



IEEE BUENAVENTURA SECTION

Welcome to the Buenaventura IEEE Section for July, 2010

- July 13th
ComSoc **Bring The Light Closer To You**, Dr. Dawei Zheng, SiFotonics Technologies. ITT Force Protection Systems, Thousand Oaks
6:30 reception, pizza, & networking; 7:00 presentation
- July 14th
Computer **Digital Comics: Technical Challenges of 21st-Century Publishing**
Bill Fisher, Quicksilver Software
Ahmanson Science Center, Cal Lutheran University
6:30 reception, pizza, & networking; 7:00 presentation
- July 21st
MTTS **Antenna Arrays: non-foster matching, superdirectivity, and compressive sensing** Dr. Jonathan Lynch, Hughes Research
Ciao Wireless, Camarillo
6:30 reception, pizza, & networking; 7:00 presentation
- July 22nd
AES-LMAG **Considerations When Starting Your Own Technology Company**
Jerry Knotts, California Coast Venture Forum, Inc., USAF(ret)
Vitesse Semiconductor Corporation, Camarillo
6:30 reception, pizza, & networking; 7:00 presentation



The summer months are fairly quiet for our Section, though the events we have promise to help you recover from strenuous vacationing and the perils of back-yard barbeques!

Most of our events are free and open to the public, and often have dinner available. All of our events are posted on the Section calendar, available here on our site.

Keep an eye out for our CyberSecurity and Personal Privacy speaker event in October. Details will be coming soon!

Steve Johnson, 2010 Section Chair

Job Opening – RF/Analog Development Eng: Valencia, CA

Design & testing of RF/Analog electronics. Knowledge of a wireless protocols operation & required interfaces to digital electronics.

Experience with industry standard design tools (Microwave Office, HFSS, SIWave, Speed2000, PSpice, Capture) is required. AutoCAD, Cadence Allegro & Solidworks exposure is a plus.

Knowledge of PCB, SMT & chip & wire assembly processes is a plus. Experience with medical device requirements is a plus.

Contact Pat Jacobs -- pat.jacobs@advancedpersonnelprofiles.com



Buenaventura Section

MEETING NOTICE



Buenaventura Section's
ComSoc Chapter

Date and Time: Tuesday, July 13, 2010

Location : ITT-Force Protection Systems, 3500 Willow Lane, Thousand Oaks, CA

Directions: take the Hampshire Rd. exit off Hwy 101, facility is east on the south side of 101

http://maps.yahoo.com/maps_result?addr=3500+Willow+Lane&csz=Thousand+Oaks%2C+CA

Agenda: 6:30 p.m. Reception, Pizza, & Networking

7:00 p.m. Meeting & Presentation

RSVP Requested: xwang97@yahoo.com

NOTE: The presentation takes place in a company that is involved in Government work. Therefore, please note that you will be asked for Government issued picture ID (Drivers License or better). Non-US Citizens will need to bring Right-To-Work documentation.

Bring The Light Closer To You Speaker: Dr. Dawei Zheng



Since the deployment of FTTX, optical fiber has been brought to the peripheral of our offices and homes. While 95% of US household bandwidth is limited to about 1 Mbps, Japanese and Korean families typically enjoy bandwidth of 2 orders of magnitude higher. What can we do with the higher bandwidth? One of the most important applications is 3D video conferencing, which could potentially enable most office workers to telecommute from home on a regular basis. Greater adaptation of telecommuting through 3D video conferencing could reduce traffic and pollution and is a true green technology. This talk will present other visions that the industrial leaders are considering, in terms of how optical interconnect could revolutionize our life. We will also address the technology platform that could enable this economically – Yes, only Silicon can do this!

Bio: Dr. Dawei Zheng received his B.Sc from the department of electrical engineering, Fudan University, China and his Ph.D in electronic materials science from UCLA. After UCLA, He joined Intel, Santa Clara developing flash memory before he landed in a Silicon photonics startup company – Kotura for more than 8 years. Most recently he is the director of product development at a Silicon photonic startup company – SiFotonics Technologies Co. At SiFotonics, he is in charge of photonic component development as well as business development and technical marketing to bring the technologies to the commercial world.

Digital Comics: Technical Challenges of 21st-Century Publishing

Bill Fisher, Quicksilver Software

Wednesday, 14 July 2010



Richter Auditorium, Cal Lutheran University,
Thousand Oaks (6:30-8:30pm)

... funny thing I saw online everywhere yesterday ...

The world of comics/graphic novels has leaped online with new delivery systems, channels like iTunes, and on multiple platforms ranging from traditional PCs to Sony PSP and Apple iPads/iPhones. Quicksilver Software's founder, William Fisher, has been working with major publishers and artists to deliver comics in these new, digital formats.

