FORWARD

On behalf of the IEEE Lasers and Electro-Optics Society and the AIAA Digital Avionics Technical Committee co-sponsor, we would like to welcome you to scenic Victoria, British Columbia for the IEEE Avionics Fiber Optics and Photonics Conference (AVFOP 2007). AVFOP is the result of a 2004 government and industry consensus championing a standalone fiber optics and photonics conference dedicated to the field of avionics. This application-oriented conference is intended to provide a common international forum for leaders, researchers, engineers, technicians, logisticians, instructors and students to convene and discuss all aspects of avionics fiber optic component and systems technology and its future direction. Over the next three days you will be given the opportunity to meet with a wide range of commercial, defense, academic, and aerospace sector professionals engaged in the development and application of wideband digital and RF fiber optic link, cable plant, and networking technologies.

Day 1 of the AVFOP program comprises three sessions devoted primarily to the application of analog photonics technology to airborne environments. An evening reception will follow the Day 1 technical program.

Day 2 opens with a technical session on applications and security where you will hear the latest in optical information assurance and optical CDM-based security technology. From there the conference will switch gears to the WDM domain where you will learn about progress happening in the SAE WDM LAN task group, as well as WDM photonic integration and COTS CWDM component testing. Day 2 concludes with an afternoon session devoted to cabling and interconnect technologies.

Day 3 begins with a second technical session on WDM technology. The AVFOP 2007 program concludes with two sessions devoted to active and passive optical components, and a presentation on the benefits of military specification qualified components.

The AVFOP 2007 program is the result of diligent efforts by the Technical Program Committee and the IEEE LEOS staff. We appreciate all of the work put into making AVFOP 2007 a worthwhile event for the aerospace community that it serves. We also thank the conference paper authors and participants who are sharing their expertise and time. Without their involvement AVFOP would not exist.

Please enjoy yourselves here in Victoria and have a great meeting!

Mark Beranek
General Chair

Thomas Dermis
Program Chair
Amphenol Fiber Systems International

Amphenol Fiber Systems International
1300 Central Expressway N.
Allen, TX 75013 USA

Phone:  +1 214 547 2438  
Fax:  +1 214 547 9344  

Amphenol Fiber Systems International is a leader in the design, development and manufacturing of fiber products, dedicated to meeting the needs of the Avionics Marketplace with products like M29504 termini, M38999 connectors and custom assemblies.

Discovery Semiconductors, Inc.

CONTACT: ABHAY JOSHI

Discovery Semiconductors, Inc.
119 Silvia Street
Ewing, NJ 08628 USA

Phone:  +1 609 434 1311  
Fax:  +1 609 434 1317  

Discovery Semiconductors is an industry leader in manufacturing ultrafast, high optical power handling InGaAs photodetectors, RF-over-fiber optical receivers and balanced optical receivers. Discovery’s instrumentation includes their Lab Buddy and Optical Coherent Receiver System.

Enablence Technologies, Inc.

CONTACT: MICHAEL INSKIP

Enablence Technologies, Inc.
400 March Road
Kanata, Ontario, K2K 3H4 Canada

Phone:  +1 613 270 7860  
Fax:  +1 613 270 7850  

Enablence Technologies supplies planar lightwave circuit (PLC) based solutions, high speed photodetectors and RF over Fiber Receivers for the aerospace and defense industries. Enablence is publicly traded under the symbol TSX-V:ENA. For more info visit: www.enablence.com.

Glenair, Inc.

CONTACT: JIM NOVACOSKI

Glenair, Inc.
1211 Air Way
Glendale, CA 91201 USA

Phone:  +1 818 247 6000  
Fax:  +1 818 500 9912  

Glenair manufactures military grade fiber optic connectors, termini and cable assemblies for harsh application Environments. We are active members of the NGCON.

Luna Technologies

CONTACT: BRIAN MCCARVER

Luna Technologies
3157 State Street
Blacksburg, VA 24060 USA

Phone:  +1 540 961 5190  
Fax:  +1 540 961 5191  

Luna Technologies specializes in advanced solutions for fiber-optic test and measurement. Our Optical Backscatter Reflectometer is a zero dead zone, high resolution OTDR with distributed temperature and strain analysis for optical fiber components, modules, and networks.

