AUTOTESTCON 2012

September 10–13, 2012
Disneyland® Resort and Convention Center
Anaheim, California

AUTOTESTCON 2012

Mission Assurance Through Advanced ATE

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http://www.autotestcon.com

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FINAL PROGRAM

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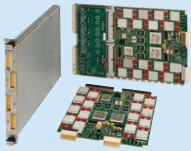
INTRODUCING

HSSub™ HIGH SPEED SUBSYSTEM

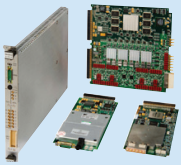
Visit our booth #801 to see the new capabilities and live demonstrations of the **High Speed Subsystem (HSSub).** Learn about what makes Teradyne's HSSub stand apart.

- ***Multiple, concurrently operating bus instruments*** tackle custom and standard, parallel and serial buses from 100 MHz to multiple GHz
- ***Three-tier Processing Architecture*** combines PC, real-time processors, and FPGAs for high-bandwidth, low-latency UUT/ATE interaction
- ***Runtime-Defined Instruments*** are rapidly configured for specific UUT/TPS requirements

Core System Instrumentation and Spectrum-9100 Systems



Di-Series Digital Test Instruments



Ai7-Series Analog Test Instruments

Bi4-Series Bus Test Instruments

Spectrum-9100 Scalable ATE Systems

Visit **Teradyne's Booth #801** to be entered into a drawing to **win noise cancelling headphones!**

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AUTOTESTCON 2012 COMMITTEE

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CHAIRMAN'S MESSAGE

Welcome to yet another IEEE AUTOTESTCON*, the premier conference for Automatic Test Systems to aid in the support of weapon and information systems for the mighty military systems that keep us, and the world, safe from aggressors and terrorists. This is the 48th edition of this annual conference, and we have added additional technical content to both the program and the seminars to help keep the conference useful and informative for our attendees.

We have seen many changes over the past few years, starting with the terrible terrorist attack in New York in 2001 and continuing through whole-country uprisings (the "Arab Spring") and continued terrorist activity throughout the world. We have finally finished our military effort in Iraq and are hopefully finishing our involvement in Afghanistan, and as we write this the situation in Syria grows worse by the hour. The democracies in Egypt, Libya, Iraq etc are tenuous at best but we are all hopeful. We never can tell what the Iranians or North Koreans are going to do but you can bet it won't be a laying down of arms. There is some likelihood that the US and possibly NATO will have to protect the Strait of Hormuz for gulf oil shipments as Iran continues to rattle their sabre and play their usual threatening games. Then there are the rampant massacres caused by drug cartels in Mexico that our Border Patrol has been somewhat able to keep south of our borders. In short, it appears as if there is always going to be ample opportunity for the US military to assist in keeping the peace, as best we can.

When you couple all of this implied need for military strength with the current US budget crisis and financial situation, aggravated by the European debt crisis, you have a situation of continuous need with less ability to sustain the expenditures needed to satisfy that need. And for those folks who wonder why we need a strong military, one can only hope that they realize that their freedoms and security are clearly at stake here. If we allow terrorists to have a secure haven where they can train and prepare to strike out against the free world, the West, they will. We don't want another Twin Towers, but terrorist organizations such as Al Qaeda sure do.

So what does all this mean to us, purveyors and proponents of capable automated test systems for military equipment? Our test systems keep the military machine moving, ready to fight another day as they say. The military ops tempo of the past decade is greater than any time since World War II, and this put a tremendous strain on the gear. It breaks, it fails, and our systems figure out what has failed so it can be repaired. We have to provide competent, effective, and comprehensive test systems to the military so they can keep the war machines repaired, in top tune, and ready to deploy. We need for our systems to be cost-effective and affordable, reliable and easy to use. Our systems need to enable the military maintainers to do their job effectively and quickly. Our systems are a major contributor to military readiness.

Am I preaching to choir here? Perhaps a little bit, but this serves as the dramatic reminder of why we are here, at this hotel, at this conference, at this time. This conference will explore the latest technology and methodologies to effective maintenance. This conference will explore new ideas, new concepts. This conference will allow the military users to dialog with the suppliers and learn what we might do better.

This is IEEE's AUTOTESTCON!

In addition to the strong technical program (almost 100 quality papers!) and a revised Seminar program, coordinated by the ever-capable Mike Ellis of Northrop Grumman, we have numerous offerings for spouses and companions including a golf tournament and spouse tours. The Wednesday evening "extravaganza" for attendees at the newly-remodeled Disney California Adventure "Cars Land" should be a real treat for all! Our Keynote Speaker this year is Lt Gen Larry Farrell, USAF (Ret.), President of the National Defense Industrial Association, who will share his thoughts on our military capability. And we have over a hundred Exhibitors in excess of 250 exhibit booths to showcase the advanced capability that is available to support the mission. So enjoy the conference, and be sure to let one of us know if you need anything.

Bob Rassa
General Chair

**IEEE AUTOTESTCON is one of the major conferences of the Institute of Electrical & Electronics Engineers and is wholly sponsored by the IEEE Aerospace & Electronic Systems Society, Dr Hugh Griffiths, President, and the IEEE Instrumentation & Measurement Society, Jorge Fernandez Daher, President.*

Frank McGinnis Award

The IEEE AUTOTESTCON Frank McGinnis Professional Achievement Award recognizes outstanding leadership, individual initiative and technical contributions in the field of automatic test engineering, either for a specific accomplishment or for a body of activities during a career. The award includes a perpetual crystal trophy kept for one year, a permanent plaque and $2,000. The award honors the memory of Frank McGinnis who headed an Industry/Joint Services Automatic Test Task Force instrumental in initiating new thrusts in military R&D in ATE. The Task Force evolved into the National Security Industrial Association (NSIA) Automatic Test Committee. NSIA later emerged with the Advanced Defense Preparedness Association (NDIA), where the Automated Test Committee is still active under the NDIA Systems Engineering Division.

Walter E. Peterson Award

The IEEE AUTOTESTCON Walter E. Peterson Award is presented each year to the best paper on technical topics at the Conference. It is awarded in honor of Mr. Peterson and perpetuates his technical leadership, interest and inspiration in the introduction and utilization of new and advanced technology in the design and manufacture of automated test systems. The award includes a certificate and cash prize of $2,000.

David M. Goodman Award

The IEEE AUTOTESTCON David M. Goodman Best Paper Award for Management Topics recognizes the many contributions made by the late Dr. Goodman in the formation of AUTOTESTCON and his encouragement of management theory and concepts. The award carries a certificate and a cash prize of $2,000.

Student (Best Paper) Award

Undergraduate and graduate students were invited to submit papers to the AUTOTESTCON 2012 Student Paper Contest sponsored by the IEEE Instrumentation and Measurement Society. Both travel awards (grants) and best paper awards will be made.

Travel grants to help defray travel will be competitively awarded for papers selected for presentation. Best paper awards will consist of up to two Undergraduate Student Outstanding Paper awards and up to two Graduate Student Outstanding Paper awards. Travel grants can range up to $1,000, depending upon need.

John Slattery Professional Achievement Award Award

The John Slattery Professional Achievement Award is sponsored by the Automatic Test Committee of the Systems Engineering Division of the National Defense Industrial Association (NDIA/ATC) and honors the memory of John Slattery for his professional contributions to the advancement of automated testing. It is presented to an individual who has made major contributions to improving the state of automatic testing in support of the national security posture of the United States, including:

Outstanding Technical Achievements; Demonstrated Technical Innovation; Contributions to ATE technology; Participation in ATE Industry Peer Groups, Enthusiasm/eagerness to provide mentoring; Uncompromised ethics and professionalism; Industry contributions that reflect technical zeal, competence, and integrity; And an unswerving desire to achieve technical excellence, regardless of political or management considerations.

The 2012 recipient of the NDIA/ATC John Slattery Professional Achievement Award is Mr. Joseph A. Mikolaj. Joe is the Test Program Set Assistant Program Manager for Systems Engineering (TPS APM SE) for US Navy PMA-260D. As the TPS APM, he is the chief engineer for all CASS Test Program Sets providing engineering leadership for CASS TPS acquisitions and sustainment.

Mr. Mikolaj received his bachelor's degree in Electrical Engineering from University of Akron in 1982, and began his career with the US Navy as a co-op at the Naval Surface Warfare Center, Crane Division. Over the past 30 years, he accepted positions of increasing responsibility and authority throughout his career, - a career that includes serving as the focal point for NAVAIR's implementation of four generations of digital test capability into the CASS Family (CASS Block I/II/III, RT-CASS and eCASS), and supporting various initiatives for the Navy and other DOD entities, including R&D projects like Agile Rabid Global Combat Support (ARGCS).

Joe is an active member of the ATE community, mentoring young engineers inside and outside his organization, supporting Navy participation at AUTOTESTCON, presenting papers at the Teradyne Users Group, and participating in cutting edge technical working groups – e.g. Joe was a founding member of the CASS Technical Working Group (TWG).

FROM THE TECHNICAL CHAIR

Welcome to AUTOTESTCON 2012 and the promise of yet-another great conference. As the Technical Program Committee prepared for this year's show there was a joint expectation that the technical program abstract count would be down. After all times are tough and trade show budgets are diminishing – were we ever wrong! Our task was not one of soliciting abstracts, but rather that of down-selecting from over one hundred and forty excellent submissions from government, industry and academia in over a dozen countries all around the globe! The final result was almost one hundred thought-provoking papers and five panel sessions, plus, of course, the ever-popular four track Seminar Program. My sincere thanks to authors – both selected and prospective – and to my Technical Committee for all their hard work in developing the program We believe that you will find the end result stimulating, exciting and professionally rewarding.

Why are we flourishing in the worst economic times most of us have ever witnessed? While there is no simple answer, the sheer enthusiasm and drive of our attendees – yes, that's you – cannot be discounted. You provide not only the scripts and the actors; you are also the audience in our show – the *sine qua non* of AUTOTESTCON's success.

Ten years ago many industry pundits were forecasting the disappearance of ATE, to be replaced with redundant, self-repairing systems, smart diagnostics, prognostics and extensive built-in-test. As predicted, all these technologies have advanced enormously, but survive today as true partners with traditional ATE, augmenting its functions, focusing its applications and working in harmony to achieve the common goal of maximizing prime systems availability. And new challenges are emerging and being addressed. Software testing is also becoming a key consideration. While software may not break in the same way as its hardware counterpart, it can and does fail – usually unpredictably and often with catastrophic consequences. As with hardware, our job is to predict these failures and counteract them – prognosis is mandatory because diagnosis may be too late! Common software techniques and standards pave the way for further innovation and commonality, and will see full employment as we approach DoD's next generation of ATS systems hardware.

This year's conference offers insight into all these, and more. Innovation is on display, in publication and available for your evaluation. Thank you in advance for continuing to make our conference successful. My Committee and I are confident that you will reap the benefits of your participation as we meet once again to share ideas, challenges and friendships.

Mike Ellis
Technical Program Chair

Lawrence P. Farrell, Jr.
Lieutenant General, USAF (Ret.)
President, National Defense Industrial Association
Keynote Speaker, Wednesday, September 12, 2012

Prior to his retirement from the Air Force in 1998, General Farrell served as the Deputy Chief of Staff for Plans and Programs, Headquarters U.S. Air Force, Washington, D.C. He was responsible for planning, programming, and manpower activities within the corporate Air Force and for integrating the Air Force's future plans and requirements to support national security objectives and military strategy.

Previous positions include Vice Commander, Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio, and Deputy Director, Defense Logistics Agency, Arlington, Virginia. He also served as Deputy Chief of Staff for Plans and Programs at Headquarters U.S. Air Forces in Europe. A command pilot with more than 3,000 flying hours, he flew 196 missions in Southeast Asia, and commanded the 401st Tactical Fighter Wing, Torrejon Air Base, Spain. He was also the system program manager for the F-4 and F-16 weapons systems with the Air Force Logistics Command, Hill Air Force Base, Utah.

He has also been a CNN military analyst commenting on matters related to U.S military operations and programs.

General Farrell has had in-depth business development experience, having served on various business strategy groups for such companies as LABBLEE Corp, Raytheon, Labat-Anderson Inc., KPMG, Huber Corp, The Boeing Company, and Philadelphia Electric Company. He has also served on a number of study groups supporting The United States Air Force, The Rand Corporation, and The Logistics Management Institute. In addition, he has been a member of the advisory boards of UNISPHERE Inc., BAE Systems Simulation and Training, Miltope Group Inc., Learning Byte International, and The Camber Corporation.

He is a graduate of the Air Force Academy with a BS in Engineering and an MBA from Auburn University. Other education includes the National War College and the Harvard Program for Executives in National Security.

A native of Montgomery, Alabama, he is married to the former Victoria Leigh Kruzel of Richmond, Virginia. They have a son, Captain Sean Farrell and a daughter, Kelly Farrell Lowder.

SPECIAL EVENTS

Wine & Cheese Welcome Reception
Magic Kingdom Lawn
Monday, September 10, 2012
6:00PM to 7:00 PM

Buffet Luncheon
Exhibit Hall
Tuesday, September 11, 2012
11:30am - 1:00pm

Exhibitor Reception
Exhibit Hall
Tuesday, September 11, 2012
6:00pm - 8:30pm

"Route 66 Road Trip"
Cars Land Extravaganza
Wednesday, September 12, 2012
6:00pm - 11:00pm

The AUTOTESTCON 2012 Wednesday evening Extravaganza "Route 66 Road Trip" will be a private evening at the brand-new Cars Land at Disney California Adventure, featuring dinner and drinks and access to the key features and rides of Disney's newest major attraction. This addition to Disney California Adventure opened June 15 and has become the hottest venue in Disney's southern California enterprise. Cars Land is closed to the public for this event and only open to AUTOTESTCON attendees with a proper credential, thus assuring pretty much unlimited access to the rides and features of this fun new park. One admission is provided with each full registration, and extra tickets may be purchased for $70.00 adult, $35 children 3-9.

We will have Radiator Springs Raceway, Luigi's Flying Tires, and Mater's Junkyard Jamboree rides all running. The Cozy Cone Motel area (snacks and refreshments) will be open and staffed, all items for purchase. We'll also have Ramone's (gift, souvenir and accessory shop) open and staffed. All of the lighting in the Land will be operational. NOTE: Minimum ride height for children is 42 inches.

Dinner will be served at the large, indoor Stage 17, which is at the end of Hollywood Land just inside the California Adventure. Cars Land is in the middle of the park, with the main entrance across from the Vineyard Restaurant. The World of Color is a fabulous water and light display in the lagoon at Paradise Pier.

Guests can enter the park starting at 6:00 PM on special credential, issued with their dinner ticket. Dinner will be from 6:30 PM to 7:45 PM, and at 7:45 guests head to World of Color with park escorts. World of Color starts at 8:15, and guests will leave World of Color at 8:45 approximately and head to Cars Land. Cars Land opens for us at 9:00 PM and runs until 11:00 PM. We have the entire Cars Land to ourselves.

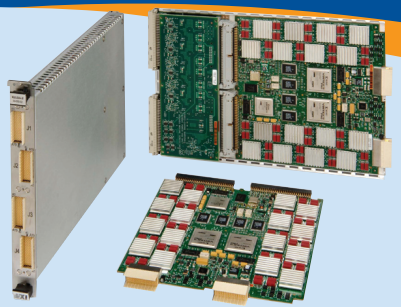
Guests may leave the park when they wish. Once they leave Cars Land, they may not return. The rest of the park will have been closed down. All activities will cease operation at 11:00 PM.

NOTE: The sit-down, served dinner will begin promptly at 6:30 PM. It is about a 10 minute walk from the Disneyland Hotel to the Disney California Adventure entrance, and another 5 minute walk to Stage 17 where dinner is being served.

