The 14th International CMSE Conference

Components for Military and Space Electronics
Conference & Exhibition

February 8 - 11, 2010

LAX Radisson Hotel
Los Angeles, California

The Premier Conference on the Engineering, Design, and Use of Electronic Components in Military & Space Systems

Call For Papers

Abstract Deadline
Extended till October 30, 2009

Organized by:
Components Technology Institute, Inc.

Co-Sponsored by:
Military Embedded Systems
VME & Critical Systems
The CMSE Conference emphasizes making the best choice of components, whether EEE parts or black boxes including military standards or COTS, for military and space applications. Uniform performance capability and quality/reliability are not the same for all projects with different needs, cost, risk and schedule.

Organized by engineers for engineers and engineering management, this is the premier conference for military and space electronics issues. This Conference specializes in the selection, application, reliability assurance, testing and failure analysis of all types of electronic components, subsystems and circuit boards while also emphasizing new technology, processes and design practices. Emphasis is placed on practical solutions, new techniques and how to assess the risks of COTS verses mil spec components and make cost effective decisions which meet the mission requirements.

Experts from throughout the world are requested to submit an abstract for a presentation on the conference topics. Papers reporting on actual experience, knowledge and data gained from the use of mil spec components and COTS in military and space systems are solicited. Papers reporting on actual experience, knowledge and data gained from the use of commercial components and COTS in military and space systems are solicited. Specific subjects for consideration include:

- Impact of lead free materials on reliability
- Mil spec designs vs. COTS systems
- Mitigation of obsolete components
- New Applications practices for both COTS and mil spec components
- Ruggedizing practices for harsh environments
- Reliability analysis and prediction
- Latest components technology for military and space applications
- Avoiding counterfeit components
- Approaches for converting older military systems to newer technology
- Hi Rel DC/DC power conversion
- Impact of RoHS and REACH
Conference Topics

The CMSE is the first and largest International Conference on the use of electronic components in military and space systems. This annual Conference is attended by the most engineers, project personnel and offers the most technical papers on subjects of great interest:

Themes for 2010

- Back to Component Engineering Basics
  - Selection, derating, testing
  - Mil Spec and COTS components
- Improving Reliability Through New Technology
  - Identifying low risk components
  - Impact of lead free
- Avoiding Counterfeit Components

Design Practices
- FPGAs, DSPs, & ASICs
- Packaging and special thermal techniques
- Techniques to successfully use PEMs & COTS
- PEMs in long term storage conditions
- Critical applications

Applications
- Avionics, ships, military vehicles and radios
- Missile and weapons systems
- Satellites & launch vehicles

Case Studies & History
- Industry perspectives
- Life cycle Management
- Designing for obsolescence

Obsolescence Management
- Designing for obsolescence
- COTS - solution or problem
- Life cycle management
- Lessons Learned

Radiation Hardness
- Assessing hardness levels of COTS and PEMs
- Maintaining hardness through design changes
- Shielding techniques
- Impact of scaling on RH performanc

Technology Trends
- New technologies and how to use them
- Replacing obsolete technologies
- Life time of the new technologies

Reliability Analysis and Testing
- COTS and PEMs qualification practices
- Uprating over manufacturers data sheet
- ESS, screening practices and cost analysis
- Accelerated and step stress testing

Risk Mitigation
- System redundancy
- Failure/error detection and correction
- New Reliability assessment practices

EEE Parts & Components
- ICs, optos, hybrids, and discretes
- Passives, solid state relays and connectors
- MEMs, optoelectronics, and etc.
- Batteries and sensors

Selecting COTS Designs & Suppliers
- How to select suitable suppliers
- Quality issues and acceptable quality levels

Abstract Submittal:
Please submit a one page abstract describing the title, scope, and content of the presentation while emphasizing the key points. The abstract must include the author(s) name and affiliation plus the complete address, e-mail address, and telephone and fax number for the presenter. In the case of multiple authors, the presenter’s name must be listed first.

Abstracts should be submitted before October 23, 2009. Speakers will be notified by October 28 of acceptance and a copy of their presentation is required by December 15th for the Conference Notes. Email abstracts to Leon.Hamiter34@cti-us.com

To discuss the Conference or Exhibition call Leon Hamiter at 256-536-1304 or e-mail: leon.hamiter34@cti-us.com

www.cti-us.com