OFS – Specialty Photonics Division

OFS – Specialty Photonics Division
55 Darling Drive
Avon, CT 06001 USA

Phone:  +1 888 438 9936  
Fax:  +1 860 674 8818  

OFS – Specialty Photonics Division is the industry leader in optical fiber design or modification for highly customized applications. It develops focused solutions for fibers, cables, and other specialty fiber optic products and devices.
**Polatis**

CONTACT: PHILIP BENGUHE

Polatis
5 Fortune
Billerica, MA 01821 USA

Phone: +1 800 514 7435
e-mail: pbenguhe@polatis.com; info@polatis.com
URL: www.polatis.com

Polatis manufactures high reliability fiberoptic matrix switches suitable for both single and multimode, digital and RF Communication, in standard and custom configurations. Our products support telecommunication, military/federal, Video, and test applications.

**SIFAM Fibre Optics**

CONTACT: BRUCE NAPIER

SIFAM Fibre Optics
Broomhill Way
Torquay, Devon TQ2 7QL UK

Phone: +44 1803 407 782
Fax: +44 1803 407 786
e-mail: bnapier@sifamfo.com
URL: www.sifamfo.com

SIFAM Fibre Optics is a specialist provider of fibre optic solutions for harsh environments. Expertise encompasses component manufacture (fused couplers, pigtailed lasers and receivers) and module “design and build” (fibre routing, electronic integration, custom housing).

**Teledyne Microelectronics**

CONTACT: HARRY KELLZI

Teledyne Microelectronics
12964 Panama Street
Los Angeles, CA 90066 USA

Phone: +1 310 574 2082
Fax: +1 310 574 2045
e-mail: microelectronics@teledyne.com
URL: www.teledynamicro.com

Teledyne Microelectronics is a leader in the design and production of advanced optoelectronics packaging for high-speed avionics communications devices. Teledyne specializes in hermetic and COTS fiber-optic assemblies; services include design validation through modeling, prototyping and Telcordia qualification.

**W. L. Gore & Associates**

W. L. Gore & Associates
402 Vieve’s Way
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Phone: +1 302 292 5100
e-mail: Electronics.usa@wlgor.com
URL: www.gore.com

W. L. Gore & Associates provides high performance fiber optic cable assemblies for military and aerospace applications. GORETM cable assemblies are engineered to deliver the most stable optical performance in aerospace applications.
Final Program