NOTES

Di-050: The Proven Next-generation Digital Test Instrument

Teradyne: Advancing ATE Technology for Mission Assurance



CSi CORE SYSTEM INSTRUMENTATION

Teradyne's CSi (Core System Instrumentation)

At the core of the defense industry's most advanced test systems you'll find Teradyne's CSi family of products. Our high-performance, high-density analog, digital, and bus test instruments form the heart of the standard DoD ATS families, solutions built on the ARGCS Advanced Concept Technology Demonstration, Teradyne Spectrum 9100, and OEM-supplied systems.

Teradyne's Di-050 addresses current and next-generation digital testing needs, featuring:

- **Proven Compatibility** preserves investments in legacy TPSs and minimizes program risk when replacing previous generations of Teradyne or other digital assets
- **LRU/WRA-Centric Flexibility** addresses today's diverse requirements; board and box test, old and new UUT designs, maintaining old while developing new TPSs, and the demands of legacy instrument replacement
- **Unmatched Performance** tackles the latest UUT technology requirements and delivers the highest quality of test
- **Breakthrough Usability** lowers TPS development and debug cost through flexible hardware and innovative iStudio™ development and debugging software
- **Reliability and Survivability** delivered by industry-leading MTBF and protection from external damage based on over 35 years of digital support experience

Visit **Teradyne's Booth #501 to be entered into a drawing for a Vermont Teddy Bear.**
Ask us about the Di-050 and the entire CSi family of test instruments.

TERADYNE
Because Testing Matters

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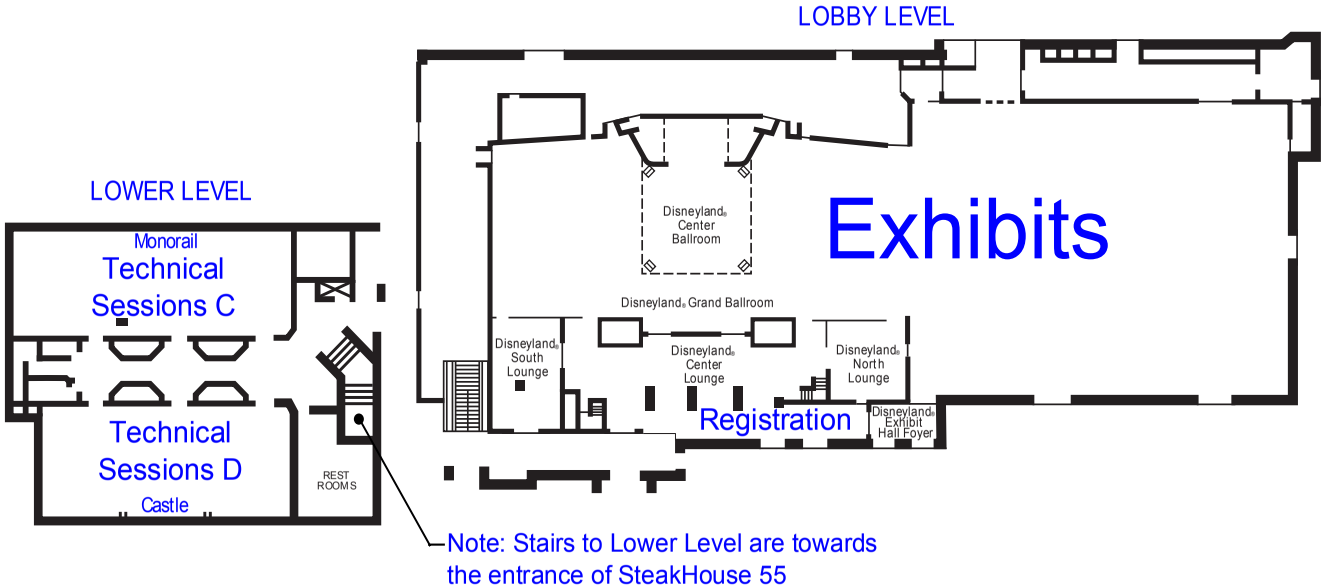
Activity ↓	Day →	SUN - Sept 9	MON - Sept 10	TUES - Sept 11	WED - Sept 12	THUR - Sept 13
Spouse	Spouse Tours		Tour A 1:30PM-3:00PM	Tour B 9:00 AM - 4:00PM	Tour C 8:45AM-1:45PM	
Exhibit Hall	Open to Attendees			10:30AM-5:00PM	9:30AM-5:00PM	9:00AM-12N
	Exhibitor Reception			6:00PM-8:30PM		
Registration		2:00PM-5:00PM	7:00AM-6:00PM	7:00AM-5:00PM	7:00AM-5:00PM	8:00AM-11:00AM
Morning Refreshments Open			7:00AM	7:30AM	7:00AM	7:00AM
Technical Program			8:00AM-12N 1:00PM-5:00PM	8:30AM-10:30AM 2:00PM-5:15PM	8:15AM-11:30AM 1:30PM-5:00PM	8:00AM-11:30AM 11:45AM Adjourn
Luncheons			12N-1:00PM Sleeping Beauty Pavilion	11:30AM-1:00PM In Exhibit Hall	12N-1:00PM Award Lunch Paradise Pier	12N-1:00PM Paradise Pier
Exhibitor Reception				6:00PM-8:30PM		
Cars Land Extravaganza					6:00P-11:00P	
Welcome Reception			6:00PM-7:00PM Magic Kingdom Lawn			
Coffee Breaks	Morning		7:00AM-8:00AM	7:30AM-8:30AM	7:15AM-8:15AM	7:00AM-8:00AM
	Mid-Morning		9:45AM-10:00AM	10:15AM-10:30AM	9:30AM-10:00AM	9:30AM-10:00AM
	Mid-Afternoon		3:00PM-3:15PM	3:30PM-3:45PM	3:00PM-3:30PM	
Golf Tournament			7:00AM-2:00PM			
Disneyland Park Hours (DLP)		9:00AM-11:00PM	10:00AM-8:00PM	10:00AM-8:00PM	10:00AM-8:00PM	10:00AM-8:00PM
Disney California Adventure (DCA)		9:00AM-10:00PM	10:00AM-8:00PM	10:00AM-8:00PM	10:00AM-8:00PM	10:00AM-8:00PM

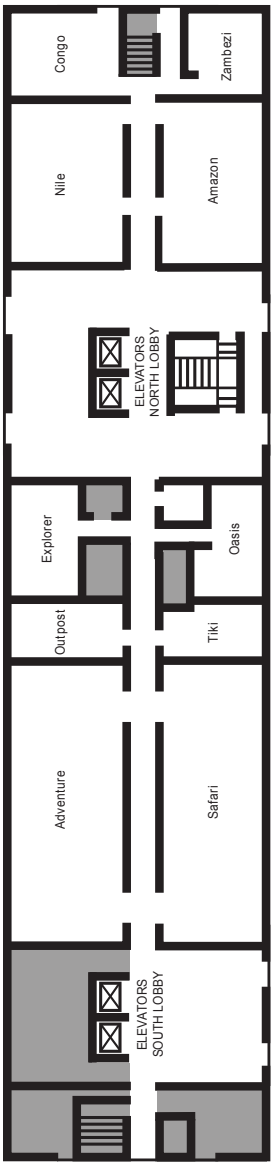
Other Park Hours: Fri Sept 07 & 14: DLP 9AM-11PM; DCA: 9AM-10PM. Sat Sept 08 & 15: DLP 9AM-12PM, DCA 9AM-10PM; Sun Sept 16: DLP 9AM-11PM; DCA 9AM-10PM

Disneyland® Hotel

CONVENTION CENTER

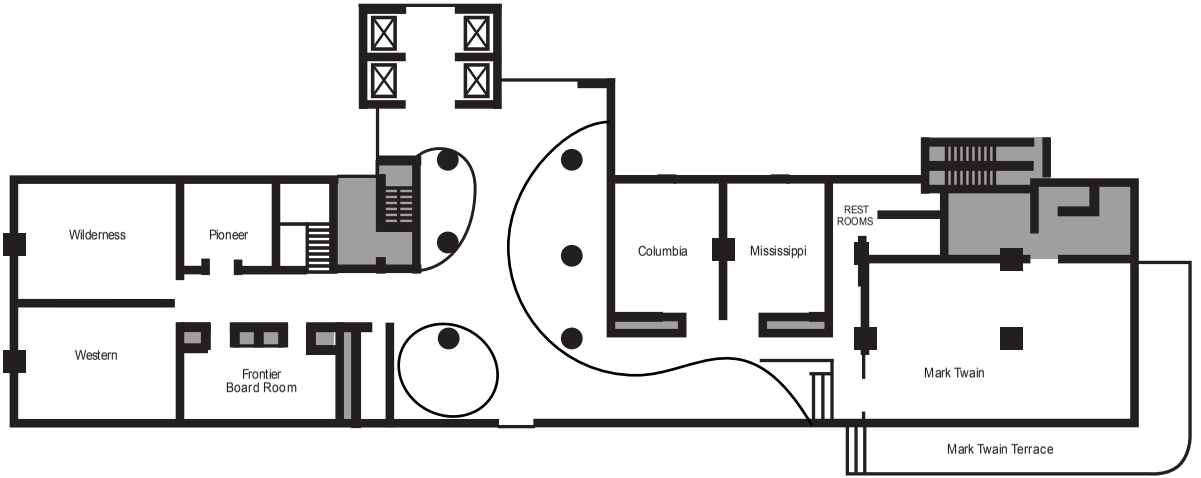
FANTASY TOWER


LOBBY LEVEL
Exhibits
Disneyland® Center Ballroom
Disneyland® Grand Ballroom
Disneyland® South Lounge
Disneyland® Center Lounge
Disneyland® North Lounge
Registration
Disneyland® Exhibit Hall Foyer
LOWER LEVEL
Monorail
Technical Sessions C
Technical Sessions D
REST ROOMS
Castle
Note: Stairs to Lower Level are towards the entrance of SteakHouse 55



ADVENTURE TOWER

FRONTIER TOWER



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PARADISE PIER HOTEL FLOOR PLAN

PACIFIC BALLROOM

Lunches Wednesday & Thursday

NOTES

Celebrating 15 Years

The #1 Modular Standard

Open platform
More than 1,500 products available
DC to 26.5 GHz modular instrumentation

More than 55 members
High performance, high value
Compact, modular form factor

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SEMINAR PROGRAM - (MONDAY) SEPTEMBER 10, 2012				
TRACK → TIMES ↓	**A: Magic Kingdom 1**	**B: Magic Kingdom 2**	**C: Monorail A/B**	**D: Castle A/B**
8:00am - 12:00pm	ATE for A to Z	Design for Built-In-Test	Familiarization and use of IEEE 1641 Standard for Signal and Test Description	Systems Software Testing using DO-178B
1:00pm - 5:00pm	TPS Management	Diagnostic Modeling and Application Development	VXI, PXI, IVI and LXI Standards Improve ATE Systems Design	ATS Considerations for New Testing Technologies

Now you can receive Continuing Education Unit (CEU) credits for attending AUTOTESTCON Seminars. The seminar program has been approved to award CEUs to eligible participants. Qualifying attendees will receive 0.4 CEUs for each successfully completed seminar and 0.8 CEUs for participating in a full day. A full day of successful attendance will provide 8 PDH units. IEEE Continuing Education Programs are peer-reviewed by content experts. This peer review guarantees both quality of the technical content of learning materials, as well as adherence to IEEE's strict criteria for educational excellence. All programs that pass this strict process are entitled to award IEEE Continuing Education Units (CEUs), recognized as the standard of excellence for continuing education programs in IEEE's fields of interest.

ATE from A to Z

Instructor: Mike Ellis, Northrop Grumman Corporation

This seminar provides a complete overview of the world of ATE from a practical engineering and management viewpoint. Beginning by examining the ATE interfaces and their limitations, it offers managers and project engineers a quick and purposeful insight into the probable sources and causes of potential technical and management problems. Working from the interfaces, the seminar explores analog and digital test methods, examines the impact of new instrument technologies and covers the basics of switching systems and pin electronics. ATE software and languages will also be discussed.

No ATE seminar would be complete without a discussion of Commercial Off The Shelf hardware and software. A to Z will include a realistic, and entertaining examination of (COTS) application to the military ATE environment. Initially viewed as a panacea, it is now recognized that despite its many advantages, COTS is not a "free lunch". Attendees are invited to visit "The Underside of the COTS Iceberg", where they will travel through an actual COTS rehost of a complex ATE system. Take this opportunity to explore both sides of the COTS revolution, understanding both its opportunities and its challenges, while examining and learning from "other people's mistakes".

The seminar will conclude with a discussion of recent changes in DoD acquisition strategies and their potential impact on the future of ATE. Interoperability, net-centric operations, nanotechnology and smart sensors are high on OSD's wish-list for new systems and will become an inherent part of the test and maintenance process. Explore DoD's vision of the next generation of systems, where Test & Evaluation, Condition Based Maintenance, Training and Battle Damage Assessment become by-products of a distributed hierarchical, real-time information network. The future may be closer than you think!

Monday, September 10, 2012

TPS Management

Instructors: Mike Ellis, Northrop Grumman Corporation

This three-part seminar is designed to cover the controversial and challenging issues of TPS Management from all perspectives; this session is a must for all industry and government TPS managers. As with the morning ATE session, it focuses on real world situations and explores areas of frequent problems.

Part I of the Seminar covers the tasks and challenges facing the government Acquisition Manager in preparing for, awarding and oversight of a TPS acquisition contract based on the NAVAIR Generic OTPS RFP (aka Red Team), it will cover the issues faced by the military in acquiring TPSs. It will also discuss the NAVAIR OTPS Acquisition process, highlighting new requirements including those arising from the Systems Engineering Technical Review (SETR) process.

Part 2 of the seminar deals with the challenges a facing the TPS Developer. It summarizes the lessons learned from twenty years of TPS Development Management on over 1000 TPSs for all armed service branches. This part of the seminar will focus on planning and controlling a military TPS development project. Planning objectives will be those elusive goals, happy customer and a profitable project.

In Part 3 of the TPS Seminar, attendees will be provided in-depth insight into actual issues faced during TPS Acceptance Testing. This seminar section will lead attendees through an actual Acceptance Test, highlighting and discussing real-world problems and their resolution from the viewpoint of buyer and seller.

This unique seminar offers attendees the opportunity to “live” each of the TPS life cycle phases through the eyes of experts.. Along the way attendees will have the opportunity to examine the product and its challenges from four distinctly different viewpoints. They will explore the “pot holes” in the path to success and have the opportunity understand the implementation and impact associated with effective, on time TPSs delivered within budget.

Monday, September 10, 2012

Design for Built-In (Self) Test

Instructor: Louis Y. Ungar, A.T.E. Solutions, Inc.

With increased circuit complexity in recent years almost every test approach has had to settle for lower fault coverage, more difficulty in diagnoses and all at greater costs. The notable exception is Built-In Test (or Built-in Self Test, BIST) or as it is often called, embedded test. BIST is a phenomenon that capitalizes on greater circuit complexity (intelligence), better fault isolation from a hierarchical allocation of tests, and does not rely on costly external automatic test equipment (ATE) and test program sets (TPS). The inclusion of boundary-scan circuitry in increasing numbers of today's chips has made circuit testability more readily available at board and system levels. Inclusion of BIST structures in less, but significant number of chips, has made it possible to invoke chip-level tests even during normal operation. These two developments, already in place for the past several years, and greatly accelerated in the past few years, have not only made component-level, board-level and system-level BIST possible to run after system deployment, but it has also made hierarchical BIST feasible. With hierarchical BIST, diagnostic resolutions can be greatly improved, and self-testing, self-diagnostic, even self-prognostic systems are achievable.

This seminar is aimed at professionals in all areas of support, including reliability, maintainability and logistics, as well as engineers and managers from design, test, and quality assurance.