In this talk, Bill will discuss his company's new LongBox Digital Comic Book publishing and distribution system. He will present background about why digital distribution is so critical in this and many other markets, and then discuss some of the key technical challenges faced by the development team as they put together a state-of-the-art infrastructure for multi-platform digital content delivery.

The talk will include details about the competing challenges of providing solid protection against copying while at the same time giving users great freedom in how they can use and enjoy the content that they download. He will also discuss his company's technical design philosophy, how it influenced the design of the application, the tools, and the back-end infrastructure for the system which is now in final public beta testing.

About the Speaker and His Company

Bill Fisher is the Founder, Kingpin, and Scoutmaster of Quicksilver Software, Inc. Quicksilver creates strategy, simulation, and educational titles, including Star Trek: Starfleet Command, and the U.S. Army's Full Spectrum Command series.

The company also excels in embedded and vertical market product development, and projects that require custom hardware components. Recent projects include a mobile counter-IED trainer for the U.S. Army and Marine Corps, a game for Apple iPhone and iPad, a live poker game show in Las Vegas, a keyboarding skills product, and a military "urban stability operations" simulator.

Prior to founding Quicksilver Software, Inc. in 1984, he managed home computer software development for Mattel Electronics where he developed Intellivision programs.

Bill has spent 26 years managing his own software development company. His interests range from strategy game development to simulation-based training and artificial intelligence design to usability and user interface design. He maintains an active role in guiding development of the company's projects, which include products targeted at markets ranging from commercial entertainment software and educational software to simulation software and mobile applications





IEEE

MEETING NOTICE Buenaventura MTT-S Chapter

Wednesday, July 21st, 2010 (6:30PM)

Ciao Wireless

4000 Via Pescador, Camarillo, CA 93012

6:30PM Reception & Networking;

7:00PM Presentation

Antenna Arrays: non-foster matching, superdirectivity, and compressive sensing **Dr. Jonathan Lynch**

Non-foster matching networks have shown promise for increasing the bandwidth of small antennas. This approach uses active circuitry to circumvent the limitations of Foster's reactance theorem and the Chu limit of minimum antenna quality factor. A key issue with non-foster circuits is stability, and applying non-foster matching to arrays of antennas makes ascertaining stability much more difficult. Non-foster matching of antenna arrays has the potential to enable a new class of wideband phased arrays that achieve, to some degree, the advantages of superdirectivity that have been pursued (in vain) for so many decades.

Compressive sensing (CS) is relatively recent technique that takes advantage of "sparsity" of information content that exists in many situations to reduce hardware size, weight, power, and A/D sampling rate. It is theoretically possible to achieve high angular resolution with fewer sets of antenna array terminal ports (and therefore fewer receivers) than are required in a conventional phased array. Groups have also demonstrated reconstruction of bandlimited signals that have been sampled at sub-Nyquist rates.

This presentation will describe recent techniques for the analytical description of antenna arrays and show how they may be advantageously applied to arrays that utilize non-foster matching and/or compressive sensing. The approach makes use of the unique "radiation modes" that completely describe transmitting and receiving behavior and naturally lead to a rigorous S parameter network description of the array. Unlike previous modal descriptions, the one presented here may be applied to any finite, reciprocal array and does not require the array to be lossless. The resulting network description leads to a straightforward determination of array stability for non-foster matching, provides a convenient figure of merit for superdirective arrays, and allows for accurate predictions of CS performance that include the effects of mutual coupling and external scattering.

Jonathan Lynch received his BS (1987), MS (1992), and PhD (1995) degrees at the University of CA, Santa Barbara. He is currently a Senior Scientist at HRL Laboratories in Malibu where he is involved with the development of W band radiometric sensors for commercial millimeter wave imagers. He is also developing antenna array hardware for compressive sensing as well as applying non-foster circuits for antenna array superdirectivity.

IEEE BUENAVENTURA SECTION
Aerospace & Electronics Systems Chapter
&
Life Members Affinity Group

**Considerations When Starting
Your Own Technology Company**

Date: July 22, 2010

Time: 6:30 pm Refreshments and Networking,
7:00 pm Talk

Venue: Vitesse Semiconductor Corp.
741 Calle Plano,
Camarillo, CA 93012

This presentation will review many of the significant factors that must be addressed when starting a new technology based company. These factors will include IP, planning sequence, business plan, funding, founders, etc. Most new companies fail because they ignore the basics. These companies do not have a compelling business proposition or a comprehensive plan. Come prepared to share your ideas and business opportunities under consideration.

Please RSVP to Sunil Pai (paisunils@ieee.org) if you wish to attend this meeting.