**Tuesday, 02 October 2007**

**ALL SESSIONS WILL BE HELD IN THE PACIFIC BALLROOM**

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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Chair(s)</th>
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<tr>
<td><strong>08.30</strong> - <strong>10.10</strong></td>
<td>TuA</td>
<td><strong>ANALOG PHOTONICS I</strong></td>
<td>Mark W. Beranek, US Naval Air Systems Command, Patuxent River, MD, USA</td>
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<td><strong>Session Co-Chairs:</strong> Thomas F. Dermis, US Air Force Research Laboratory, WPAFB, OH, USA</td>
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<tr>
<td><strong>08.30</strong> - <strong>08.40</strong></td>
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<td><strong>Welcome</strong></td>
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<tr>
<td><strong>08.40</strong> - <strong>09.10</strong></td>
<td>TuA1</td>
<td>RF Photonics Challenges on Aerospace Platforms, W. L. Stewart, Lockheed Martin, Benbrook, TX, USA</td>
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<td></td>
<td></td>
<td>This paper addresses some of the challenges of RF photonics on aerospace platforms. Single mode fiber optics is considered in meeting the need for low loss, light weight, and high bandwidth RF signal distribution systems.</td>
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<tr>
<td><strong>09.10</strong> - <strong>09.40</strong></td>
<td>TuA2</td>
<td>Considerations for Application of RF-Over-Fiber to Navy Systems, E. W. Jacobs, J. Rodgers, D. C. Evans, T. E. Weiner and C. Lin, SPAWAR Systems Center, San Diego, CA, USA</td>
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<td>This paper summarizes system-level metrics relevant to Navy RF-over-fiber applications, discusses an example deployed RF-over-fiber system, and concludes with an update on recent progress on improved components and RF photonic link performance.</td>
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<tr>
<td><strong>09.40</strong> - <strong>10.10</strong></td>
<td>TuA3</td>
<td>Fiber-Optics for Future EW Platforms, R. Pirich and P. Anumolu, Northrop Grumman Corporation, Bethpage, NY, USA</td>
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<td>An enabling technology for next-generation EW systems is an all fiber optic backplane. Fiber-optic systems are rapidly evolving and this paper will review the application of fiber optics for aircraft and specifically EW applications.</td>
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<td><strong>10.10</strong> – <strong>10.30</strong></td>
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<td><strong>COFFEE BREAK</strong></td>
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<tr>
<td><strong>10.30</strong> - <strong>12.00</strong></td>
<td>TuB</td>
<td><strong>ANALOG PHOTONICS II</strong></td>
<td>Gregory L. Abbas, EOSpace Incorporated, Redmond, WA, USA</td>
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<td><strong>Session Co-Chairs:</strong> John T. Gallo, Xadair Technologies, Jacksonville, FL, USA</td>
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<tr>
<td><strong>10.30</strong> - <strong>11.00</strong></td>
<td>TuB1</td>
<td>Analog Phase Modulation for Avionics Applications, V. J. Urick, F. Bucholtz, P. S. Devgan and J. D. McKinney, US Naval Research Laboratory, Washington, DC, USA</td>
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<td>We present the result that analog phase modulation can outperform analog intensity modulation for RF photonics applications. We cite the applications in an airborne environment where analog phase modulation can be employed.</td>
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<td><strong>11.00</strong> - <strong>11.30</strong></td>
<td>TuB2</td>
<td>Electromagnetic Pulse Shaping and Applications, J. D. McKinney, US Naval Research Laboratory, Washington, DC, USA, D. Peroulis and A. M. Weiner, Purdue University, West Lafayette, IN, USA</td>
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<td>We review the use of optical pulse processing technology to synthesize arbitrary radio-frequency (RF) electromagnetic waves (1-11 GHz). We illustrate the ability to tailor the spectral phase and amplitude of these waves and present an intriguing application: compensation of antenna distortions on ultrawideband RF waves.</td>
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<td><strong>11.30</strong> - <strong>12.00</strong></td>
<td>TuB3</td>
<td>Multi-Octave Microwave Transmission over Fiber with a Single Optical Phase Modulator, B. M. Haas and T. E. Murphy, University of Maryland, College Park, MD, USA</td>
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<td>We describe recent experimental results showing second-order distortion suppression using a single optical phase modulator. This enables multi-octave operation of phase-modulated fiber optic links with Spur-Free Dynamic Range matching that of a Mach-Zehnder based link.</td>
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<td><strong>12.00</strong> – <strong>14.00</strong></td>
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<td><strong>LUNCH BREAK</strong></td>
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TuC 14.00 - 14.30 (Invited)
Wideband Agile Receiver, C. Cemy, US Air Force Research Laboratory, WPAFB, OH, USA
The Wideband Agile Receiver (WAR) merges advanced photonics and a high dynamic range digital receiver to create a novel hardware prototype for the sensing and communication systems that are the ‘eyes and ears’ of the war fighter.

TuC2 14.30 - 14.45
This paper will examine the potential for integrating commercially available photonic components onto an optical substrate. The goal is to provide components and photonic integrated circuits for application in airborne RF photonic and sensing systems.

TuC3 14.45 - 15.00
Hybrid Analog-Digital Fiber Optic Network for Aircraft Communication and Control, P. S. Devgan, V. J. Urick, J. D. McKinney and K. J. Williams, US Naval Research Laboratory, Washington, DC, USA
A hybrid analog-digital network for intra-aircraft communication is presented. 2.5-GHz digital data and 1-GHz analog signal are modulated onto a single laser. The Q-factor and third harmonic show no degradation due to unwanted crosstalk.

TuC4 15.00 - 15.15
A Suppressed Carrier Ring Laser Oscillator for Coherent Analog Optical Links, B. J. Bortnik, Y.-C. Hung, H. R. Fetterman, University of California - Los Angeles, Los Angeles, CA, USA, R. Forber and W. Wang, IPITEK, Carlsbad, CA, USA
A laser ring oscillator for heterodyne links is proposed where an intracavity modulator outputs a suppressed carrier signal while recirculation of the carrier around the ring. This transmitter was demonstrated experimentally with high spur-free-dynamic range.

TuC5 15.15 - 15.30
Free Space Optical Communication, T. Manzur, US Naval Undersea Warfare Center, Newport, RI, USA
This paper will discuss the current implementations of free space optical communications (FSO) and telemetry, and will describe concepts for integrating this capability into the existing and future DoD and submarine applications.

