

## OFC/NFOEC SPECIAL ISSUE

SERIES EDITORS: HIDEO KUWAHARA AND JIM THEODORAS

### S4

#### SERIES EDITORIAL:

### OPTICAL COMMUNICATIONS BECOMES AN INDUSTRY STALWART

### S16

#### PHOTONIC INTEGRATION FOR HIGH-VOLUME, LOW-COST APPLICATIONS

To date, photonic integration has seen only limited use in a few optical interface applications. The recently adopted IEEE draft standards for 40 Gb/s and 100 Gb/s Ethernet single-mode fiber local area network applications will change this situation.

CHRIS COLE, BERND HUEBNER, AND JOHN E. JOHNSON

### S24

#### A TOTAL-COST-OF-OWNERSHIP ANALYSIS OF L2-ENABLED WDM-PONS

Candidates for next-generation broadband access networks include several variants of WDM-PONS. The total cost of ownership of these solutions is determined mainly by operational expenditures, where the cost of energy is one of the major contributors. We show that a combination of WDM-PON with active L2 switching can minimize the total cost of ownership while at the same time offering the highest scalability for future bandwidth demands.

KLAUS GROBE AND JÖRG-PETER ELBERS

### S30

#### THE ROAD TO CARRIER-GRADE ETHERNET

Carrier-grade Ethernet is the latest step in the three-decade development of Ethernet. The authors describe the evolution of Ethernet technology from LAN toward a carrier-grade operation and then, through an overview of recent enhancements.

KERIM FOULI AND MARTIN MAIER

### S40

#### A COMPARISON OF DYNAMIC BANDWIDTH ALLOCATION FOR EPON, GPON, AND NEXT GENERATION TDM PON

The authors compare the typical characteristics of DBA, such as bandwidth utilization, delay, and jitter at different traffic load, within the two major standards for PONS: Ethernet PON (EPON) and Gigabit PON (GPON).

BJÖRN SKUBIC, JIAJIA CHEN, JAWWAD AHMED, LENA WOSINSKA,  
AND BISWANATH MUKHERJEE

#### COMMENTARY

### S8 THE NEXT GENERATION OF ETHERNET, BY JOHN D'AMBROSIA

#### ADVERTISING SALES OFFICES

Closing date for space reservation:  
1st of the month prior to issue date

##### NATIONAL SALES OFFICE

Eric L. Levine  
Advertising Sales Manager  
IEEE Communications Magazine  
3 Park Avenue, 17th Floor  
New York, NY 10016  
Tel: 212-705-8920  
Fax: 212-705-8999  
e-mail: e.levine@comsoc.org

##### PACIFIC NORTHWEST and COLORADO

Jim Olsen  
3155 N.E. 76th Avenue  
Portland, OR 97213  
Tel: 503-640-2011  
Fax: 503-640-3130  
portland@roymcdonald.com

##### SOUTHERN CALIFORNIA

Patrick Jagendorf  
7202 S. Marina Pacifica Drive  
Long Beach, CA 90803  
Tel: 562-795-9134  
Fax: 562-598-8242  
patrick@roymcdonald.com

##### NORTHERN CALIFORNIA

George Roman  
4779 Luna Ridge Court  
Las Vegas, NV 89129  
Tel: 702-515-7247  
Fax: 702-515-7248  
Cell: 510-414-4730  
george@roymcdonald.com

##### SOUTHEAST

Scott Rickles  
560 Jacaranda Court  
Alpharetta, GA 30022  
Tel: 770-664-4567  
Fax: 770-740-1399  
sruckles@aol.com

##### EUROPE

Martin Holm  
Huson International Media  
Cambridge House, Gogmore Lane  
Chertsey, Surrey, KT16 9AP  
ENGLAND  
Tel: +44 1 1932-564999  
Fax: +44 1 1932-564998  
Email: m.holm@husonmedia.com