Track 6 - Aircraft Systems

Session A - Unmanned Air Vehicles
1. The Evolution of The Global Hawk and MALD Avionics System
2. Development of a Small Rotary -Wing Autonomous Vehicle
3. Control Algorithm and Flight Simulation Integration Using the Open Control Platform for Unmanned Aerial Vehicles
4. A Multi-Agent Operator Interface for Unmanned Aerial Vehicles
5. Software-Enabled Control Technologies for Autonomous Aerial Vehicles

Session B - CAA/FAA SafeFlight21 Op Eval 99 (Part I)
1. OpEval 99 - What We Did and Where We Are Going/ Cargo Airline Association (Not Published)
2. OpEval 99 - What We Did and Where We Are Going/ FAA SafeFlight 21 Program Office (Not Published)
3. OpEval 99 - What We Did and Where We Are Going/ UPS Aviation Technologies (Not Published)
4. OpEval 99 - What We Did and Where We Are Going/ Honeywell (Not Published)
5. OpEval 99 - What We Did and Where We Are Going/ BFGoodrich Avionics Systems, Inc. (Not Published)
6. OpEval 99 - What We Did and Where We Are Going/ Lockheed Martin (Not Published)

Session C - Avionics Systems/IFE
1. No Room for Rembrandt
2. Human Operations: Software Systems that Monitor Passengers and Equipment
3. System Design Considerations for the Development of Iridium World Air Services
4. Supplemental Cooling for Legacy Aircraft Avionics
5. Avionics Retrofit Integration Techniques and Lessons Learned Using a Dynamic Systems Integration Laboratory

Session D - Safety Systems
1. Conflict Detection and Alerting for Separation Assurance Systems
2. Aircraft Self Reports for Military Air Surveillance
3. Towards a Pilot-Centered Turbulence Assessment and Monitoring System
4. Formalism Helps in Describing Accidents
5. Every-Day Monitoring of the Operators' Psychophysiological Safety
6. Psychophysiological Features of Adaptation to Stress and Risk, Assessment at Operator's Work
Track 7 - Space Systems

Session A - Commercial And Defense

1 Application of Reconfigurable Avionics For the Bantam Launch Vehicle  
   Kevin Shawn Wallace

2 Failure Mode, Effects and Criticality Analysis (FMECA) Use in the Federal Aviation Administration (FAA) Reusable Launch Vehicle (RLV) Licensing Process  
   John L. Buzzatto

3 Global Positioning System Receivers in Space Applications  
   Jennifer Stieglitz

4 Space Integrated GPS/INS (SIGI) Navigation System for Space Shuttle  
   Bob Willms

Session B - Space System Elements

1 Update of the Development of a Low Cost Data Acquisition System for the Space Shuttle Solid Rocket Booster Program  
   Kevin Crawford

2 Development of a COTS Mass Storage Unit for the Space Readiness Coherent Lidar Experiment  
   Karl Liggin

3 REE: A COTS-Based Fault Tolerant Parallel Processing Supercomputer for Spacecraft Onboard Scientific Data Analysis  
   Raphael R. Some

4 On-Board Guarded Software Upgrading for Space Missions  
   Ann Tai

5 A Report on the Applications for a Spacecraft Avionics Functional Model (Not Published)  
   Joseph F. Smith

6 Characteristics of a Successful Space System Engineer  
   Robert C. Moore

Session C - Space Science And Exploration

1 A Component Framework for Satellite On-Board Software  
   Alessandro Pasetti

2 The FAR Ultraviolet Spectroscopic Explorer (FUSE) Instrument Data System  
   Brian K. Heggestad

3 Results of the First Astronaut-Rover (ASRO) Interaction Field Experiment and Recommendations for Future Planetary Surface Exploration  
   Nathalie Cabrol

Session D - Microelectronics For Space

1 Low-Cost Miniaturized Electronics for Space Application with Chip-on-Board Technology - Design, Manufacturing and Reliability Considerations  
   Binh Le

2 Design and Implementation of a General-Purpose Processor for Space Systems  
   James A. Perschcy

3 Verification Tools for Embedded Robotic Electronics  
   Alexander Sarau

4 Free-Flying Magnetometer Data System Architecture and Hardware Realization Using Commercial Off the Shelf (COTS) Technology  
   Brent Blaes
Track 8 - Automotive Systems

Session A - Ground Vehicles

1 Getting More from the Scene for Autonomous Navigation: Demo III XUV Program  
Mark Rosenblum

2 Depth Detection Of Targets In A Monocular Image Sequence  
Yi Lu

3 A Real-Time Operating Environment for Army Weapon Systems  
William Pritchett

4 Reducing Maintenance Costs Through the Application of Modern Software Architecture Principles (Withdrawn)  
Christine Hulse

5 A Framework for Reusable and Rehostable Software  
Tim Feeney

6 Jump Starting 42V PowerNet Vehicles  
Paul Nicastri

Session B - Hybrid Vehicles/ITS

1 Advanced Silicon Rich Automotive Electrical Power Systems  
Ali Emadi

2 Intelligent Efficiency Mapping of a Hybrid Electric Vehicle Starter/Alternator Using Fuzzy Logic  
Raymond Sepe

3 Web-Based Virtual Engineering Laboratory (VE-LAB) for Real-time Control of a Hybrid Electric Vehicle Starter/Alternator  
Raymond Sepe