17.00 – 19.00
WELCOME RECEPTION – PACIFIC BALLROOM

Wednesday, 03 October 2007

WA1 08.30 - 08.45
CWDM integration of electro-optical properties into a monolithic PIC or hybridized with a PLC can replace 10 packages with one package of equivalent performance. This development can reduce fibers and packages for Avionic applications.

WA2 08.45 - 09.00
Fiber Optic Considerations for Insertion into Legacy Avionics Platforms, P. Anumolu and R. Pirich, Northrop Grumman Corporation, Bethpage, NY, USA
At times, fiber optics are inserted into avionics systems without a rigorous analysis of the benefits. In this paper, we define some considerations for fiber optics insertion and derive a rubric to serve as a guideline for insertion.

WA3 09.00 - 09.15
Novel Secure Platform for Avionic Applications based on Optical CDMA, I. Glesk, Y.-K. Huang, P. R. Prucnal, Princeton University, Princeton, NJ, USA, and B. L. Uihlein, Lockheed Martin, Eagan, MN, USA
Novel OCDMA platform for use in avionic applications with data security approaching “One-time Pad” was demonstrated. It supports OC-24 data rates with raw BER<10^-12 and allows conduct eavesdropping studies.
WA4  09.15 - 09.30

ABSTRACT NOT AVAILABLE

WA5  09.30 - 09.45
OCDM-based All Optical Multi-Level Security, S. Etemad, Telcordia Technologies, Inc., Red Bank, NJ, USA
We describe an OCDM methodology using passive optically integrated phase coders. The proposed all optical operations support MLS in avionics applications for both preventing inadvertent receipt of optical signal and providing robustness against malicious exhaustive and/or archival attacks.

WA6  09.45 - 10.00
Progress Towards A Virtual Quadrant Receiver for 4-ary Pulse Position Modulation/Optical Code Division Multiple Access (4-ary PPM/O-CDMA) Networks, V. J. Hernandez, C. V. Bennett, W. J. Lennon, Lawrence Livermore National Laboratory, Livermore, CA, USA, A. J. Mendez, Mendez R&D Associates, El Segundo, CA, USA, and R. M. Gagliardi, University of Southern California, Los Angeles, CA, USA
A virtual quadrant receiver for 4-ary PPM/O-CDMA is described, simulated, and implemented. Simulations show the impact of multi-access and optical beat interference on system performance. The implementation maximizes photonic processing and can ultimately be implemented as a monolithic PLC-based device.

10.00 – 10.30  

COFFEE BREAK

10.30 - 11.45
Session WB: WDM I  
Session Co-Chairs: Michael J. Hackert, US Naval Air Systems Command, Patuxent River, MD, USA  
William P. Krug, Boeing Company, Seattle, WA, USA

WB1  10.30 - 11.00  (Invited)
Development of a Scalable WDM LAN for Avionics Networking, J. B. Stark, Defense Photonics Group, Inc., New York, NY, USA
As communication bandwidth requirements grow on aerospace platforms, WDM provides flexibly allocated, scalable capacity carried on an optical fiber infrastructure that endures for the life cycle of the platform. The SAE AS-5659 subcommittee is defining the standard for this new generation of communications infrastructure.

WB2  11.00 - 11.30  (Invited)
Waveguide grating couplers enable the effective coupling of light from vertical-cavity devices such as VCSELs and resonant photodetectors to bidirectional in-plane waveguides. This enables WDM multiplexing and demultiplexing in a compact, planar integrated format.

WB3  11.30 - 11.45
This paper discusses the performance of commercial CWDM filter and source technologies. Specifically, we look at their performance in terms of wavelength stability across the temperature ranges they are likely to encounter in aerospace applications.

11.45 – 14.00  

LUNCH BREAK

14.00 - 16.15
Session WC: CABLING & INTERCONNECT  
Session Co-Chairs: Michael J. Hayduk, US Air Force Research Laboratory, Rome, NY, USA  
Praveen Anumolu, Northrop Grumman Corporation, Bethpage, NY, USA

WC1  14.00 - 14.30  (Invited)
Hybrid glass coating replaces polyimide buffer currently used on optical fibers for military aircraft. Hybrid glass bonds to the fiber and protects it from heat, water and chemical corrosion improving the reliability of aerospace cables.

