signaling and lists further refinements needed to make these services operational; **of interest to all.**
- “Ultrasience net: network testbed for large-scale science applications” by N. S. V. Rao et al.: **of interest to all.**



- “JumpStart deployments in ultra-high-performance optical networking testbeds” by I. Baldine et al.: This article describes deployments of the JumpStart architecture and protocols in several ultra-high-performance optical networking testbeds; **of interest to all.**
- “In-field evaluation of a managed IP/MPLS over WDM provisioning solution” by F. Karayannis et al.: This article demonstrates results and experiences gained in the area of multilayer internetworking, with emphasis on bandwidth on-demand provisioning as well as resource and restoration management; **of interest to all.**
- “Global seamless network demonstrator: a comprehensive ASON/GMPLS testbed” by H.-M. Foisel et al.: This article reports on the continuous activities of Deutsche Telekom in setting up comprehensive ASON/GMPLS network demonstrators. The goal is to enable practical evaluations and early experiences with prototype implementations related to new standards and specifications from ITU-T, IETF, and OIF; **of interest to all.**
- “SUCCESS-HPON: A next-generation optical access architecture for smooth migration from TDM-PON to WDM-PON” by An Fu-Tai et al.: Presents the Stanford University Access Hybrid WDM/TDM Passive Optical Network (SUCCESS-HPON), a next-generation hybrid WDM/TDM optical access architecture that focuses on providing a smooth migration path from current TDM-PONs to future WDM-PONs; **of interest to Rajesh, Lei Shi.**

*October:*

- “Realization of the next-generation network” by L. Chae-Sub et al.: This article provides some insight into the history, definition, requirements, and future trends of next-generation network standards. It concentrates on a high-level overview to provide a strategic direction of standards toward a complete NGN providing fixed-mobile convergence, telebroadcasting, and all aspects of 21st century communications; **of interest to all.**
- “NGN architecture: generic principles, functional architecture, and implementation” by K. Knightston et al.: This article summarizes the architectural aspects of a NGN in terms of general principles, functional representation, and typical implementation. According to the general reference model, which assumes decoupling of services and transport, NGN can be represented by multiple functional groups. One of the key implementations for session-based services, utilizing an IP multimedia subsystem, is introduced with enhanced features to meet both fixed and mobile network requirements; **of interest to all.**

*September:*

- “Network characterization using constraint-based definitions of capacity, utilization, and efficiency” by F. Yegenoglu et al.: This article characterizes network resources in terms of capacity, utilization, and efficiency, and defines these metrics as functions of the sets of constraints under which the network is operating. These constraints may include service level agreement objectives, routing policy constraints, and failure survivability requirements; **of interest to Rajesh, Avishek.**

*August:*

- “Light-trail testbed for IP-centric applications” by N. A. VanderHorn et al.: Develops light-trails as a novel and amenable control and management solution to

- address IP-centric communication problems at the optical layer. Implements a testbed to demonstrate light-trail feasibility. Also presents three MAC protocols for light-trails and evaluate their performance; **of interest to Chaitanya.**
- “CHEETAH: circuit-switched high-speed end-to-end transport architecture testbed” by Z. Xuan et al.: Proposes a circuit-switched high-speed end-to-end transport architecture (CHEETAH) as a networking solution to provide high-speed end-to-end circuit connectivity to end hosts on a dynamic call-by-call basis; **of interest to all.**
  - “Verizon experience with ng ethernet services: evolution to a converged layer 1, 2 network” by H. Chamas et al.: This article presents Verizon’s experience with deploying metro Ethernet services and some of their laboratory activities related to the convergence of layer 2/1 networks; **of interest to all.**
  - “Success pon demonstrator: experimental exploration of next-generation optical access networks” by H. Yu-Li et al.: Proposes and demonstrates a new hybrid TDM/WDM PON architecture that jointly serves multiple physical PONs to enjoy statistical multiplexing gain as well as cost sharing. This article describes design and implementation issues of the key building blocks, including fast tunable lasers, burst-mode receivers, and scheduling algorithms with quality of service support; **of interest to Rajesh, Lei Shi.**
  - “Chasing errors through the network stack: a testbed for investigating errors in real traffic on optical networks” by A. W. Moore et al.: A testbed is described that allows both physical layer errors to be observed and analyzed, as well as monitoring network performance via frame loss; **of interest to all.**

*July:*

- “Multilayer traffic engineering for GMPLS-enabled networks” by M. Vigoureux et al.: Catalogs the unified traffic engineering paradigms, discuss their applicability, and present their enforcement techniques. Shows that the common GMPLS concept has the advantage of low operational complexity, and enables unified TE capabilities such as efficient network resource usage and rapid service provisioning; **of interest to all.**

*June:*

- Nothing of Interest.

*May:*

- Nothing of Interest.

*April:*

- Nothing of Interest.