The course will discuss how test issues can be effectively dealt with at the design level by creating testable circuits. Using boundary scan (JTAG/IEEE-1149.1) techniques, as well as mixed signal (IEEE-1149.4) and AC-coupled nets (IEEE-1149.6) testability standards, it is now possible to gain chip-level access through a system-level connector. Combining these techniques with internal scan and BIST structures, attendees will learn how to design tests into a circuit. Utilizing BIST structures that are increasingly embedded into chips, or programmed into field programmable gate arrays (FPGAs) through JTAG in-system programming (ISP), a larger percentage of the circuit can be made testable. The cost of using such techniques is on the decline, while the benefits that can be gained are ever greater. While software approaches to built-in test are mature and widely accepted at the system-level, project managers need to consider the added rewards of hardware BIST. It can improve diagnostics, reduce the expense of ATE and of test program set (TPS) development, and offer a platform for prognoses. In some circuits, such as memories, BIST gives way to built-in repair analysis, and even built-in self repair.

This course will provide attendees with the understanding they need to plan system designs for test and for built-in tests. The course will also discuss how these techniques affect supportability issues, including reliability, availability, operational readiness and false alarms.

Monday, September 10, 2012

Diagnostic Modeling and Application Development

Instructors: Dr. John W. Sheppard, Montana State University
Timothy J. Wilmering, Technical Fellow, The Boeing Company

This seminar provides an overview of traditional and more recent approaches to system-level diagnosis and prognosis. The emphasis is placed on different system modeling approaches and the algorithms that can be applied using resulting models. The seminar is organized in three parts:

Part 1: The Diagnostic Landscape. The seminar will begin by reviewing the basic issues and challenges in system diagnosis and prognosis. Fundamental terms and concepts of fault diagnosis will be presented with focus being given to historical approaches and the needs from the perspectives of the Department of Defense. Recent initiatives such as DoD ATS Framework, NxTest, ARGCS, and ATML will also be introduced.

Part 2: Diagnostic and Prognostic Algorithms. In the second part of the seminar, diagnosis will be defined within the context of classification problems. Central to this part of the seminar will be a continuing discussion of how one handles uncertainty in the diagnostic and prognostic process; therefore, the primary focus of this part will be recent developments in applying Bayesian techniques to fault diagnosis and prognosis. Prognosis will be related to the diagnosis problem in the context of "predictive" classification, and Bayesian extensions, such as hidden Markov models and dynamic Bayesian networks will be discussed.

Part 3: Health Management Information Integration. The third part of the seminar will focus on information integration issues in developing health management systems. The discussion will focus on using formal models, called ontologies, to define the semantics of the required information and then focus on processes for maturing diagnostic applications as maintenance information is collected. Emerging standards being developed within the IEEE related to diagnostic and maintenance information will be reviewed. The seminar will end by reviewing the state of the art and providing an overall assessment of how well diagnosis and prognosis can be performed.
Throughout the discussion, the seminar will draw upon experiences of the instructors and participants to highlight issues related to diagnostic development within defense and commercial environments.

Monday, September 10, 2012

Familiarization and Use of IEEE Std 1641-2004 (IEEE Standard for Signal and Test Description)

Instructors: Chris C. Gorringe & Matt Cornish, EADS Test Engineering Services, (UK) Ltd.

The IEEE standard for Signal and Test Definition (IEEE 1641) is part of the DoD ATS Technical Framework, under consideration for inclusion in the DoD DISR and its use is UK MoD procurement policy for all new TPS and ATS. IEEE 1641 is also a key element within IEEE 1671 ATML, providing signal definition for Test Description and Instrument Description. Beyond defense, 1641 is also gaining interest within the semi-conductor test industry.

This seminar provides an introduction to IEEE 1641, for those likely to be involved with future & re-host test systems for the DoD or MoD. The seminar is especially targeted at those who are responsible for specification, acquisition, development, or implementation of test requirements, such as Project and ILS Managers. It also includes valuable information for those who are responsible for the design and operation of automatic test systems, such as team leaders and technical leads.

The first part of the seminar covers essential concepts, with the message that 1641 is about reducing the whole-life costs of maintaining test requirements & systems. In particular, how the standard provides a mechanism for achieving portable and repeatable test requirements that are based upon signal requirements defined with mathematical rigor. It affords an understanding of the principles & functions of the standard and explains the importance of the role of the standard in the development of test systems & requirements.

The second part of the seminar discusses various practical issues, drawing upon the experience of the presenters. These include how items such as measurements, tolerances and more complex signals (e.g. sweep signals) may be defined and implemented. The seminar demonstrates procedures for defining true portable signal requirements and shows how ‘specific’ or special-to-type ATLAS nouns can be defined, thus showing that IEEE 1641 and can be used to enable TPS re-host and interoperability.

Monday, September 10, 2012

VXI, PXI, IVI & LXI Standards Improve ATE Systems Design

Instructor: Bob Helsel, managing the following consortia: VXIbus Consortium, PXI Systems Alliance, IVI Foundation, and the LXI Consortium

The VXIbus architecture was introduced 25 years ago, and is currently a well-established architecture used extensively in military, aerospace and commercial applications. However, many test engineers have no personal experience with it, or would like to brush up on its basics, as it will be around for another 10-20 years. We will cover the approval in 2004 of the VXI-1 Rev 3.0 spec, which again doubles the backplane speed to 160MB/s. And we will cover the approval of VXI 4.0 and its improvements in speed and flexibility. VXIplug&play standards are the software equivalent to the VXI hardware specifications, and are the definition to which all VXI drivers are now written. This software standard has formed the bedrock for many other software developments, such as Interchangeable Virtual Instrument (IVI) drivers.

PXI is a newer, more compact, faster hardware standard based on CompactPCI. It applies the same extensions to CPCI that VXI did to VME. This modular instrument standard rapidly gained acceptance and can be viewed as a companion standard to VXI, (or by some as a replacement). This 15-year-old hardware standard will be discussed in detail, as will its expected impact on the market. An update will be provided on Enhanced PXI specifications and their implementation, including Low Power Chassis. PXI Express and PXI MultiComputing will be explained with a review of PXI express products and their potential applications.

The Interchangeable Virtual Instrument (IVI) software standard, which has been extensively revised and expanded, will be covered with the latest information available. The IVI Foundation was founded in 1998 and incorporated in 2001. The purpose of the IVI Foundation is promoting specifications for programming test instruments that simplify interchangeability, provide better performance, and reduce the cost of program development and maintenance. IVI Instrument drivers have been available for about 11 years. New Specifications for Digital Test, Counter/Timer, and Signal Oriented test plus LXI triggering and sync will also be discussed.

The LXI Consortium is about 7 years old now, and was formed to standardize the way instruments can be connected and controlled via the Internet in a Local Area Network. Extensions for discovery, triggering and synchronization, browser interface, initialization, and programming are all part of the extensions being considered in this standardization effort. We will introduce the latest release of the LXI Specification as well as the introduction of new LXI compliant products that are now available.

An emerging test and measurement standard called AXIe, AdvancedTCA eXtensions for Instrumentation (http://www.axiestandard.org/), is expected to find wide acceptance within the Automatic Test Equipment community as it offers many key benefits. It is expected that a large number of COTS (commercial off-the-shelf) signal conditioning, acquisition and processing modules will become available from a range of different suppliers. AXIe uses AdvancedTCA® as its base standard, but then leverages test and measurement industry standards such as PXI (http://www.pxisa.org/), IVI (http://www.ivifoundation.org/), and LXI (http://www.lxistandard.org/), which were designed to facilitate cooperation and plug-and-play interoperability between COTS instrument suppliers. This enables AXIe systems to easily integrate with other test and measurement equipment.

AXIe's large board footprint, available power and efficient cooling to the module payload allows high density in a 19" rack space, enabling the development of high-performance instrumentation in a density unmatched by other instrumentation form factors. Channel synchronization between modules is flexible and provided by AXIe's dual triggering structures: a parallel trigger bus, and radially-distributed, time-matched point-to-point trigger lines. Inter-module communication is also provided with a local bus between adjacent modules allowing data transfer rates up to 10 Gbits/s in each direction, for example between front-end digitizer modules and DSP banks. AXIe is a next-generation, open standard that extends AdvancedTCA® for general purpose and semiconductor test.

This comprehensive update on the development of commercial standards for the ATE community should not be missed by anyone concerned with current and future ATE systems design and integration.

System Software Testing Using DO-178B and DO-254

Instructor: Mark Everly, TSS Inc.

As systems increase in complexity they increasingly rely on software to provide much of their functionality. Hardware testing methods are well established, but standardization of software testing methods has lagged its hardware counterpart. ARINC Standard DO-178B seeks to close this gap. The purpose of DO-178B is to "provide guidance for determining, in a consistent manner and with an acceptable level of confidence, that the software of airborne systems and equipment comply with airworthiness requirements." While focusing primarily on flight-critical software, DO-178B methods are rapidly becoming the de facto standard for all software testing. This seminar addresses automated testing methodologies that achieve complete and consistent results to fulfill the purpose of DO-178B.

When implemented properly, automated testing can effect up to a 25% efficiency increase during initial product development and over 50% for subsequent product enhancements. When implemented improperly, automated testing can lead to excessive budget and schedule overruns. This seminar will explore effective automated testing paradigms that fulfill the purpose of DO-178B and methods that ensure success from project onset. To achieve these goals, the areas of DO-178B that typically affect the largest amount of budget and schedule overrun will be addressed and plans to mitigate these areas will be presented.

ATS Considerations for New Testing Technologies

Instructors: Larry V. Kirkland WesTest Engineering, Corp.
R. Glenn Wright GMA Industries, Inc.

This seminar addresses the introduction of new testing technologies into today's automatic test systems (ATS) in an effort to fulfill current and future test requirements for printed circuit boards (PCBs). The increasing gate density of electronic components, combined with new levels of functionality equal to entire system levels of just ten years ago, call for new approaches to testing that stretch the imagination and cry out for new definitions of testing philosophies. An interface is no longer limited to direct connections to card-edge connectors and test points, but comprises the complete geometry of the PCB accessible across the entire spectrum from DC to the terahertz region and beyond without relying simply on physical connections. Sensors used for test can range in scale from centimeters to nanometers, both external and internal to the PCB, and are able to observe electrical, chemical, physical and other phenomena previously not capable of being measured. Sensor data processing and failure event interpretation has entered into a new realm of sophistication and complexity to detect and identify not only PCB components (electrical, electromechanical, mechanical and the PCB itself) that have failed, but are likely to fail in the future. More interestingly, the question of what comprises test requirements may now extend beyond specifically what the UUT is supposed to do and when it does it, given a particular set of stimulus, to how and why it does what it does.

Methods of UUT interrogation and observation of circuit board and component behavior via direct connection, wireless, and passive means are discussed. An overview of existing and advanced sensor technologies relating to functionality, test capabilities and limitations, current state of the art, and cost is provided covering: analog and digital, thermal and infrared, electromagnetic emissions, laser vibrometry, X-ray, terahertz, and gas and materials sensors. Hardware and software issues are also considered, addressing such topics as sensor integration and data fusion, visualizing test processes and analyzing test results, robotics as a means of enhanced UUT access, and integration of new technology into existing legacy ATS.

Opening Remarks
Bob Rassa, Raytheon
Tuesday, September 11, 2012
Time: 8:30 AM - 8:45 AM
Magic Kingdom Ballroom

Executive Plenary Panel
"Requirements and Technology Enablers for Supporting Next Generation Weapons"
Moderator: Mike Ellis – AUTOTESTCON Technical Program Chair, Northrop Grumman Corp.
Tuesday, September 11, 2012
Time: 8:45 AM – 10:15 AM
Magic Kingdom Ballroom

Looking forward over the next decade of support for the nation's critical weaponry, what challenges must we as industry address? How will support needs change in the next decade? What technologies are in-place now to address them? What technology gaps do we envision? Are there technologies on the horizon to fill these gaps? These questions, and more, demand answers. An expert panel of executives representing the user community, major aerospace primes and test technology companies will offer their vision and insight, and provide attendees with a broad spectrum of ideas, and perhaps more important, food for thought as begin another AUTOTESTCON and share the latest in technology, approaches and concepts.

Panelists:
Maj. Gen. Stephen T. (Steve) Sargeant, USAF (Ret.), CEO, Geotest-Marvin Test Systems, Inc. Former Commander, Air Force Operations Test and Evaluation Center (AFOTEC)

Chris Clendenin, Director-Support Equipment Systems & Services, Boeing Defense, Space and Security

David J. Salisbury, Director, CINS Business Development, Northrop Grumman

Anthony J. Minei, Deputy Director Test Systems, Services & Support, Lockheed Martin Global Training and Logistics

Eric Starkloff , Vice President, Product Marketing, National Instruments

TBD, Agilent

General Sessions
Keynote Address - Lt Gen Larry Farrell, USAF (Ret.), President, National Defense Industrial Association
Wednesday, September 12, 2012
Time - 8:30 AM
Magic Kingdom Ballroom

NOTES

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		SESSION	TRACK A Magic Kingdom 1	TRACK B Magic Kingdom 2	TRACK C Monorail A/B	TRACK D Castle A/B
TUESDAY Sept. 11, 2012	2:00pm – 3:30pm	1	Panel: The Future of ATE with Modular Instrumentation	Legacy ATE/TPS Sustainment	Support Systems Management	Design for Testability (DFT)
	3:45pm - 5:15 pm	2	Panel: Common Benchtop Automated Test Station (CBATS)	Signal Generation & Analysis	Test Program Set Design	RF Test Techniques
WEDNESDAY Sept. 12, 2012	10:00am - 11:30am	3	Panel: “My Software is Broken!” or “Why do we only Test 50% of our System Functionality”	Specialized ATE Topics	Test Program Set Design	Instruments for Communications Testing
	1:30pm - 3:00pm	4	Panel: Reduce Development and Maintenance Costs and Future-Proof Your Systems Using the IVI and LXI Standards	ATE Enhancement Concepts	ATE/TPS Management	Prognostics & Health Management
	3:30pm - 5:00pm	5		ATE Software & Test Data		
THURSDAY Sept. 13, 2012	8:00am - 9:30am	6	Panel: Testability – Who Cares?	Advanced ATE Designs	Standards & Methodologies in Instrumentation	Novel Test & Diagnostic Methods
	10:00am - 11:30am	7	Improving Instrument Performance		Advanced Test Applications	

Tuesday, September 11, 2012

Panel: The Future of ATE with Modular Instrumentation

SESSION A1
2:00pm - 3:30pm
Magic Kingdom 1

Moderator**:** Bob Helsel (Executive Director - VXIbus Consortium, PXI Systems Alliance, and AXIe Consortium)

Modular instrumentation has demonstrated steady growth in the automated test industry over the past years. After reaching an inflection point, the adoption by users and vendors is accelerating at an increasing pace. Has modular instrumentation become the defacto standard of automated test? Why, and in what applications? How do the different standards of VXI, PXI and AXIe play into this scenario? What does this mean for Mil/Aero applications in particular? Four industry experts will give brief presentations on these topics, followed by an interactive panel discussion.

Panelists:

Matthew Friedman, Senior Product Manager for Automated Test, National Instruments

Tom Sarfi, President, VXIbus Consortium; VP Marketing and Business Devt., VTI Instruments Corporation

Larry Desjardin, President, Modular Methods & former Chairman of the Board for the AXIe Consortium

Von Campbell, Chairman of the Board, AXIe Consortium; Platform Components R&D Manager, Software and Modular Solutions Division, Agilent Technologies

Legacy ATE/TPS Sustainment

SESSION B1
2:00pm - 3:30pm
Magic Kingdom 4
Session Chair: Kamill Hilberth (Superior Electronics Inc.)