Speaker: Jerry Knotts

Jerry Knotts retired from the USAF in 1984 after 24 years of service with the rank of Colonel. His military experience included over 14 years with a unique USAF program called BIG SAFARI where he worked with General Dynamics, E-Systems, Lockheed Corporations and numerous other aerospace companies. During this time, he acted as Project Engineer and Program Manager for many special projects, including: COMBAT SENT, COBRA BALL, PEACE JACK, the RB-57F, COMBAT TALON, and many others. He completed 112 combat missions as an F-105F WILD WEASEL and RYAN RAIDER over North Vietnam. His awards include the Legion of Merit, Distinguished Flying Cross, Defense Commendation Medal, Meritorious Service Medal (with three Oak Leaf Clusters), Air Medal (with 13 Oak Leaf Clusters), and numerous other awards. After retirement, he served as Vice-President/General Manager, Defense Electronics Division, California Microwave and later as Vice-President for Programs Development at American Nucleonics Corporation. As a business consultant, he provides strategic and financial planning services to small and medium sized companies through his Strategy Management Consulting firm.

He is the President the California Coast Venture Forum, Inc. and a business plan reviewer and mentor with both the Los Angeles Regional Technology Alliance (LARTA) and the Southern California BioMed Council (SoCALBIO). Jerry serves as Chairman of the Board for BioQuip Products, Inc. and a member of the Board of Directors for Qualified Technologies Inc. Jerry is the President of the South Coast Youth Leadership Conference, Inc.; Founder and Chairman of the Stagecoach Inn Museum Foundation; and Treasurer, Youth Enrichment Foundation, Inc. He is also a member of the Board of Counselors for the California Lutheran University Business School. Jerry holds a BSEE (Electronics Engineering) from The Pennsylvania State University; and an MBA from Auburn University. In addition, he is a graduate of the Defense Acquisition University, Industrial College of the Armed Forces, Air Command and Staff College, and Air War College. He is a Senior Life Member of the IEEE, Chairman of the IEEE Life Member Group (Buenaventura Section), is a Registered Professional Engineer, and a life member of the Texas, California, and National Society of Professional Engineers. Jerry has served as a member of the Ventura County Republican Party Central Committee, a Ventura County Airport Commissioner, and serves as a Lay Arbiter for the Ventura County Bar.



Celebrating 125 Years
of Engineering the Future

Buenaventura Section Profile

The Buenaventura Section is one of the most active in the western United States, with over 100 speaker events in the last two years, and global recognition for our Chapters and Affinity Groups. We welcome your attendance and participation in Section events!

EMBS: Chapter of the Year 2006 and 2008

LMAG: Life Member Affinity Group of the Year 2009

Buenaventura Section Chapters

Aerospace Chapter provides speaker events to members interested in the design, integration, test, and analysis of large, complex systems consisting of major subsystems that contain dissimilar electronic devices. Most of our members work on sensor systems (radar, Sonar, optics, and navigation), communications systems, command and control centers, avionics, space systems, military systems, digital signal processing simulators, and software development. Some members work on robotics, energy, and transportation systems

Communication Society Chapter a community comprised of a diverse group of industry professionals with a common interest in advancing all communications technologies.

Computer Society Chapter chapter's vision is to be the leading provider of technical information, community services, and personalized services to the ventura county's computing professionals.

Electronic Devices Circuits and Systems chapter places its interest in all aspects of the physics, engineering, theory and phenomena of electron and ion devices as well as looks at the theory, the analysis, the design (computer aided design), the practical implementation of circuits, and the application of circuit theoretic techniques to systems and to signal processing.

Engineering in Medicine and Biology Society chapter serving the needs of biomedical engineers in ventura county. Its leadership is striving to develop new ways to serve its members with modern information from remarkable speakers.

Life Member Affinity Group IEEE "Life" status is an automatic process which is based on an individual's membership record and age. The member must be at least 65 years of age and has been a member of IEEE or one of its predecessor societies such that the sum of age and years of membership equals or exceeds 100. The Buenaventura Section has the only Life Member Affinity Group in Southern California.

Microwave Theory and Techniques Society chapter promotes the theory and applications of RF, Microwave, Millimeter-wave, and Terahertz technologies.

Robotics chapter interested in both applied and theoretical issues in robotics and automation, including intelligent machines and systems used, for example, in space exploration, human services, or manufacturing, and the use of automated methods in factory, office, home, laboratory automation, transportation, and other systems to improve performance and productivity.

Buenaventura Section IEEE Officers

We welcome your involvement – We have several positions open!

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If you need to reach individuals or companies with a technical background in Ventura County and beyond, this newsletter is an ideal vehicle. We can advertise your job openings, consulting services, or conferences and events.

Please contact Steve Johnson, sfjohnso@ieee.org

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We welcome your involvement – We have several positions open!

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