*March:*

- “Next-generation optical storage area networks: the light-trails approach” by A. Gumaste et al.: Shows how the optical layer can be furthered from just pure transport to creating opportunities in provisioning as well as providing the mirroring function of SAN systems (multicasting) and consequently lead to reduction in cost; **of interest to all.**
- “Reliability and availability assessment of storage area network extension solutions” by X. Qiu et al.: This article provides analytical models developed for the calculation of long-term average downtimes, service failure rates, and service availability that can be achieved as a function of hardware/software failures,

software upgrades, link failures, failure recovery times, and layer 3 protocol convergence times; **of interest to all.**

- “Reconfigurable free-space optical cores for storage area networks” by T. D. Wilkinson et al.: This article reviews two potential optical switch technologies and assesses their performance as a SAN optical switch core; **of interest to all.**

*February:*

- “Bandwidth allocation for multiservice access on EPONs” by Y. Luo et al.: This article addresses and provides an overview of the upstream bandwidth allocation issue for multiservice access provisioning over EPONs, and proposes an algorithm for dynamic bandwidth allocation with service differentiation; **of interest to Rajesh, Lei Shi.**
- “Media access control for Ethernet passive optical networks: an overview” by J. Zheng et al.: The purpose of this article is to provide a good understanding of the MAC issue, discuss the major problems involved (e.g., multiple access, bandwidth allocation, transmission scheduling, and quality of service support), and present an overview of the state-of-the-art solutions proposed thus far to the problems; **of interest to Rajesh, Lei Shi.**
- “Automatically switched optical networks: benefits and requirements” by A. Jaiszczyk: The article summarizes driving forces that are behind automatically switched optical networks; **of interest to Avishek.**

*January:*

- Nothing of Interest.

**2004**

*December:*

- Nothing of Interest.

*November:*

- “All-optical switching technologies for protection applications” by Z. Zalevsky et al.: This article examines the applicability of new and legacy all-optical switching technologies to serve as building blocks for different protection applications; **of interest to Ferhat, Menglin.**

*October:*

- Nothing of Interest.

*September:*

- “Cost optimization methods in the design of next generation networks” by H. M. Sigurdsson et al.: In this article the migration of Iceland Telecom's circuit-switched PSTN towards NGN is described. A cost model of the telecommunications system has been developed to enable cost and benefits analysis of transforming the network to NGN. Methods of optimization and their application to determine the optimal number and position of nodes in the future network are described; **of interest to Avishek.**

*August:*

- “Ethernet PONs: a survey of dynamic bandwidth allocation (DBA) algorithms” by M. P. McGarry et al.: This article first provides a brief introduction to Ethernet passive optical networks, followed by a discussion of the problem of dynamic bandwidth allocation; **of interest to Rajesh, Lei Shi.**

- “A view of fiber to the home economics” by N. J. Frigo et al.: Examines some of the historical, competitive, and economic reasons for FTTH in US markets; **of interest to Rajesh, Lei Shi.**
- “SUCCESS-DWA: a highly scalable and cost-effective optical access network” by H. Yu-Li et al.: This article introduces a novel PON employing dynamic wavelength allocation to provide bandwidth sharing across multiple physical PONs; **of interest to Rajesh, Lei Shi.**
- “A dynamic bandwidth allocation scheme for differentiated services in EPONs” by J. Xie et al.: This article first reviews some DBA schemes available in the literature, then propose a two-layer bandwidth allocation scheme that implements weight based priority for this need; **of interest to Rajesh, Lei Shi.**

*July:*

- “Lightpaths on demand: a Web-services-based management system” by R. Boutaba et al.: This article presents a user-controlled lightpath management system that addresses the problem of provisioning bandwidth-guaranteed tunnels across multiple independent management domains; **of interest to all.**

*June:*

- Nothing of Interest.

*May:*

- “Differentiated QoS for survivable WDM optical networks” by C. V. Saradhi et al.: This article presents a survey of various methods that have been proposed for providing service differentiation in survivable WDM networks and discusses their performance; **of interest to Ferhat, Menglin.**

*April:*

- Nothing of Interest.

*March:*

- Nothing of Interest.

*February:*

- “Shareability in optical networks: beyond bandwidth optimization” by M. Ali: Allow for additional sharing of important node devices in order to reduce network cost; **of interest to Ferhat.**
- “Network control and management challenges in opaque networks utilizing transparent optical switches” by G. Ellinas et al.: The article addresses and clarifies some fundamental issues surrounding all-optical networking and all-optical switching, and analyzes the trade-offs between transparent and opaque networking; **of interest to Avishek.**

*January:*

- “Service level agreement and provisioning in optical networks” by W. Fawaz et al.: This article proposes a service level agreement applied to the optical domain (O-SLA), which is expected to be the near- and long-term network technology of the great bandwidth capacity offered by optical devices; **of interest to all.**
- “Policy-driven automated reconfiguration for performance management in WDM optical networks” by W. Golab et al.: This survey article is concerned with the problem of automatically updating the configuration of an optical network to accommodate changes in traffic demand, which entails making a reconfiguration

policy decision, selecting a new configuration and migrating from the current to the new configuration; [of interest to Ferhat](#).

- “Extending end-to-end optical service provisioning and restoration in carrier networks: opportunities, issues, and challenges” by W. Alanqar et al.: Addresses the opportunities, issues and challenges associated with end-to-end optical service provisioning and restoration in carrier networks; [of interest to Ferhat, Menglin](#).
- “The protected working capacity envelope concept: an alternate paradigm for automated service provisioning” by W. D. Grover: Proposes an alternative paradigm for efficient use of shared protection capacity, partly summed up as provisioning over protected capacity rather than provisioning protection; [of interest to Ferhat, Menglin](#).
- “Shared protection in mesh WDM networks” by P. H. Ho et al.: This article introduces the design principles and state-of-the-art progress in developing survivable routing schemes for shared protection in mesh WDM networks; [of interest to Ferhat, Menglin](#).
- “A joint resilience scheme with interlayer backup resource sharing in IP over WDM networks” by L. Lei et al.: Proposes a resilience scheme based on recovery at the lowest layer in which intralayer and interlayer backup resource sharing is utilized to improve the network utilization; [of interest to Ferhat, Chaitanya](#).