Preserving Test Program Set (TPS) Performance After Legacy Automated Test Equipment (ATE) Upgrade
Randall L Marion (The Boeing Company, USA)

A Novel Approach to RF/Microwave Stimulus for Legacy ATE
John Stratton (Agilent Technologies, inc., USA)

CASS / VDATS Interoperability Exploration
Richard D'Alessio (The M&T Company, USA); Gilberto García (NAVAIR Jacksonville, FL, USA); Jared Brown (WR-ALC, USA)

Support Systems Management

SESSION C1
2:00pm - 3:30pm
Monorail A/B
Session Chair: Mark Everly (TSS, Inc.)

Test Strategies for minimizing the overall cost of test in moving from "cost based/government furnished equipment" to "firm fixed price" contracts
Duane Lowenstein (Agilent Technologies, USA)

Component Obsolescence Management Model for Long Life Cycle Embedded System
Xiaozhou Meng (Mid Sweden University, Sweden); Benny Thörnberg (Mid Sweden University, Sweden); Leif Olsson (Mid Sweden University, Sweden)

Test Means at Airbus Military: covering the aircraft test life-cycle with a common and standard approach
Pedro Lopez Fernandez (Airbus Military, Spain); Bartolome Lozano (Aerospace Engineer, Spain)

Life Cycle Planning from Product Development to Long Term Sustainment
Jake Harnack (*National Instruments, USA*)

Tuesday, September 11, 2012

Design for Testability (DFT)

SESSION D1
2:00pm - 3:30pm
Castle A/B
Session Chair: L. Alan Olesen (Eagle Management Consulting Group)

Boundary Scan as a System-Level Diagnostic Tool
Louis Y. Ungar (A.T.E. Solutions, Inc., USA)

Testability Modeling Usage in Design-For-Test and Reduction of Product Lifecycle Cost
James Valfre (Raytheon Company, USA)

Data Awareness from ATE
Anthony Lowe (Crane Aerospace,USA)

Key Problems of Virtual Testability Verification
Peng Yang, Jing Qiu, Guanjun Liu, Yong Zhang, Wang Chao
(National University of Defense Technology, P.R. China)

Panel: CBATS: Defining the Standard for ATE Excellence through System Design and Long-term Support

SESSION A2
3:45pm - 5:15pm
Magic Kingdom 4
Moderator: David Finnie (PMP, Technical Program Manager, CACI, INC.-FEDERAL)

As a viable solution for replacing many of the existing legacy benchtop testers in the DoD depots; WR-ALC ATSG sponsored the CBATS Model 101 and Model 201 and recommended that they become part of the DoD Family of Testers. In November 2011, the DoD ATS Executive Directorate approved the CBATS as part of the DoD Standard Family of Testers. This panel discusses the development and role of CBATS in the DoD ATS Standard Family of Testers.

Panelists:

Paul Pankratz - Senior Program Manager, CACI INC.-FEDERAL

Mike Clark - 309 EMXG/ENA Engineering Lead, Hill AFB, Utah, USA

Paul Armistead - USAF AFMC WR-ALC/GRNEB ATSG Engineer, Robins AFB, GA, USA

Garth Black - Regional Business Development Manager, National Instruments

Tuesday, September 11, 2012

Signal Generation & Analysis

SESSION B2
3:45pm - 5:15pm
Magic Kingdom 1
Session Chair: Dean Matsuura (Teradyne, Inc.)

Low-cost and Small Footprint Solution for Testing Low-voltage Differential Signal Video Displays
Daniel Tagliente (US Army, ARDEC, USA)

Increasing the Resolution of a Uniform Quantizer Using a Deterministic Dithering Signal
Nathan West (Oklahoma State University, USA); George Scheets (Oklahoma State University, USA)

Enhancing Vibration Analysis by Embedded Sensor Data Validation Technologies
Francisco J. Maldonado (American GNC Corporation, USA); Stephen Oonk (American GNC Corporation, USA); Tasso Politopoulos (American GNC Corporation, USA)

Interpreting System Switching Specifications And How They Relate to Waveform Quality
Kevin Paton (Teradyne Corporation, USA)

Test Program Set Design (1)

SESSION C2
3:45pm - 5:15pm
Monorail A/B
Session Chair: Craig Stoldt (BAE Systems)

Applying System Engineering Processes to Legacy TPS Modernization
Peter Austin (Northrop Grumman, USA)

Implementing a Commercial Design Approach to Reduce Development Time of Complex Microwave Test Adapters
Esteban Najle (BAE Systems, USA); Tom Sarfi (VTI Instruments, USA)

Windows Presentation Foundation (WPF) Technology Meets the Challenges of Operator Interface Design in Automatic Test Systems
Anna Kozminski (National Instruments, USA)

Tuesday, September 11, 2012

RF Test Techniques

SESSION D2
3:45pm - 5:15pm
Castle A/B
Session Chair: Mark Elo (Giga-tronics)

A Novel, Cost-Effective Method for Test and Recognition of Polyphase-Coded Radar Signal
Hongqing Gao (Nanjing Research Institute of Electronics Technology, P.R. China)

Electronic Countermeasures (ECM) Technique Measurements and Automation Methods
Jeff Murrill (Northrop Grumman, USA)

Using RF Recording Techniques to Resolve Wireless Channel and Interference Problems
Dave Murray (Agilent Technologies, Inc. USA)

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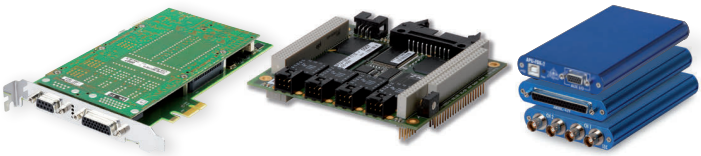

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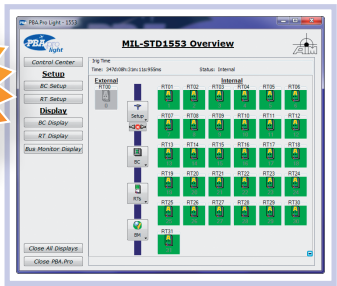

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Wednesday, September 12, 2012

Panel: "My Software is Broken!" or "Why Do We Only Test 50% of Our System Functionality"

SESSION A3
10:00am - 11:30am
Castle A/B
Moderator: Mike Ellis (Northrop Grumman Corporation)

As test technologists we concern ourselves with prognosis and diagnosis of system failure. Today's weapons systems typically rely on software for over half of their functionality and yet its performance under field failure conditions is often overlooked, and there are all too many instances of software "breaking" in the field, often with lethal consequences. This panel discusses how software can "break", and explores proven techniques for testing software to predict its field behavior under anomalous conditions.

Panelists:

Field Software Failures & Consequences
Michael T .Ellis, Navigation Systems Product Line Manager, Northrop Grumman Corporation, USA

SW Test Techniques & Planning
Larry Attkisson, SW Development Manager, Northrop Grumman Corporation, USA

Testing at the Boundary – Predicting Failure
Mark Everly, TSS Inc., USA

UAVs– The Next Generation of Aircraft and the Role of SW
Kelly J. Hayhurst, NASA, Langley, USA

Specialized ATE Topics

SESSION B3
10:00am - 11:30am
Magic Kingdom 4
Session Chair: Mike Seavey (Northrop Grumman Corporation)

Automated Continuity Tester for Large Wire-wrapped Avionics Chassis
Peter Bryant (Mercer University Engineering Research Center, USA); Tracy Tillman (Mercer University Engineering Research Center, USA)

Using a plug-in model to simplify and enhance ATE test software capabilities
Jervin Justin (National Instruments, USA)

System Design Architecture Multi-Munitions All Up Round Test Systems
Hugh Smith (Raytheon Missile Systems, USA)

Wednesday, September 12, 2012

Test Program Set Design (2)

SESSION C3
10:00am - 11:30am
Monorail A/B
Session Chair: Craig Stoldt (BAE Systems)

Testbricks: Software framework for IEEE Standard 1641 test programs
Fernando Muñoz Manrique (Indra, Spain)

TPS Design and Development for CMA Program using LM-STAR
Steven J O'Donnell (Lockheed Martin, USA)

Instruments for Communications Testing

SESSION D3
10:00am - 11:30am
Magic Kingdom 1
Session Chair: Jeff Murrill (Northrop Grumman Corporation)

Supporting a wide variety of communication protocols using Partial Dynamic Reconfiguration
Richard Dunkley (309th Software Maintenance Group, Hill Air Force Base, USA)

Advancing RF Test with Open FPGAs
Erik Johnson (National Instruments, USA); Ryan Verret (National Instruments, USA)

Accelerate Instrument Control and Automation
Deborah Homan (Agilent Technologies, USA)

Wednesday, September 12, 2012

Panel: Reduce Development and Maintenance Costs and Future-Proof Your Systems Using the IVI and LXI Standards

SESSION A4-5
1:30pm - 5:00pm
Magic Kingdom 1
Moderator: Adri Kruger (National Instruments)

Panelists:

Instrument Driver Patterns for Usability
Joseph Mueller, (Agilent Technologies, Systems and Modular Solutions Division, USA)

Simplifying Test System Development with IVI.NET
Kirk Fertitta (Pacific MindWorks, USA)

The RMS IVI Solution
Hugh Smith (Raytheon Missile Systems, USA)

Remote Wireless Control of LXI Instruments
Neil Forcier (Agilent Technologies, Inc., USA)

Preparing for an IPv6 World with LXI Instruments
Thomas Fay (Agilent Technologies, Inc., USA)

Designing Highly Efficient LXI-Based Test Systems
Tom Sarfi, (VTI Instruments, USA)

Leveraging IVI for Instrument Wrapper Development
Teresa P Lopes, (Teradyne, USA)

ATE Enhancement Concepts

SESSION B4
1:30pm - 3:00pm
Magic Kingdom 4
Session Chair: Lou Ann Roberts (VTMiltope)

Using Mobile Devices on ATE Test Systems
Ian Williams (EADS North America Test & Services, USA)

Integration of Mobile Devices and ATE Test Systems
Sok Lao (EADS North America Test and Services, USA)

New Source Measure Unit Architecture for Control Loop Configurability
Rolando Ortega (National Instruments, USA)

Wednesday, September 12, 2012

ATE/TPS Management (1)

SESSION C4
1:30pm - 3:00pm
Monorail A/B
Session Chair: Dan Christenson (Hill Air force Base)

What To Do When Your UUT and ATE Are Out of Reach
Pavel Gilenberg (Teradyne, USA)

A Commercial Approach to Military System Sustainment
Chuck Lew (Boeing, USA); Ronald Jones (Boeing, USA); Phillip Burrus (Boeing, USA)

Dealing with the Multitudes of Legacy TPSs
Tracy McQuillen (EADS North America Test & Services, USA)

Prognostics & Health Management (1)

SESSION D4
1:30pm - 3:00pm
Castle A/B
Session Chair: Patrick W. Kalgren (Impact Technologies)

A Standards-based Approach to Gray-Scale Health Assessment Using Fuzzy Fault Trees
Patrick Donnelly (Montana State University, USA); Liessman Sturlaugson (Montana State University, USA); John W. Sheppard (Montana State University, USA)

Multi-Criteria Cartography Investigation on Diagnostics and Prognostics Techniques Suited for System and Vehicle Health Maintenance
Ioana M. Geanta (Université de Lorraine, France); Didier Theilliol (Nancy Universite, France); Benoit Iung (Université de Lorraine, France); Michel Schieber (Cassidian Test & Services, France); Yann Fusero (Cassidian Test & Services, France)

Novel Diagnostic and Prognostic Techniques Using Electromagnetic Interference (EMI) Measurements to Detect Degradation in Electronic Equipment
William Duff (SEMTAS, USA); Louis Y. Ungar (A.T.E. Solutions, Inc., USA)

Prognostics of Power Electronics, Methods and Validation Testbeds
Jose R. Celaya (NASA Ames Research Center, USA); Kai F Goebel (NASA Ames Research Center, USA)

Wednesday, September 12, 2012

ATE Software & Test Data

SESSION B5
3:30pm - 5:00pm
Magic Kingdom 4
Session Chair: Larry V. Kirkland (WesTest Engineering)

Application of ATML Test Results and IntraStage to Facilitate Intelligent Data Analysis
Harsh Wanigaratne (IntraStage, Inc., USA); Alisdair Smith (Selex Galileo Ltd., United Kingdom)

Mobile Application Security for ATE Applications
Susan Moran (EADS North America Test and Services, USA)

An Open Source Software Framework for the Implementation of an Open Systems Architecture, Run-Time System
Matt Cornish (EADS Test Engineering Services (UK), United Kingdom); Malcolm Brown (DES JSC SCM-EngTLS-TM-ATS, United Kingdom)

ATE/TPS Management (2)

SESSION C5
3:30pm - 5:00pm
Monorail A/B
Session Chair: Dan Christenson (Hill Air Force Base)

TPS Rehost Efficiency Improvement Considerations
Kamill R. Hilberth (Superior Electronics, Inc., USA)

Reducing the Cost of ATE Software Development
Garth Scheck (CRANE Aerospace, USA)

Legacy Test Program Sets Migration using Fault Modeling and Dynamic Reasoning
David R. Carey (US Army, USA)

Wednesday, September 12, 2012

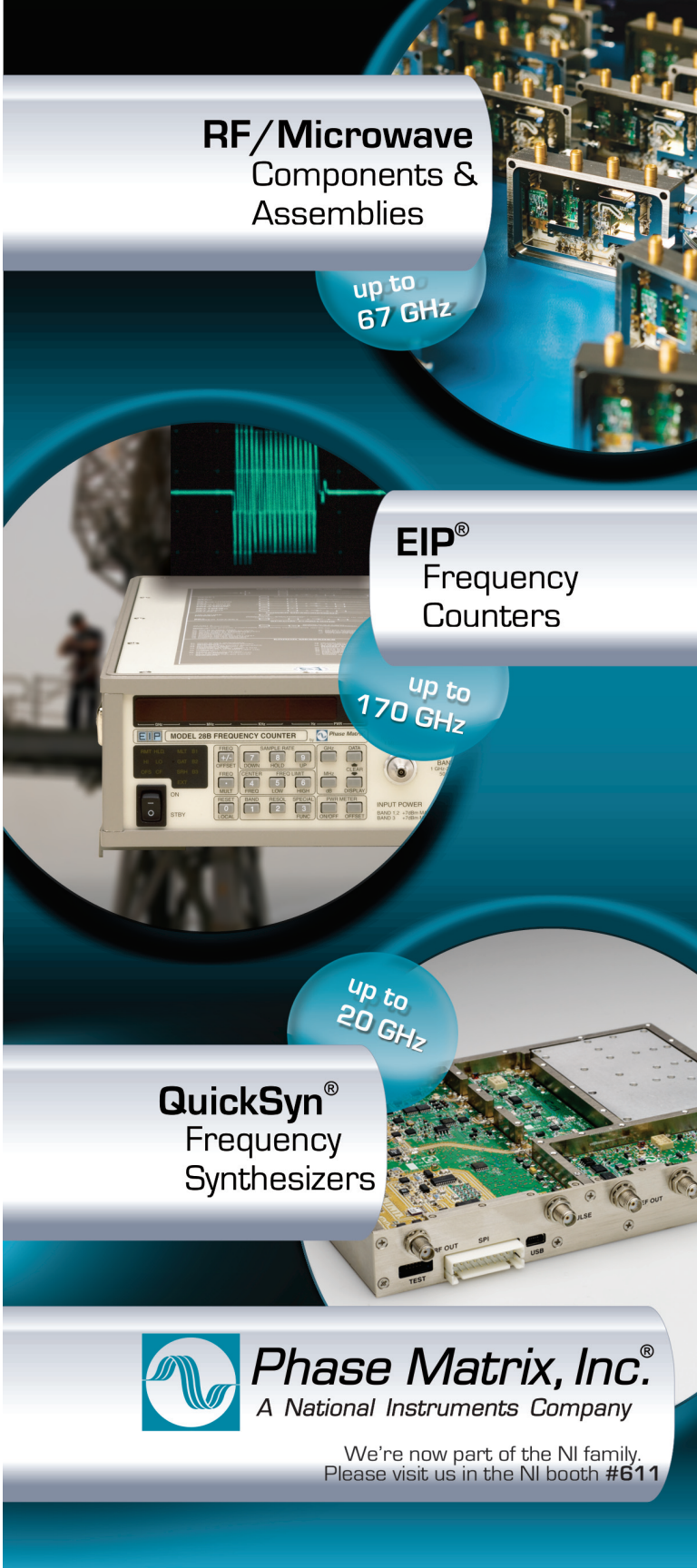
Prognostics & Health Management (2)

SESSION D5
3:30pm - 5:00pm
Castle A/B
Session Chair: Patrick W. Kalgren (Impact Technologies)

Distributed Intelligent Health Monitoring with the coremicro Reconfigurable Embedded Smart Sensor Node
Stephen Oonk (American GNC Corporation, USA); Francisco J. Maldonado (American GNC Corporation, USA); Tasso Politopoulos (American GNC Corporation, USA)

A Low-cost Arc Fault Detector for Aerospace Applications
Marco Rossi (Politecnico di Milano, Italy); Roberto Ottoboni (Politecnico di Milano, Italy); Riccardo Grassetti (Logic SpA, Italy)

A Method of Combining Intermittent Arc Fault Technologies
Charna Parkey (Astronics, DME Corporation, USA); Craig Hughes (Astronics, DME Corporation, USA); Mike Caulfield (Astronics, DME Corporation, USA); Mike Masquelier (LiveWire Innovation, USA)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Thursday, September 13, 2012

Panel: Testability - Who Cares?