WC2  14.30 - 14.45
Measurement of Coupling Between Cleaved or Polished Fibers using an Automated Fusion Splicer, J. E. Toney and J. S. Mazurowski, Penn State Electro-Optics Center, Freeport, PA, USA

WC3  14.45 - 15.15  (Invited)
Temperature Effects on Optical Fibers for Aerospace Applications, R. J. Betti, Raytheon Systems Co., Camp Springs, MD, USA  
E. T. Landrieu, Air Force Research Laboratory, Rome, NY, USA  
A. C. Caddell, BAE Systems, Filton, Bristol, UK
This paper addresses the effects of temperature on optical fibers for aerospace applications and presents results from a longer term program.
In this paper we present experimental results on repeatability of insertion loss measurement, using an automated fusion splicer as a platform for aligning fibers with cleaved or polished end faces. We demonstrate that high repeatability can be achieved with single-mode and multi-
mode fibers.

WC3 14.45 - 15.00
High Performances Single Mode Fiber Optic Cable for Aerospace Applications, G. Trouillard and A. Bergonzo, Draka Fileca, Sainte Geneviève, France
The fibre optic use is growing in the aerospace industry. This paper describes a new single mode fibre optic cable which features a high temperature performance, low bending losses and ease of installation in future aerospace environments.

WC4 15.00 - 15.15
A simple yet effective fiber tip lens has been designed, evaluated, and utilized in a military fiber optic transceiver. The optimized fiber tip lens offers over 80% optical coupling and more than 10 µm offset margin at each of 3-axis optical alignment.

WC5 15.15 - 15.30
End-of-Life Insertion Loss Methodology, S. Newland, Harris Corporation, Melbourne, FL, USA, D. A. Hardy, W. L. Gores & Associates, Newark, DE, USA and T. Goodwin, W. L. Gores & Associates, Elkton, MD, USA
Single-mode cable assemblies are increasingly being used in rugged avionics environment. We present here several different methodologies for calculating end-of-life insertion loss based on summations of individual tests.

WC6 15.30 - 16.00 (Invited)
Optical Phase Domain Reflectometers, D. N. Harres, Boeing Company, Hazelwood, MO, USA
A new approach to optical fiber reflectometry is presented in which a single frequency is used to modulate the laser. Numerical methods are used to decompose the reflected waveform into its constituent components.

WC7 16.00 - 16.15
Millimeter Resolution Optical Reflectometry Over Up to Two Kilometers of Fiber Length, D. Gifford, M. Froggat, M. Wolfe, A. Sang, B. J. Soller, Luna Innovations, Blacksburg, VA, USA, and S. Kreger, Blue Road Research, Gresham, OR, USA
We demonstrate OFDR measurements with mm resolution over 2 km. Individual events such as connectors, bends, and breaks can be identified and precisely located. We also demonstrate high-temperature and strain sensing with the same technique.

Thursday, 04 October 2007

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<td>Session ThA: WDM II</td>
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<td>Session Co-Chairs: Michael J. Hackert, US Naval Air Systems Command, Patuxent River, MD, USA</td>
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<tr>
<td>William P. Krug, Boeing Company, Seattle, WA, USA</td>
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ThA 08.30 - 09.00 (Invited)
Sandia Photonics Technologies for Avionics, G. Vawter and C. T. Sullivan, Sandia National Laboratories, Albuquerque, NM, USA
Avionics-related optoelectronics R&D is a core capability of Sandia National Laboratories. We will review activity in VCSELs, MEMs and photonic-integrated circuits as applied to applications from atomic clocks to beam forming and RF data links.

ThA 09.00 - 09.30 (Invited)
InP Photonic IntegratedD Circuit and DWDM-on-Chip Technology, S.-T. Ho, Northwestern University, Evanston, IL, USA, Y. Huang and J. Ma, OptoNet, Evanston, IL, USA
The author will give a review of several leading platforms for InP photonic integrated circuit. Meanwhile, a novel DWDM-on-chip technology developed recently based on ultra-high efficiency super compact grating on InP wafer will be discussed.

ThA 09.30 - 09.45
Priority-based Ring-Hybrid WDM LANS for Avionics, M. Stringer-Blaschke, A. Kumar, M. Sivakumar and J. Y. McNair, University of Florida, Gainesville, FL, USA
A priority-based ring-hybrid WDM LAN architecture is proposed, using both ring and point-to-point topologies to support hybrid avionic sub-systems with variable-priority traffic. Simulation results demonstrate variable and consistently low latencies for all subsystems.

We use a proposed reference network architecture to investigate the fault tolerance of an avionics DWDM network. Our simulations show modest increases in the numbers of hops and packets lost for low number of line failures.

