

13th International CMSE Conference

Components for Military and Space Electronics Conference & Exhibition

February 9 - 12, 2009

**Sheraton Mission Valley Hotel
San Diego, California**

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

Call For Papers

Abstract Deadline

October 17, 2008

Organized by:

Components Technology Institute, Inc.

Co-Sponsored by:

Military Embedded Systems
VME & Critical Systems
Electronic Products

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The CMSE name was changed from Commercialization “ to “Components” to emphasize making the best choice of components, whether EEE parts or black boxes including military standards or COTS, for military and space applications. This recognizes that the same performance capability and quality/reliability level does not fit all project needs for 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 mil spec and COTS 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. 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.

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 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*
- *Embedded COTS electronics*
- *Applications practices for both COTS and mil spec components*
- *Meeting harsh environments through ruggedizing practices*
- *Reliability assessment, testing and failure analysis*
- *Latest components technology and applications*
- *Avoiding Counterfeit Components*
- *Approaches for converting older military systems to newer technology*
- *Cost analysis of using COTS components*
- *Case studies of COTS in military & space systems*

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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 the following subjects:

Special Topics for 2009

- Impact of lead free on electronic reliability
- Counterfeit Components
- Failure mechanisms of scaled IC's

Design Practices

- Open System architectures
- FPGAs, DSPs, & ASICs
- Packaging and special thermal techniques
- Techniques to successfully use PEMs & COTS
- Ruggedizing COTS for military use
- 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

- Business practices
- Industry perspectives
- Life cycle Management
- Designing for obsolescence

Obsolescence Management

- Designing for obsolescence
- COTS - solution or problem
- Industry perspectives
- 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 performance

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 **August 29, 2008**. Speakers will be notified by October 1st 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**

Embedded COTS

- Legacy and new systems
- VMEbus, switched fabrics, Rapid IO
- Network centric, middleware, etc.

Technology Trends

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

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 & Commercial Suppliers

- How to select suitable suppliers
- Quality issues and acceptable quality levels
- Automotive, telecom and commercial practices

Reliability Analysis and Testing

- COTS and PEMs qualification practices
- Uprating over manufacturers data sheet
- Theory and structure of qualification program
- ESS, screening practices and cost analysis
- Accelerated and step stress testing