SESSION A6
8:00am - 9:30am
Monorail A/B
Moderator: Louis Ungar (ATE Solutions)

Much has been written and discussed about why and how to implement design for testability (DFT) yet getting it implemented has not always been successful. Interestingly, at the IC level, DFT is widely supported, at the board level it also finds some support, but at the system level testability is hard to come by. Perhaps the difference is in the commitment and position of the people who care enough to make it happen. This panel is a serious attempt at determining who in the process of developing electronics must be involved in bringing about testable, diagnosable and supportable electronics. Because testability issues depend on the inherent capabilities that must be implemented during the design stage when the focus and considerations of circuit support and repair do not seem important, many designs lack the necessary features to detect, isolate and easily repair failed circuits. This panel will bring together experts in various operations that reflect on the triumphs and tribulations of dealing with this inherent attribute of supportability. Audience participation will become an integral part of this session and we will all hopefully take away a better understanding of the people we need on our side to make Testability happen.

Panelists:

Military Maintenance and Support Perspective
David R. Carey, US Army, Tobyhanna

IC level DFT and Tools Perspective
Ron Press, Mentor Graphics

ATE Perspective
Joe Lagrotta, Agilent

Avionics Vendor Perspective
Craig Stoldt, BAE Systems

Commercial Electronics (COTS) Perspective
Bill Eklow, Cisco

Thursday, September 13, 2012

Advanced ATE Designs

SESSION B6
8:00am - 9:30am
Magic Kingdom 4
Session Chair: Teresa Lopes Teradyne, Inc.

Architecting High Throughput PXI Systems
David Nosbusch (National Instruments, USA)

The Design and Verification of A LXI Based Distributed Universal ATS Architecture
Zhaoqing Liu (Harbin Inst. of Tech., P.R. China)

Challenges Measuring Wideband Radars in an ATE environment
John Stratton (Agilent Technologies, Inc., USA)

Tester Family Consolidation
James L Orlet (The Boeing Company, USA); Gerald Murdock (The Boeing Company, USA)

Standards & Methodologies in Instrumentation

SESSION C6
8:00am - 9:30am
Magic Kingdom 1
Session Chair: John Chapman (Boeing)

A New Class of Test Instrument: The FPGA Based Module
Patrick B Kelly (US Air Force, USA)

The Practical Realities of High-Speed Digital Test in a Production Environment
Tushar Gohel (Teradyne, USA)

Considerations When Migrating from Traditional Instrumentation to PXI
Desmond Lamont (National Instruments, USA)

Thursday, September 13, 2012

Novel Test & Diagnostic Methods (1)

SESSION D6
8:00am - 9:30am
Castle A/B
Session Chair: Dr. John W. Sheppard (Montana State University)

An Integrated Toolset for Ontology-Guided Knowledge Discovery and Diagnostic Maturation using Maintenance Data
Shane Strasser (Montana State University, USA); Eben Howard (Montana State University, USA); John W. Sheppard (Montana State University, USA)

Soft Error Detection via Double Execution with Hardware Assistance
Luis Bustamante (University of California, Davis, USA); Hussain Al-Asaad (University of California, Davis, USA)

Stress Testing Software to determine Fault Tolerance for Hardware Failures and Anomalies
John Wu (Northrop Grumman - Navigation System Division, USA)

Improving Instrument Performance

SESSION A7
10:00am - 11:30am
Magic Kingdom 1
Session Chair: Kevin Leduc (EADS North America Test & Services)

Digital up-conversion versus I/Q modulation using a wideband arbitrary waveform generator
Beate Hoehne (Agilent Technologies, Germany)

Portable Field Measurement of Mobile Radio Systems, Effective Radiated Power, and Receiver Sensitivity
Kenneth Heppt (Astronics, DME Corporation, USA); Charna Parkey (Astronics, DME Corporation, USA); Craig Hughes (Astronics, DME Corporation, USA)

Incorporating Advanced Instrumentation Capabilities into a PXI Digital Mulitmeter Instrument
Jeff Robins (Geotest - Marvin Test Systems Inc., USA); Michael J Dewey (Geotest - Marvin Test Systems, USA)

Where's The Beer? A Paradigm Shift in Flight-Line Armament Testing
Loofie Gutterman (Geotest - Marvin Test Systems, USA)

Thursday, September 13, 2012

Advanced Test Applications

SESSION C7
10:00am - 11:30am
Monorail A/B
Session Chair: Timothy J. Wilmering (Boeing Research & Technology)

Experimental Applications of Automatic Test Markup Language (ATML)
Chatwin Lansdowne (NASA, USA); Chris C. Gorringe (Cassidian Test Engineering Services Ltd., United Kingdom); Patrick McCartney (Metecs, USA)

Circuit Card Test and Diagnosis using Electromagnetic Emission Analysis
R Glenn Wright (GMA Industries, Inc., USA)

Arithmetic Compaction Circuits for Mixed-Signal Systems Testing
Vadim Geurkov (Ryerson University, Canada); Lev Kirischian (Ryerson University, Canada)

Automatic Modulation Recognition Techniques Based on Cyclostationary and Multifractal Features
Sylwester Sobolewski (USAF AFMC WRALC / GRNEB, USA); William Adams, Jr. (U. S. Air Force, USA); Ravi Sankar (University of South Florida, USA)

Novel Test & Diagnostic Methods (2)

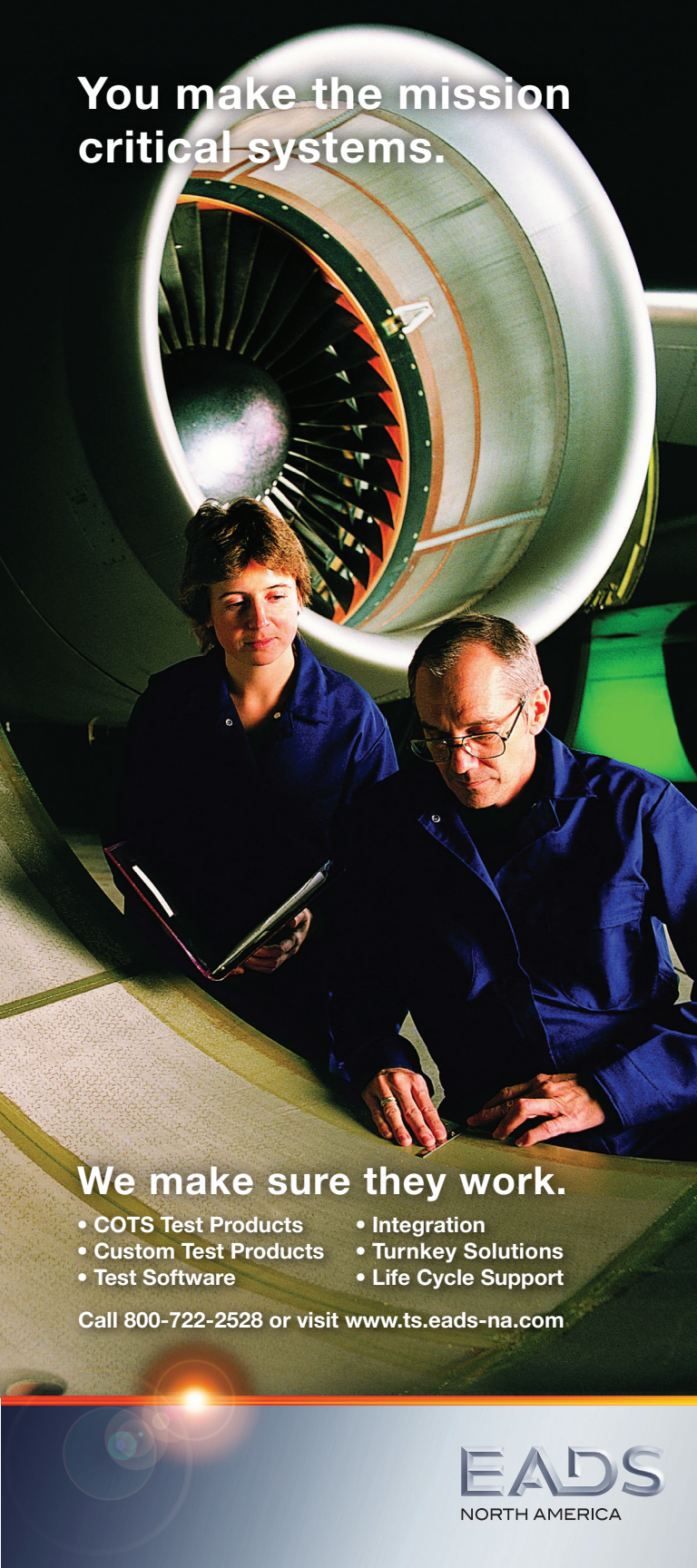
SESSION D7
10:00am - 11:30am
Magic Kingdom 4
Session Chair: Walt Downing (Southwest Research Institute)

A Non-Arduous Way to do Signal Routing
Larry V. Kirkland (WesTest Engineering, USA)

Leveraging the Cloud to Create a Network Centric Support Environment for Support Equipment
Anthony Alwardt (The Boeing Company, USA)

Creating Automated Test and Repair Solutions with Advanced Diagnostics and ATE Software
Michael J Dewey (Geotest - Marvin Test Systems, USA); James Lauffer (DSI International, USA)

Accelerated Aging Experiments for Capacitor Health Monitoring and Prognostics
Chetan Kulkarni (Vanderbilt University, USA); Jose R Celaya (NASA Ames Research Center, USA)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NORTH AMERICA

Chocolate, Chocolate, Chocolate

Monday, September 10, 2012
1:30 – 3:00 pm
Meet at Mark Twain Room, Frontier Tower, 1:15 PM

Chocolate, Chocolate, Chocolate!: This unusual and delightful activity concerning America's favorite delectable will provide the participants with a real live education on the mystery, history and use of chocolate. The history of chocolate from its earliest usages to current everyday applications will be presented, and the chemical construction and processing of chocolate will be explored. The session will cover the health risks vs. rewards, and provide an understanding the facts and myths surrounding chocolate consumption. Much like wine production, the individual characteristics of chocolate depend on different production regions, as well as the roasting and refining of the product. And of course, as the main feature, chocolate recipes and preparation of sumptuous and unique chocolate desserts by Disney Master Chocolatiers will be shared. ENJOY!

Per Person Cost: $35 per guest

L.A. City Tour and Hollywood+ Shopping at Beverly Center & Hard Rock Cafe

Beverly Hills, Rodeo Drive, Farmers' Market, Hollywood Chinese Theatre, Walk of Fame, Sunset Strip plus Shopping

Tuesday, September 11, 2012
9:00 am – 4:00 pm
Meet at the AUTOTESTCON Information Booth at 8:45 am

This tour will take you throughout America's most exciting city. Mann's Chinese Theatre is famous for its permanent collection of handprints, footprints and signatures of movie stars such as Elizabeth Taylor, Marilyn Monroe and many others. Take a stroll on the Hollywood Walk of Fame and then head straight to Beverly Hills and Rodeo Drive. See where the stars shop and browse in exclusive shops like Fred Hayman, Giorgio Armani, Gucci.

Next to Beverly Hills is Century City, the business center of the entertainment industry and home of 20th Century Fox Movie Studios. On to Farmers Market where the food is the freshest, the produce only the best and gift shops are unique!

Per Person Cost: $35 per guest

Mission San Juan Capistrano + El Adobe Restaurant

Wednesday, September 12, 2012
8:45 am – 1:45 pm
Meet at the AUTOTESTCON Information Booth at 8:30 am

Two Historic Landmarks

Our day will begin with a docent guided tour of the historic Mission San Juan Capistrano. The docents, dressed in their historic attire, will guide us through the 10 acres of museum rooms, exhibits, gardens, fountains and more. Providing us with the details of California's early history and the birthplace of Orange County. After the guided tour we will have time on our own to enjoy the gardens, and take pictures.

Mission San Juan Capistrano was originally founded in 1775 by Father Lasuen, on October 19th, but was quickly abandoned due to unrest among the indigenous population in San Diego. Mission San Juan Capistrano has the distinction of being home to the oldest building in California still in use, a chapel built in 1782; known alternately as "Serra's Chapel" and "Father Serra's Church,) it is the only extant structure where it has been documented that the padre Junipero Serra celebrated mass.

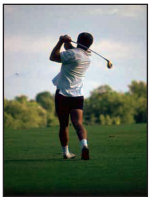
After our visit to the Mission, we will stroll two short blocks through Old Town San Juan Capistrano to enjoy lunch at the historic El Adobe restaurant.

The El Adobe building was originally two separate structures. The northern section was originally the home of Miguel Yorba Adobe, built in 1797. The southern half housed the Juzgado (court and jails) and was established in 1812. Today, El Adobe de Capistrano artfully reflects the history of both building and location. Antiques, furnishing, and décor were all chosen to compliment the genuine Mexican-Californian ambiance

Per Person Cost: $45 per guest

Golf Tournament

Monday, September 10, 2012
California Country Club
Check-in: 7:00 am, Tee-off: 8:30 am
Awards and Door Prizes



We are going to provide a quiet atmosphere for you and your friends to stroll (or drive the cart) through tree lined holes where the course favors the roll up shots onto the greens (that's good for us hackers whose shots are not always pure). The course is a private course designed by William "Billy" Bell, who is also known for designing Torrey Pines. The course is lush and designed to frustrate the golfer who does not hit the straight shot…(which is probably a bunch of us).

Besides starting the morning with a typical Sunny California style breakfast ---breakfast burrito, coffee and some breads, we will have a hearty sit down lunch afterwards so you can enjoy a healthy lunch and a chance to hear your names called out for the prizes you won for your great…and near great…shots. See you all there.

$89 per player

Golf course # (626) 333-4571

California Country Club

1509 S Workman Mill Rd

Whittier, CA

Club rental is available by contacting the course directly.

The Disneyland Hotel information desk will have directions to the course if you want them...allows you to go from two different directions and they will give you morning information about the traffic. Directions will also be available at the AUTOTESTCON information booth.

Special Feature: Disney Character Appearances

Photo OP!!! As a special feature for AUTOTESTCON 2012 full conference attendees, major Disney characters will appear in the Upper Exhibit Hall for photographs with attendees! The schedule and description for the Disney character appearances is as follows:

Tuesday September 11, 1:15 PM to 1:45 PM
Donald Duck and Goofy

Tuesday September 11, 6:30 PM to 7:00 PM
Mickey Mouse and Minnie Mouse

Wednesday September 12, 3:00 PM to 3:30 PM
Peter Pan and Cap'n Hook

The Conference photographer will be taking pictures with these delightful characters posing with our attendees. All pictures will be posted online for download.