10.00 – 10.30 COFFEE BREAK

Session ThB: OPTICAL COMPONENTS I
Session Co-Chairs: Neal K. Bambha, US Army Research Laboratory, Adelphi, MD, USA
Rick C. Stevens, Lockheed Martin, Eagan, MN, USA

Next Generation of Passive and Reconfigurable Fiberoptic Components, J. Zhao, Agiltron Inc, Woburn, MA, USA
Agiltron design eliminates the progressive damage caused by thermal cycling stresses by use of packaging materials with matched coefficients of thermal expansion to the fiber. This approach not only provides ultra-high reliability but also excellent temperature stability performance.

Bi-Directional Fiber Optic Transceivers for Avionics Applications, S. Bidnyk, M. Pearson, A. Balakrishnan and S. O’Keefe, Enableance Inc., Ottawa, ON, Canada
A bi-directional avionics transceiver based on planar lightwave circuit technology has successfully been designed, fabricated, and tested. The transceiver has been shown to operate at 2.5 Gb/s, while weighing only 1.9 g.

Multimode Fiber Links for 40Gb/s Avionic Applications, S. Datta, X. Wang, A. Joshi, D. A. Becker, R. Howard and C. Wree, Discovery Semiconductors, Inc., Ewing, NJ, USA
We report a 300m long 40Gb/s multimode transmission utilizing a multimode-fiber-pigtailed top-illuminated photodiode. The frequency response of the multimode fiber and the photodiode is experimentally determined for various polarizations using an optical heterodyne setup.

Military Avionics Fiber Optics Photonics Packaging Technology Forecast, M. W. Beranek, US Naval Air Systems Command, Patuxent River, MD, USA, R. Jenkins and R. I. Voigt, US Naval Academy, Annapolis, MD, USA
A new wave of photonics packaging research and development is required to enable a robust next generation BIT-capable avionics LAN technology solution based on single mode fiber and advanced WDM and RF components.

11.45 – 14.00 LUNCH BREAK

Session ThC: OPTICAL COMPONENTS II
Session Co-Chairs: Daniel N. Harris, Boeing Company, Hazelwood, MO, USA
Ron Pirich, Northrop Grumman Corporation, Bethpage, NY, USA

This paper gives an overview of the state-of-the-art in the field of integrated tunable wavelength converters, in particular focusing on the recent results related to the monolithic integrated wavelength converter DARPA funded research conducted at the University of California in Santa Barbara.

Performance Testing of Bit-Enabled Aerospace Transceiver, C. B. Kuznia, Ultra Communications Inc., Vista, CA, USA
We describe performance testing of a quad transceiver module developed for harsh environment applications. This 850 nm VCSEL-based transceiver operates over 4 independent transmit and receive channels using multi-mode fiber. We present characterization of performance and built-in-test (BIT) features over temperature.

We describe a compact transient model for EDFAs and EDWAs that is ideal for efficient simulation of avionic photonic systems. The model accounts for ASE generation, background loss, homogeneous upconversion, and thermal effects.

Optical Branching Devices for Avionic Passive Optical Network, M. Farries, B. Napier, A. Robertson, and D. Smith, Sifam Fibre Optics Ltd., Torquay, Devon, UK.

The development of fused optical components for operation over the -55°C to +125°C in the uncontrolled areas of an aircraft is reported. The use of these high reliability fused components for power splitting or wavelength multiplexing in passive optical networks on future aircraft is discussed.

Design Theory and Experiment of All-Optical Tunable Filter Utilizing Acoustically induced Microbending Modulation in Thin Optical Fibers, F. Abrishamian, S. Nagai, S. Sato and M. Imai, Muroran Institute of Technology, Muroran, Hokkaido, Japan

Spectral response of acoustically induced microbending through thin fiber is discussed from theoretical and experimental viewpoints. We successfully fabricated all-optical tunable filter using thin fiber (80µm) and confirmed the frequency tunability at 1550nm.

MEMS Based Fiberoptic Solutions for Avionic Applications, M. Muha and P. Benguhe, DiCon Fiber Optics Inc, Richmond, CA, USA

MEMs based devices enable robust fiberoptic systems for avionic applications, due to superior performance and reliability. Initially considered for switching and attenuation applications, they can now facilitate wavelength management in future WDM systems.

END OF PROGRAM
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Adoption will benefit in significant savings of cost and time to the photonics interconnect designer.

**P I S D v1 will be launched in January 2008**