4 A Case Study of Starting Power Requirement for Visteon Integrated Start-Alternator System  
Habib ur Rehman

5 PLASTIC Lithium ION Energy/Power Systems Are Key to Integrated and Affordable Hybrid Automotive Solutions  
John Waters

6 Advanced Law Enforcement Vehicle Electronics and Associated Power  
James Ochoa

Session C - Fleet/CVO Electronics

1 Design of Pulse Width Modulation Based Smart Switch Controller for Automotive Applications  
Ali Keyhani

2 Induction Motor Parameter Identification from Operating Data for Electric Drive Applications  
Ali Keyhani

3 Voice Signal Extraction for Enhanced Speech Quality in Noisy Vehicle Environments  
Gail Erten

4 A Novel Power Generation System For Ground Vehicles  
Malakondaiah Naidu

5 Automotive Electrical Systems: Architecture and Components  
Iftikhar Khan
Track 9 - Open Systems Architectures

Session A - Open Systems Joint Task Force

1 Validation and Verification in Open Systems Architecture for RF Electronics (Not Published)  
Dean C. Hooks

2 Application of Commercial Resources to Military Needs for Electronic Power Sub-Systems  
Ed Mabe

3 Technical Architecture for RF Open System Realization  
Curtis Milton

4 A Product Line Approach to Weapon Systems Acquisition  
James Dixon

5 Joint Tactical Radio Systems - A Solution to Avionics Modernization  
Philip Eyermann

6 JTRS - An Open, Distributed-Object Computing Software Radio Architecture  
Karl Davis

Session B - Hardware Architecture

1 Evaluation of the Generic Open Architecture Framework  
Donald Parrish

2 Dynamic Space Processor Architecture Built on Commercial Open System Interface Standards  
Joseph Marshall

3 An Open Architecture for Next Generation Space Onboard Processing  
Michael Harris

4 Integrated Mechanical Diagnostic (IMD) Health and Usage Monitoring System (HUMS): An Open System Implementation Case Study  
Richard Muldoon

5 JAHUMS ACTD - A Case Study In Open Systems From A Technology Insertion Perspective  
David Haas

Session C - Software Architecture

1 Exploiting Object Technology to Support Product Variability  
David Sharp

2 Freeing Product Line Architectures from Execution Dependencies  
Bryan S. Doerr

3 Provably Dependable Software Architectures for Adaptable Avionics  
Victoria Stavridou

4 Avionics Product Line Software Architecture Flow Policies  
David Sharp

5 A Component Based, Event Driven Framework for Rapid Prototyping Real-time Avionics Systems  
Margaret M. Adams

Session D - Commercial Off-The-Shelf

1 An Intelligent Network Interface Card  
Martin H. Davis

2 Electronic Design Collaboration Within Virtual Product Development  
William Stewart

3 Technology Roll Lessons Learned on Embedded Avionics Platforms  
Gordon Kranz

4 Software Architecture Development for Product Line Software  
Timothy Popp
Track 10 - Test Engineering

Session A - Software Test

1 Test and Validation of Electronic Systems  
   Gary L. Fitzhugh
2 Test and Evaluation Techniques Using Rapid Prototyping Tools
   for Avionics Requirements Development  
   William J. Bezdek
3 Practical Validation of Model Based Code Generation for
   Automotive Applications  
   Steve Toeppe
4 Model Driven Automatic Unit Testing Technology Tool
   Architecture  
   Steve Toeppe
5 Graybox Software Testing Methodology Embedded Software
   Testing Technique  
   Andre Coulter
6 Abstracting Formal Specifications to Generate Software Tests via
   Model Checking  
   Paul Black

Session B - Aircraft EMI (1)

1 B-767 Inter Compartment Path Loss Results (Not Published)  
   Gerald Fuller
2 Measured Emissions from Regulated and Unregulated Passenger
   and Crew Devices  
   Gerald Fuller
3 Measured Path Loss into the Cockpit and Passenger Cabin from
   Sources in the Passenger Lounge/Gate/Jetway Area (Not
   Published)  
   Gerald Fuller
4 The Relationship Of Commercial Aircraft Fuselage Size On RF
   Coupling/Pathloss From Rf Sources To Receiver Based
   Navigation And Communication Avionics Systems  
   Gerald Fuller
5 RF Loading Effects of Aircraft Seats in an Electromagnetic
   Reverberating Environment  
   Truong Nguyen

Session C - Aircraft EMI (2)

1 Monte Carlo Simulation of Reverberation Chambers  
   John Ladbury
2 A Comparison of Reverberation Chamber and Semi-Anechoic
   Chamber Testing for Automotive Susceptibility  
   Kevin Slattery
3 Control Laws with Hierarchical Switch Logic to Accommodate
   EME-Induced Sensor Failures  
   B. C. Chang
4 Stochastic Perturbation of Electromagnetic Disturbances in
   Closed-Loop Computer Controlled Flight Systems  
   Steven Gray
5 High-Power Radiated Susceptibility Testing of FADEC Systems
   in Reverberation Chambers  
   Mark Johnson