What is included with Registration?

A fully paid Conference Registration Package includes admission to the Keynote Session, Technical Program Sessions, Exhibits Area (during the conference hours), Exhibitors Reception (Tuesday evening), Welcome Wine and Cheese Reception, "Route 66 Road Trip" Cars Land Extravaganza, (Wednesday evening), luncheons on Tuesday, Wednesday, and Thursday, and Disney character photo op in upper Disneyland exhibit hall. Registrants also receive a copy of the Proceedings on CD-ROM, a name badge, and tickets for the events listed above.

On site registration starts at 2 PM on Sunday, September 9, 2012

What is Not included with Registration?

The Conference Registration package does not include: admission to the seminar program on Monday (or copies of the Seminar Course Books); the Golf Tournament on Monday; the Spouse/ Companion tours on Monday thru Wednesday; or tickets for companions to any of the luncheons or social events. Tickets may be purchased separately through advance registration or on-site at the registration desk.

Conference Proceedings

Will be provided on CD-ROM. Extra copies may be purchased on-site for an additional fee.

Complimentary Admission to Exhibits

All qualified professionals will be admitted to the exhibits free of charge on Wednesday, September 13 and Thursday, September 14. Qualified professionals includes military personnel, governmnet employees, and everyone employed in the electronics, defense, logistics, and related industries.

IEEE Life Member/IEEE Student Member Registration

Free admission to the Technical Presentations is offered to IEEE Life Members and IEEE Student Members. Take advantage of this offer and purchase the Proceedings and tickets to luncheons and social events separately.

Authors/Session Chairpersons

Please note that Conference Registration is required for all Technical Program participants including Authors, Presenters, and Session Chairpersons.

REGISTRATION INFORMATION

Seminar Registration

Seminar Registration includes admission to all seminars, paper copy of Seminar Papers, and Monday lunch. Seminar Registration does not include registration for the Conference. Extra paper copies of the Seminar Papers may be purchased on site for an additional fee.

If any questions, please email freyes210@aol.com or call (714) 394-8474

AWARD LUNCH

Wednesday, September 12, 2012
Noon to 1:30 pm
Pacific Ballroom, 2nd floor, Paradise Pier Hotel

PARKING

A reduced parking fee of $8.00 per entry will be charged when your AUTOTESTCON Badge is presented at the Disneyland Hotel parking facility.

DRESS CODE

Dress code for attendance at all daytime AUTOTESTCON functions, including Seminars, Technical Program, and Lunches, is Business (coat/tie) or Business Casual, Military Uniform of the Day.

Dress code for the Exhibitor Reception Tuesday evening is also Business (coat/tie) or Business Casual, Military Uniform of the Day.

Dress Code for Wednesday Evening, "Route 66 Road Trip" Cars Land Extravaganza is Business Casual or Resort Casual (no beach wear, flip flops, or bare feet). Children 3 years of age and up are welcome with parental supervision. Note: Minimum ride height for children is 42".

Shops

Apricot Lane Boutique
Blink
Build-a-Bear
D Street
Disney Studio 365
Disney Pin Trading Company
Disney Vault 28
Fossil
Lego Imagination Center
Little Miss Matched
Quicksilver/Roxy
RideMakerz
Sanuk
Sephora
Something Silver
Sunglass Icon
WonderGround Gallery
World of Disney

Restaurants

Brennan's Jazz Kitchen
Catals
ESPN Zone
Häagen Das
House of Blues
Jamba Juice
La Brea Bakery
Marceline Confectionary
Naples
Napolini
Peet's Coffee and Tea
Rain Forrest Café
Tortilla Joes
Wetzels Pretzels

Theaters

AMC 12

Carts

Amazing Pictures
Bags to Riches
Best Buy Gadget Store
Churro Co.
Cupcake Store
Funnel Cakes and Crepes
Gelato Bars
Hat Cart
Jewelry Cart
Kaman's Art Shoppes
Massage Cart
Planet Popcorn Inc.
Rainbow Factory
Red Chapter Clothing
Sunglass Designs
Sunscope
Surf-n-Rags
Wetzels Pretzels

Merchants in Downtown Disney and GardenWalk offer a discount to AUTOTESTCON attendees. Additional information on GardenWalk is available at http://www.anaheimgardenwalk.com/.

DOWNTOWN DISNEY

The following establishments offer additional discounts when you show your AUTOTESTCON badge:

Quiksilver
10% off all full priced items in store; excluding hard goods

Wetzel's Pretzels
20% off any item

La Brea Bakery (Restaurant & Express)
10% off food and beverages, excluding alcoholic beverages. Offer not valid with other discounts or programs. Valid during all meal periods

Catal
10% off food & non-alcoholic beverages in the full service restaurant

RIDEMAKERZ
$5 off $25 purchase

Tortilla Jo's
10% off food & non-alcoholic beverages in the full service restaurant

Naples
10% off food & non-alcoholic beverages in the full service restaurant

House of Blues
20% off lunch and dinner in the restaurant (excludes tax, alcohol, & gratuity, and Brunch)
20% off in the retail store (excludes certain items & artwork)

ESPN Zone
Get a Burger and $10 Game Card for $15

Ralph Brennan's Jazz Kitchen
10% off food bill in restaurant and Express. Valid during all meal periods

Something Silver
Free polishing cloth w/purchase of $50 or more

Little Miss Matched
10% off total purchase

Café Renee
Free funnel cake with the purchase of any crepe between 12pm - 6pm. Excludes toppings. Not valid with any other purchase.

NOTES

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EXHIBITORS

Gold Promotional Partners ..... Booth #
Geotest-Marvin Test Systems, Inc. 601
Teradyne 801

Silver Promotional Partners ..... Booth #
Aeroflex 209
Astronics DME Corporation 807
Boeing 907
CSI 203
EADS North America Test & Services 501
Pacific Power Source, Inc. 1205

Company ..... Booth #
A.T.E. Solutions 1201
AAI Corporation 1033
Acculogic 806
ACME Portable Machines, Inc. 810
Adlink Technology, Inc. 936
Advanced Test Equipment Rentals 1405
Advanced Testing Technologies, Inc 812
Aeroflex 209
Agilent Technologies 513
AIM-USA 100
AMETEK Programmable Power 1307
Asset InterTech 1228
Associated Power Technologies, Inc. 1238
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Behlman Electronics 836
Boeing 907
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Bustec 1225
CACI Federal 1137
Cal Lab Solutions 1411
CCS - Inc 112
Chroma Systems Solutions 1123
Circuit Check, Inc. 311
Cirris 1400
Copper Mountain Technologies 1304
CSI 203
dBm 1221
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Disney ..... Magic Kingdom Ballroom
Dow Key Microwave 404
DRS Technologies 1001
DSI International 1136
EADS North America Test & Services 501
Eastern OptX / Noise XT 1021
EE - Evaluation Engineering 834

EXHIBITORS

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Fluke Corporation 1016
G Systems 109
GE Intelligent Platforms 711
Geotest-Marvin Test Systems, Inc. 601
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In-Phase Technologies 206
Intepro Systems 1023
Internet Café 1419
Intra Stage 713
ION Corporation 1223
JTAG Technologies 1024
Kepco Inc 1219
L-3 Telemetry West 837
Lockheed Martin 1127
MAC Panel 1107
MagiQ Technologies 1301
Marway Power Solutions 709
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National Instruments 611
Navatek Engineering 715
NH Research, Inc. 832
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VTI Instruments Corporation 1118
WesTest Engineering Corporation 824
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Winsoft 1235
X Technologies 1215
Yokogawa Corp of America 1029
Zarges 1231
ZTEC Instruments 1020

A.T.E. (Advanced Test Engineering) Solutions, Inc
Booth #1201
A.T.E. (Advanced Test Engineering) Solutions, Inc.Single source provider of independent test information. Since 1984, we are providing consulting services to industry and Governments in all aspects of test, ATE, Design for Testability and Built-In Self Test. We offer the largest selection of test educational courses. The Test Flow SimulatorTM and The Testability DirectorTM are two of our low priced software inventions assisting in developing economic test strategies and testable designs. We share FREE test related information at http://www.besttest.com/ and publish The BestTest Newsletter.

AAI Corporation
Booth #1033
AAI features its Joint Service Electronic Combat Systems Tester, or JSECST; radio frequency/electronic warfare (EW) end-to-end test/cable sweep; laboratory EW threat generators; radar signal simulators; Universal Test Set, or UTS, improvised explosive device jammer tester; EW system test sets; Transmit/Receive Module tester; and factory/depot test systems.

Acculogic
Booth #806
Designs, manufactures, and markets a broad range of systems and instruments for testing electronic devices, circuit boards and systems. We offer short turn-around time, high fault-coverage, and fast cycle-time solutions. Our services and products are used to validate designs, ensure integrity of prototypes, improve production processes and yields, and deliver defect-free final products.

Acme Portable Machines, Inc
Booth #810
ACME Portable Machines, Inc., a leading world supplier of rugged portable computing platforms, will be located at Booth #810 for Autotestcon 2012. Our computing platforms are used for various test & measurement industries, and can be customized for many diverse application. Please stop by for more information.

Adlink Technology Inc
Booth #936
Provides a wide range of embedded computing products and services to the test and measurement, automation and process control, gaming, communications, medical, network security, and transportation industries. ADLINK products include PCI Express®-based data acquisition and I/O; vision and motion control; and AdvancedTCA, CompactPCI, and Computer-on-Modules (COMs) for industrial computing. ADLINK strives to minimize the total cost of ownership (TCO) of its customers by providing customization and system integration services, maintaining low manufacturing costs, and extending the lifecycle of its products. Stop by our booth at 936 to see our newest products for your application.

Advanced Test Equipment Rentals
Booth #1405
Advanced Test Equipment Rentals (ATEC) supplies complete testing solutions for EMC, Defense, Telecom, Power Quality, Environmental and similar testing applications. Celebrating 30+ years in business, ATEC maintains an accredited on-site lab and takes pride in serving our customers with invaluable expertise and technical support. Stop by booth #1405 to enter our raffle for a chance to win a $50 Amazon gift card!

Advanced Testing Technologies, Inc.
Booth #812
A multimillion dollar corporation that is recognized as an acknowledged leader and innovator in the design, development and production of Automatic Test Equipment. ATTI developed and introduced its Benchtop Reconfigurable Automatic Tester (BRAT) in 1989. These testers were initially introduced in Europe with KLM Airlines our first major client. Since then BRAT testers have been sold to numerous customers including the U.S. Air Force and NATO where they support various high performance aircraft.

Aeroflex
Booth #209
Aeroflex is a global leader in Test and Measurement Instrumentation. At the show this year are Aeroflex's new 7700 Synthetic Module Test System, PXI RF Modular Instruments, S-Series Signal Generator/Analyzer, 7200 Configurable Automated Test Set, SCOUT Portable Broadband Signal Analyzer, 2200 Synthesizer, IMA/Multi-function Modules and the GPSG-1000 Portable Positional Simulator. Visit us at booth #209.

Agilent Technologies
Booth 513
Agilent Technologies continues to expand its portfolio of RF and Microwave modular products and field test tools. Featured this year will be PXI RF multichannel receiver and streaming solutions, AXIe wideband arb and digitizer, rugged RF and Microwave handheld analyzers , multiport microwave switches, USB peak power sensors, and system power modules.

AIM-USA
Booth #100
AIM is a leading designer and manufacturer of high performance test & simulation modules, embedded interfaces, databus analyzers, network analyzers & customized systems for MIL-STD-1553A/B, Fibre Channel, ARINC429, AFDX/ ARINC664/ GigE, ARINC825 (CAN bus), STANAG3910/EFEX and MIL-STD-1760 (HS1760). We are featuring our newest generation of avionics high speed databus products, designed using our exclusive common core architecture for PCIe, cPCI, PXI platforms, as well as the latest enhancements to our class leading PBA.pro analysis software suite.

AMETEK Programmable Power
Booth #1307
A division of AMETEK, Inc, is the new global leader in the design and manufacture of precision, programmable power supplies for R&D, test and measurement, process control, power bus simulation and power conditioning applications across diverse industrial segments. From benchtop to battleship, single power supplies to ATE power subsystems, AMETEK Programmable Power is the source for all your power needs worldwide.

Asset InterTech
Booth #1228
Come visit ASSET InterTech in booth 1228 where we will be highlighting our ScanWorks® boundary-scan test support for Teradyne's Di-Series hardware for board test and programming operations. Also highlighted will be our ScanWorks FPGA-Controlled Test software that is an automated and extremely flexible methodology for embedding a board tester with the functionality you have chosen.

Associated Power Technologies, Inc
Booth #820
Associated Power Technologies, Inc. (APT) is a leading manufacturer of AC power sources and frequency converters. APT offers single phase and 3 phase solutions in power configurations from 500 VA to 18 kVA. All of our products are available for shipment within 24 hours, and are provided with a 2-Year warranty. Visit the APT booth to learn more about our current products and services.

Astronics DME Corporation
Booth #807
In booth 807, Astronics DME will be showcasing our advanced software-defined Communications Test Systems ATS3000 product line that includes new features such as Over-the-Air testing and depot-level troubleshooting. Our ultra portable Wire Integrity Tester for detection of hard and soft wiring harness faults will be on display along with our PXI-based factory test system.

Avionics Interface Technologies
Booth #937
Avionics Interface Technologies is a leading manufacturer of avionics test and simulation and embedded flight products for MIL-STD-1553A/B, ARINC 429, ARINC615A, ARINC 664, MIL-STD-1760E, Fibre Channel, Deterministic TTEthernet and Time-Triggered Protocol applications. AIT builds its products on an innovative, field-proven, FPGA-based hardware design providing consistency and compatibility through all modules and across all platforms.

Behlman Electronics
Booth #836
Behlman is a USA manufacturer of COTS and modified standard AC power sources, frequency converters, inverters, DC-DC, AC-DC, DC-AC and UPS's for commercial, industrial and military mission-critical applications. Markets include production test, avionics, oil & gas, railroads and utilities. We are introducing high power 6U, VPX compatible power supplies. You can visit us at Booth 836.

Boeing
Booth #907
Boeing is the world's leading aerospace company and largest and most versatile manufacturer of commercial and military aircraft. Boeing designs, manufactures, and supports aircraft, unmanned vehicles, electronic and defense systems, missiles, satellites and advanced communication systems. Boeing also is a major service provider to NASA for the International Space Station.

Boonton - * Internet Café Sponsor *
Booth #104
A leading manufacturer of electronic test & measurement and communications equipment for lab, production and field applications. We provide a complete range of leading edge Peak Power Meters, CW Power Meters, Calibrators, RF-Voltmeters, Capacitance Meters, Modulation Analyzers, Audio Analyzers and Passive Intermodulation (PIM) Testers.

Bustec
Booth #1225
A leading supplier of high-performance data acquisition systems for LXI and VXI as well as VXI slot 0 interfaces and embedded controllers. The company's products are based on open standards to lower cost and maximize system longevity. Bustec delivers industry-leading accuracy, data throughput and channel density. With bustec data acquisition and signal conditioning products, you can directly connect to voltages, currents, and sensors such as accelerometers, strain gauges, load cells, thermocouples, and RTDs. Other function cards include digital I/O, counter/timers, several types of analog output, and more.

CACI International, Inc.
Booth #1137
CACI's Aerospace Logistics Division provides Automatic Test Systems products, Test Program Set development, reverse engineering, and logistic services to the Department of Defense, foreign military sales, and commercial markets segments. CACI's CBATS Models 101 and 201 DoD "Family of Testers" ATS products are available through our GSA Schedule 66.

Cal Lab Magazine
Booth #1411
Cal Lab Magazine is a quarterly publication that covers measurement science and instrument calibration for managers, engineers, and technicians. Since 1994, Cal Lab Magazine continues to cover international standards and calibration techniques for measurement areas: electrical, dimensional, temperature, pressure, flow and mass.

CCS-Inc.
Booth #112
CCS provides industrial computers, enclosures, and networking solutions for harsh environments and mission-critical applications. With experience serving the Test and Measurement industry, CCS understands the need for precision instruments. Choosing CCS ensures that you will receive the highest quality system with the maximum level of design control and flexibility.

Chroma Systems Solutions
Booth #1123
Chroma is a world leading provider of power test instrumentation and automated test systems including AC/DC Power Sources, Electronic Loads, Power Meters and ATE for diverse bench-top, R&D and design verification of EV/PHEV, Solar, LED, Battery, Medical, and Power Supply applications. Visit Chroma at booth #1123 or at www.ChromaUSA.com.

Circuit Check
Booth #311
Circuit Check is the largest manufacturer of in-circuit, functional and custom test fixtures and related products for automatic test equipment (ATE) in the USA. Since 1979, manufacturers have relied on us, not only for test fixtures, but also for the innovative engineering that leads to successful new product development.

Cirris Systems
Booth #1400
Cirris is a leader in cable & harness test equipment. See: Easy Touch hipot cable tester; Pin-Sight guided pinning; CH2 now with 1500 VAC & 1500 VDC. Systems from 128 to 32,000 test points; 5 to 2800 VDC & 50 – 2000 VAC. Bench-top, PC based, and Integrated/Automated testing.

Copper Mountain Technologies
Booth #1304
High standards are standard at Copper Mountain Technologies. We produce lab-quality virtual vector network analyzers with high accuracy, wide dynamic range, a familiar UI and a broad variety of standard and customizable features in frequency ranges up to 8 GHz.

CSI
Booth #203
Come visit booth 203 and talk to us about our latest projects including Automated CoC Laser Test & Characterization Systems, Multi Bay RF Test Systems and our RF ring fixture architecture now up 12" rings with VP interfaces. Come and see why CSI is having our best year ever.

dBm
Booth #1221
Manufactures a range of satellite link emulators for earth station and payload RF link testing offering phase continuous delay , Doppler and rain fade emulation, Carrier/noise generators for link budget and EbNo testing, Multi-channel RF Up/down frequency converters and low cost CW signal generators wideband AWGN noise generators.

Dewetron Inc.
Booth #102
Dewetron data acquisition systems record and display data from analog and digital sensors PLUS video cameras, synchronized! Also record from ARINC-429, MIL-STD-1553, PCM data, IRIG, and GPS sensors. Award-winning DEWESoft acquisition software allows easy setup and visualization, as well as post processing functions, with easy export to Excel, Matlab, ASCII…

Diagnosys
Booth #1109
Exhibiting their range of PinPoint functional diagnostic and test systems. These include the PXI version that allows the integration of 3rd Party instrumentation and the new, rack mountable PinPoint UDA, that will be integrated into a mini-19" Rack. A Conformal Coating Removal system will also be on display.

Dow Key Microwave
Booth #404
Dow-Key Microwave, part of Ceramic & Microwave Products and a subsidiary of Dover Corporation, is a worldwide leader in RF switches since 1945. We manufacture and custom design switches and switching systems for the Commercial, Military and Space industries. Our products include broadband RF coaxial and waveguide switches operating from DC to 70 GHz, electromechanical and solid state switch matrices, fiber optic switching systems, in addition to, programmable attenuators and delay lines. Come and visit us at our booth to learn more about our Low PIM Switches and Next Generation Switch Matrix products.

DRS Technologies
Booth #1001
A leading supplier of integrated products, services and support to military forces, intelligence agencies and prime contractors worldwide. Focused on defense technology, the Company develops, manufactures and supports a broad range of systems for mission critical and military sustainment requirements.

DSI International
Booth #1136
Offers creative, customer-focused solutions to intelligent diagnostic design and provides expert technical services to support all Diagnostic and Systems Engineering goals. DSI International is the leading provider of state-of-the-art design tools, centered on the powerful eXpress diagnostic modeling and analysis software tool, enabling rapid and accurate system diagnostics design development, knowledge capture, trade study analysis, and redesign.

EADS North America Test & Services
Booth #501
EADS North America Test and Services is a recognized leader in the test and measurement industry. We design, manufacture and support ATE, instruments and switching systems, integrated systems, and software used to assure the quality, safety, and readiness of our customers' mission-critical products. Our products are used extensively in production test environments, including many leading electronics, semiconductor, and aerospace companies, as well as in field test environments by all branches of the military. Booth 501.

Eastern OptX
Booth #1021
Eastern Optx, located in Moorestown, NJ, designs and manufactures channel simulation equipment for RADAR Systems, Altimeters, and Air Interface Testing. These systems use a variety of techniques to replicate signal channel conditions that are independent of signal waveform. Eastern OptX also offers custom system integration and automated test software. Eastern OptX is the US Distributor for NoiseXT Phase Noise Test Systems. With more than 20 years of service to the Radar and Communications Industries Noise XT Systems provide the highest dynamic range phase noise measurement capability with a friendly user interface. The systems offer cutting edge capability with field proven reliability. Eastern Optx provides repair and calibration services for all NoiseXT Phase Noise Test Systems.

EE - Evaluation Engineering
Booth #834
EE-Evaluation Engineering is the pioneering magazine serving engineers, engineering managers, and corporate managers responsible for test and total product quality in the design, development, manufacturing, and service of electronic products and systems. Published in print and digital editions, EE presents in-depth technical information for buyers and specifiers of general test instruments, modular test systems, automated test equipment, communications test instruments, and RF and microwave test equipment.

Excalibur Engineering
Booth #210
Since 1989, Excalibur Engineering has been providing professional service and state-of-the art test and measurement equipment. Excalibur Engineering is your sole provider to buy, sell, and rent new and used electronic test equipment. We also provide repairs and calibration for your equipment in our Accredited ISO 17025 laboratory. We test, align, repair, and calibrate every piece of equipment bought, sold, rented, leased or repaired on premises, ensuring superior reconditioned performance. Stop by and visit our booth to enter a raffle for our Fluke handheld meter giveaway.

Experium Technologies
Booth #1306
Experium's EXL line of electronic load systems set a new standard in power measurement capability with advanced features and control interfaces in power ranges from 2500 watts to 15 KW. Internal capacitance, inductance, and time delay modes can simulate your most demanding load profiles while a high quality conservative design ensures reliable operation.Our EXR line of high power loads can satisfy your challenging AC and DC testing requirements from 50KW to 3MW.

Fluke Corporation
Booth #1016
One of the world's leading manufacturers of electrical calibration and measurement equipment, accessories and software. Products are used in critical calibrations throughout companies worldwide. The product line includes dc/lf electrical calibration, power calibration, process calibration, pressure calibration, time and frequency, temperature and humidity calibration, rf calibration, pressure and flow calibration.

G Systems
Booth #109
G Systems is a leading supplier of test and measurement automation solutions to the Aerospace and Defense industries. For over 22 years, G Systems consistently delivers high-quality hardware, software, and data management systems, offering services ranging from full engineering design and consulting to fully integrated systems and large distributed turnkey deployment.

GE Intelligent Platforms
Booth #711
GE Intelligent Platforms will be showcasing its extensive line of avionics I/O products at booth #306 including our new R15-USB 1553 data bus analyzer, combined ARINC 429 and MIL-STD-1553 XMC, and the new PXI 429 bundled products. GE is the recognized leader in supplying avionics interface products for test, simulation, development and embedded applications for both the Mil/Aero and Commercial Avionics markets.

Geotest - Marvin Test Systems, Inc
Booth #601
Geotest-Marvin Test Systems is a global producer of PXI and PC-Based test equipment, software and automated test solutions for the electronics industry. Geotest's products and services include PXI chassis and instruments, Test Executive and development software (ATEasy), test systems and integration services. We will be demonstrating our industry leading PXI digital test products and systems for legacy and next generation mil-aero products as well as new PXI analog test products.

Giga-Tronics
Booth #108
Founded in 1980, Giga-tronics Incorporated (Nasdaq "GIGA"), an ISO 9001 and AS 9100 certified company, headquartered in San Ramon, California, is a leading engineering-and-design manufacturer of best-in-class RF and microwave signal generators, microwave power amplifiers, USB power sensors, microwave power meters and broadband switching matrices. Our latest ASCOR Product Line including; 8000 Series RF Signal Switching Solutions, 8800 RF & Microwave Modular Platform and the 8900 Reconfigurable Microwave Switching Chassis will be on display. R&D, production and test managers, scientists, engineers and technicians, around the world, use Giga-tronics test equipment to realize higher productivity and greater ease of use in many applications: ATE systems, aerospace & defense, communications and general microwave component test. Please visit us and meet; Phil Bowen, USA National Sales Manager, Mark Elo, VP of Marketing, Jeff Lum, Chief Technical Executive and Robert Waldeck, VP Business Development for ASCOR switching products.

Global Test Solutions
Booth #1302
For over 10 years, Global Test Solutions has been providing high-quality test and measurement instruments and support to the North American market. Our instruments address solutions in design, manufacturing, maintenance and service, including Cable/Harness testers, Programmable Power Supplies, Amplifiers and precision measuring instruments such as Frequency Response Analyzers and meters.

Harris Canada
Booth #317
Harris Canada is the sole-source service provider to the RCAF for Avionics Systems for the CF-18 Fighter aircraft. The successful support of ATE is a challenge that Harris delivers on, every day. Our core activities are Engineering Support Services, Operations and Maintenance, Logistics Support, and Supply Chain Services.

Huntron
Booth #1015
Huntron, a leader in unpowered circuit card assembly (CCA) diagnostics and a key supplier for the USN Gold Disk (2M/MTR) program, will have Dual head Access DH Robotic Prober, Non-contact automated EME Diagnostics, and Huntron Tracker power-off diagnostics on demonstration at AUTOTESTCON 2012. Visit Huntron to see flexible, automated diagnostic solutions that help people solve circuit board problems.

Icore International, Inc
Booth #1421
At Icore, our core competency is the design and manufacture of innovative, high performance electrical interconnects components, especially in those applications where the product will be subjected to extremely harsh and hazardous conditions. Icore's products are engineered to withstand demanding physical and environmental requirements. Connecting Systems That Move You!

Ideal Aerosmith
Booth #1037
Innovatively engineers, manufactures and sustains world-class motion and electronic test solutions and services. Its cutting-edge products and services include precision inertial guidance test systems, rotational tables, centrifuges, high dynamic Hardware-in-the-Loop (HWIL) flight motion simulators, test engineering services, ATE system engineering, and quality contract manufacturing services. Ideal Aerosmith, Inc. has provided solutions for commercial and military applications to high-tech companies worldwide for more than 70 years. To find out more, please visit www.ideal-aerosmith.com.

IDEAL Industries, Inc.
Booth #1401
A market leader providing innovative, high quality tools and test instrumentation for the Electrical and Communication markets. Our products come with the promise made by the founder more than 90 years ago, "An IDEAL product will provide a value greater than the price paid for it and service is a part of the product".

IEEE AUTOTESTCON 2013
Booth #300
AUTOTESTCON 2013 will be held in Chicago, Illinois on September 16-19, 2013

IEEE AUTOTESTCON 2014
Booth #301

I&M Society
Booth #300
IEEE Instrumentation and Measurement Society is aimed at advancing the measurement science and metrology by developing new measurement methods, new methods for the characterization of the measurement results, and electrical and electronic instruments for the purpose of measuring, monitoring or recording various physical phenomena that may or may not be of an electrical nature.

Indra Systems Inc
Booth #1101
Indra Systems, Inc. will be in booth 1101. Indra is a leading provider of automated test equipment and simulation and training solutions for air, land, and sea platforms for both military and commercial applications. In addition, Indra provides on-site engineering, technical, and logistics services to a range of domestic and international customers. Indra serves a wide customer base, including the U.S. Department of Defense and aircraft manufacturers, and is available through several existing Government contract vehicles, including STOC II, TSC III, and Seaport-e. In attendance at the booth will be; Mr. Carlos Acosta President/CEO, Mr. Bob McNatt, PMP Manager, ATE Systems and Mr. Adam Zavardino Test Engineer. Indra will be taking business cards for a giveaway/drawing of two bottles of Spanish Rioja wine each day of the show.

In-Phase Technologies
Booth #206
Visit Booth # 206 to see examples of the single and multi-bay ATE Systems, Simulators, Burn-in Systems, Switch Matrices, Signal Conditioning Units, Interface Test Adapters, and Custom Test Fixtures that In-Phase Technologies has been supplying to the defense electronic, aerospace, satellite, medical electronic and component manufacturer markets since it's founding in 1994. Known for their expertise in RF, microwave and fiber optic related technologies, these test systems and related assemblies are typically designed and developed from customer provided specifications and SOW's. In-Phase is also heavily involved in Build-to-Print projects where customers are interested in replicating or upgrading existing systems.

Intepro Systems
Booth #1023
An open hardware and software architecture that virtually eliminates obsolescence risks for the military and aerospace battery,power supply, and power component testing. The software supports fast TPS development (with or without coding) and seamless integration with IVI, IEEE-1641, Atlas and LAbview packages

Intra Stage
Booth #713
Increase electronic component QUALITY, and reduce scraps and labor costs with IntraStage's SPC and Test Data Management Software. Come by and see us at BOOTH #713!

ION Corporation
Booth #1223
ION Corporation is an AS/EN/JISQ9100-Revision B and ISO 9100:2008 registered Veteran-owned Small Disadvantaged Business founded in 1984; specializing in engineering, design and manufacturing. ION Corporation produces and tests high tech electronic flight and ground support equipment for government agencies, both as a prime and subcontractor. Products and services include embedded systems engineering, environmental qualification and acceptance testing (e.g. EMI, Thermal, Humidity, etc.), electronic packaging and mechanical design services, space flight manufacturing services (NASA 8739.3, 8739.4), and electronic manufacturing services.

JTAG Technologies
Booth #1024
Provides industry leading hardware and software boundary scan tools to speed up circuit design and development, through to production test and field maintenance. We offer a full range of JTAG products to help you debug board designs with BGAs, test hardware that includes FPGAs, CPLDs, DSPs or microprocessors, detect faults and prove your design quickly and easily.

Kepco Inc
Booth #1219
Kepco Inc. is a leading manufacturer of DC power supplies, both modular and instrument type. Our new KLN 750 Watt series is a 1U, half rack, automatic crossover, high performance and low cost product. Remote analog and RS 485 programming are standard; GPIB or Ethernet are low cost options.

L-3 Telemetry-West
Booth #837
L-3 Telemetry-West is a premier provider of Ground and Airborne Telemetry products. Look to L-3 products and services for all your real-time telemetry needs. From embedded applications to fully integrated turnkey custom solutions, a wide array of L-3 TW hardware and software COTS solutions can be sized to fit your requirements. Please stop by booth #837 to see a demo of our new SignalNET Networked Data Acquisition system.

Lockheed Martin
Booth #1127
Lockheed Martin is a leading provider of logistics and test support. The company was selected to provide the U.S. Navy with its electronic Consolidated Automated Support System, and also provides automated test equipment support for the U.S. military's F-35 Lightning II program. We offer a full range of logistics, mission operations, engineering support and integration services to reduce life-cycle costs.

MAC Panel
Booth #1107
MAC Panel provides a full range of modular interconnect solutions and services to support Automated Test Equipment (ATE) requirements of major aerospace, commercial, defense and medical electronics corporations on a global scale. Please see our latest line of Next Generation Mass Interconnect solutions in Booth 1107 at Autotestcon 2012.

Marway Power Solutions
Booth #709
A quality rack PDU from Marway provides a solid foundation of reliable power for any equipment set. Marway specializes in build-to-order and purpose-built PDUs optimized to save space and weight while meeting the unique needs of each application. Need something quickly? Many of our standard systems are ready to ship.

Mini-Circuits
Booth #305
Mini-Circuits is global leader in the design, manufacturing, and distribution of RF, IF, and microwave components covering the DC to 40GHz band, for commercial, industrial, space, and military, including: WiMax, CATV, Cellular Wireless, RFID, Medical Equipment, Test Equipment, Receivers, Transmitters and Satellite applications. Rapid response, innovative design, demanding quality standards, fast turnaround, value pricing, on-time delivery, and top-notch customer service have helped make Mini-Circuits an industry leader. With 25 different product lines representing thousands of off-the-shelf and custom models, Mini-Circuits offers the world's largest variety of over 10000 signal processing components.

National Instruments
Booth #611
National Instruments creates technology with unrivaled performance and flexibility for designing automated test and measurement systems. Learn how NI and Phase Matrix PXI, combined with NI LabVIEW system design software, use the latest developments in PC buses, multicore processors, and FPGAs to deliver fast test times and superior performance. Discover more at ni.com/automatedtest.

Navatek Engineering
Booth #715
Navatek Eng. Corp. located in southern California specializes in functional test systems and troubleshooting tools for processor based boards. Our test systems, the NT3000 JTAG BDM CPU Emulation and the NT5000 ROM Emulation are PC based and can be used with a PXI chassis or PC with a PCI slot. Navatek also offers a low cost USB version of the NT3000. Navatek offers repair services for the Fluke 9010A and the 9100A/FT system.

NH Research, Inc
Booth #832
A global supplier of automated power supply test systems used for engineering characterization and high-volume manufacturing. NH Research also builds advanced AC and DC electronic loads with power levels up to 36KW and 500V. Loads now incorporate the LXI interface.

North Atlantic Industries
Booth #204
North Atlantic Industries, Inc. (NAI) is a leading supplier of embedded solutions and has been delivering differentiating products to its customers in the Defense, Homeland Security and Aerospace Industries since 1955. Our product lines include Commercial-off-the-Shelf (COTS) and Modified COTS, Multi-function Single Board Computers, Embedded I/O Boards, Rugged Power Supplies, Embedded Systems and Motion Simulation and Measurement Instruments for the Defense and Aerospace industries. All embedded products are offered in air-cooled commercial, extended temperature ranges or rugged conduction-cooled versions.

Northrop Grumman Corporation
Booth #101
Northrop Grumman is a leading global security company providing innovative systems, products and solutions in aerospace, electronics, information systems, and technical services to government and commercial customers worldwide. Please visit www.northropgrumman.com for more information.

OpenATE Inc.
Booth #1233
OpenATE, an expert in PXI modules for full line testing of logic ICs, focus on product specifications, key functions of each module, and convenience of the end users. Customers may select a suitable suite of modules to assemble a custom test system, or integrate a test module into their existing ATE. We also provide FREE software platform - MTS3 for IC test and measurement. It's helping users simplify their designs and testing process with minimum effort. For more information, please visit http://www.openate.com

Ophir RF
Booth #107
Ophir RF has one of the most comprehensive lines of high-power, RF amplifiers in the industry. The markets we serve include Communications, Electronic Warfare (EW), EMC, Test and Measurement, and Radar applications. All operations are carried out in our Los Angeles, California headquarters. Products include RF amplifiers from 10 kHz to 8 GHz with power levels varying from 1W to 24KW.

Pacific Power Source, Inc.
Booth #1205
Pacific Power Source offers a unique range of low noise linear and compact switching precision programmable AC power products ideally suited for Military ATE systems. Please visit us at booth #1205 and let us help you meet your "Mission Assurance" goals for AC power

Pickering Interfaces, Inc
Booth #406
A market innovator in signal switching and conditioning for a broad range of applications and architectures. With the largest range of switching cards in the industry, Pickering Interfaces has provided solutions to both commercial and military applications. In addition, Pickering's range of instrumentation provides innovative test solutions to users and integrators of modular test systems.

QMAX
Booth #817
Qmax offers innovative products for the test and repair of electronic circuit cards. Qmax products support In-Circuit, Functional Edge, Boundary Scan, and Signature Analysis test.In addition to displaying our Mid-Range and Bench-top Test Platforms, Qmax is introducing the Qtouch Multi-headed prober system. Although Qtouch has advanced multi-head probing capability, it is a low cost prober offering economic solutions to PCB repair and reverse engineering requirements.

Quantum Data, Inc.
Booth #923
The leading edge of the video testing industry for 30 years, we invent test instruments that help manufacturers bring next-generation video products to market faster and without interoperability problems. You'll find our instruments in development and production facilities of major video electronics manufacturers throughout the world.

Rohde & Schwarz
Booth #1117
A leading manufacturer of electronic test and measurement and communications equipment. Our instruments set standards worldwide in research, development, manufacturing and service. We offer a complete range of signal generators, spectrum and signal analyzers, network analyzers, power meters, dedicated radiocommunication test sets and turn-key EMC/EMI measurement systems.

Rosenberger North America, LLC
Booth #927
A leading manufacturer of coaxial connectors, cable assemblies and microwave devices will present its newest Rmor™ cables for rugged and harsh environments and the new line of 70GHz phase stable cable assemblies. Also featured is the new WSMP™ ultra-high density interconnect system offering superior flexibility and high-frequency performance to meet a range of standard and custom configurations in space, military and commercial applications.

RT Logic
Booth #111
Designs, develops, and delivers innovative signal processing products and test solutions for communication systems. Our product line covers the full spectrum of RF-to-Data solutions used for test systems; RF channel simulation; spectrum measurement/ interference detection; frequency conversion; modulation/ demodulation; TT&C processing; and digital network gateways, mux/demux, and digital/analog data recorders.

Seica Inc.
Booth #701
A world leader in ATE equipment design and services. With offices world wide, Seica can support you no matter where your NPI centers, repair, or production facilities are located. We specialize in legacy replacement solutions allowing our customers to take their investments in fixtures and TPSs onto a new state-of-the-art Seica Valid systems.

Southwest Research Institute
Booth #208
Southwest Research Institute® (SwRI®) is an independent, nonprofit, applied research and development organization. More than 3,000 employees work in two million square feet of laboratories, workshops, and offices at the main facility at San Antonio, Texas. Engineers, scientists, analysts, and technologists perform contract work for government and industrial clients worldwide.

Spectracom
Booth #1203
A leading provider of time and frequency technology, our application-specific products are designed for synchronization and timing of networks, systems and devices; calibration and test of precise frequency instruments, and measurement of frequency signals. Products include sync tester/analyzers, GPS simulators, time and frequency analyzers/counters, secure master clock synchronization systems, and more
Exhibitor Booth: 1203

TDK Lambda
Booth #1207
Genesys™Series - most complete set of Programmable AC/DC sources. Identical user interfaces. Now 2400W in 1U. Platforms:1U Half Rack 750W, 1U 750/1500W/2400W, 2U 3.3/5kW, 3U 10/15kW. Standard: reliable Front Panel encoders, built-in RS-232/485, Remote Analog Programming. Optional IEEE, Isolated Analog or LAN Control. Wide range power factor corrected AC Inputs for operation world-wide.

TEAL
Booth #1319
TEAL, located in booth 1319, specializes in the design and manufacture of custom power subsystems for military and aerospace equipment, including a new power distribution unit and power cabinets for future military ATE programs. Customers rely on TEAL for clean, reliable power. At TEAL, We Power Technology!

Techni-Tool
Booth #822
As the leading full-line distributor in the field, Techni-Tool serves the electronic production industry with the finest test equipment, soldering/de-soldering essentials, and static control products, as well as hand tools, inspection devices, workstations and more—from over 500 top manufacturers. With three GSA Schedules, a full staff of dedicated government procurement experts, and our unique combination of world-class customer service and unmatched product selection, we've been meeting the unique needs of government for over 50 years.

TEGAM
Booth #1413
TEGAM is a leading U.S. manufacturer of precision electronic test and calibration instruments, including RF power sensor calibrators, portable micro-ohmmeters and PXI amplifiers. TEGAM products support the assembly and maintenance of the most advanced weapons, aircraft, communications and test systems in operation today. TEGAM teammates utilize a wide range of field service, lab and production experience to provide optimal solutions, training and support to their customers. TEGAM qualifies as a small business operating in a Northeast Ohio HUBZone, supporting both commercial and military customers worldwide. Stop by and meet with Kevin Kaufman and or Michael Sciulli to learn more the products and services of TEGAM.

Tektronix
Booth #105
Tektronix is a leading supplier of test equipment for engineers focused on electronic design, manufacturing, and advanced technology development. Headquartered in Beaverton, Oregon, Tektronix serves customers worldwide and offers award-winning service and support. Stay on the leading edge at www.tektronix.com.

Teradyne
Booth #801
The world's largest ATE supplier, will demonstrate new Core System Instrumentation, including the industry's most advanficed digital, analog, and bus test instruments. Come see Spectrum 9100, the highest performance fully integrated test system for factory and depot environments, as well as TPS software and rehost solutions

Test Equipment.com, Inc.
Booth #823
TestEquipment.com is designed to serve the test equipment user by combining multi-vendor equipment and service purchasing activities with custom test equipment management portals to support all test equipment requirements. Users purchase test equipment and services, maintain asset records and documentation, access test equipment industry news and community features via a single source. TestEquipment.com will bring test equipment users, manufacturers, and service providers together by providing a single platform to purchase and sell test equipment, and test equipment services.

Tevet, LLC
Booth #1407
TEVET, LLC is a Service-Disabled Veteran-Owned (SDVOSB) and HUBZone Small Business providing both new and refurbished test equipment from leading manufacturers such as Agilent, National Instruments, GE IP, EXFO and many others. TEVET's focus is direct Federal and Prime Contractors markets. Our commitment to our customers is "best in class customer service" which has won us numerous awards including; Lockheed Martin STAR Supplier/ Veteran Owned Small Business Supplier of the Year as well as DoE Veteran Owned Small Business Supplier of the Year.

The Logical Company
Booth #925
The Logical Company manufactures NuVAX and NuPDP to replace your Qbus and Unibus-based VAX and PDP systems. NuVAX and NuPDP extend the life of real-time applications such as missile control and radar. Salem Automation specializes in modernization of legacy systems using vtVAX and vtALPHA emulators from Vere Technologies.

The M&T Company
Booth #707
Provides engineering, technical and manufacturing services and develop special software modeling programs for aircraft icing, biological particle contamination, mechanical shock and expeditionary airfield simulation. In support of our DoD Customers we provide technical and management expertise for weapons systems, SE, aircraft launch and recovery equipment and fielded systems

Underwater Kinetics
Booth #1418
Underwater Kinetics (UK) has consistently delivered innovative, top quality products serving the industrial, safety, and dive markets for over 40 years. Our protective case products are designed, engineered, and manufactured in San Diego. While we deliver water proof, dust proof, and shock proof protective cases, UK also offers unique case solutions from anti-stat blends to RF shielded plastics, to custom colors and labeling. We're large enough to handle some of the largest companies and governments in the world, but small enough to provide the one-on-one type of support that your company needs. You can learn more about the performance and quality of UK products by visiting our website at: www.uwkinetics.com Underwater Kinetics: Uncompromising Performance Since 1971.

Universal Switching Corporation
Booth #1030
Universal Switching manufactures state-of-the-art programmable switching equipment and is the leader in cost effective switching solutions. Our wide product line and flexible system architectures allow you to specify exactly the type and size of system you require with built-in expansion capability for the future. The product line covers DC to 40GHz, and everything between including AC/DC power switching, audio, ATE instrumentation, composite video, HF, RF and IF signals, high resolution RGB+HV video, high speed ECL or LVDS digital data, cellular telephone, plus other >1GHz and microwave signals all the way to 40GHz.

USMC Logistics Command
Booth #1308
The Marine Corps Logistics Command is the hub for Marine Corps logistics products and services, supporting three core competencies; supply chain management, depot maintenance (repair, rebuild and modify ground combat and support equipment), and materiel prepositioning. We strive to provide the best "Logistics Solutions for our Warfighters." What we do every day is important. A Marine's life depends on it.

Virginia Panel Corp
Booth #915
(VPC) is the world's leading supplier of Mass InterConnect Solutions to the Automatic Test Equipment Industry. Mass InterConnect solutions provide simultaneous connection of varied signals through one interface allowing fast and reliable "unit under test" changeover, reduced test costs and improved production. VPC accommodate a wide range of ATE chassis sizes/configurations including PXI, LXI, SCXI and VXI applications.

VT Miltope
Booth #931
VT Miltope specializes in the design, development and production of fully rugged computers, servers, printers, mass storage devices and related peripherals that must operate in the most demanding environmental conditions. All products are fully qualification tested to MIL-STD-810F and -461E and delivered after 100% Environmental Stress Screening (ESS).

VTI Instruments Corporation
Booth #1118
VTI delivers precision modular instrumentation and ATE core subsystems for electronic signal distribution, acquisition, and monitoring, which are used in the world's most demanding test applications. Serving the aerospace and defense, power generation, energy, automotive and commercial electronics industries, VTI's solutions allow our customers to optimize their capital investment through product longevity while ensuring unmatched measurement integrity and data reliability. For additional information, please visit http://www.vtiinstruments.com.

W-IE-NE-R & Hartmann Elektronik
Booth #106
W-IE-NE-R and HARTMANN Elektronik are presenting new VXI-4, VXS and VPX backplanes and complete chassis for ATE, military as well as scientific research applications. Further a line of universal, remotely controllable / programmable multi-channel low and high voltage power supply systems is presented.

WinSoft
Booth # 1235
WinSoft designs, develops and builds Test Systems for the Mil/Aerospace market. We offer a full spectrum of engineering services to support the entire life cycle of a project including system design, implementation, project management, and after delivery technical support. Our Technical Capabilities includes: Software/Hardware Engineering, Test System Development, Data Acquisition System, Digital/Analog & RF Design, and ATE-Life-Extension & Obsolescence. URL: www.winsoft.com

WesTest Engineering Corporation
Booth #824
WesTest has over 30 years of excellence in developing and supporting Automatic Test Equipment, Custom Test Equipment, Test Program Sets, Interface Test Adapters and the associated software for commercial and military applications. WesTest is one of the most experienced design, development, manufacturing, service, training, and support teams in the world.

X Technologies
Booth #1215
A small minority owned business established in 1998 in San Antonio, Texas. We are a premier service provider of engineering, manufacturing and repair. One core area remains Automatic Test Equipment with focus on the development of ATE, obsolescence management, TPS/ITA design, prototype development and production. X Technologies is appraised at CMMi Maturity Level 3 and is ISO 9001 compliant.

Yokogawa Corp of America
Booth #1029
A major worldwide force in the test & measurement market, with products that include oscilloscopes, power meters, wireless and optical communications test equipment, portable test instruments, recorders and data-acquisition systems, and semiconductor-related test systems.

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Offers unparalleled engineered, protective aluminum transit and rack mount cases. Advanced robotics means fast, cost effective manufacturing. Off the shelf or custom configurations, packaging engineers design the optimum protection. Our Charlotte Tech Center offers in-stock cases, customization and rapid, custom cushion fabrication. Zarges is making the case for protection.

ZTEC Instruments
Booth #1020
ZTEC Instruments is a pioneering instrument design and manufacturing company whose product focus is modular oscilloscopes, digitizers, RF test equipment and waveform generators. ZTEC's instruments are unique in that they provide common bench-top capabilities in modular form factors, including Compact PCI/PXI, VXI, LXI, and PCI.

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Ancillary Meetings will be held as part of IEEE AUTOTESTCON 2012

A list is provided for information only; meetings are generally open only to those specifically invited. Please check with meeting host on currency and status. Times or locations are subject to change.

A separate handout will be provided listing all Ancillary Meetings

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