

**3rd Integrated CNS Technologies Conference & Workshop Agenda**

**May 19 – 22, 2003**

**FINAL**

<b>Monday, May 19, 2003</b>	
04:00 – 06:00 pm	Pre-Registration
05:30 – 06:00 pm	Prep Meeting for Conference Session Chairs – Board Room
06:00 – 08:00 pm	Exhibit Reception <b>Sponsored by Mulkerin Associates Inc. &amp; Computer Networks &amp; Software, Inc.</b>

**3rd Integrated CNS Technologies Conference & Workshop Agenda**  
**May 19 – 22, 2003**  
**FINAL**

<b>Tuesday, May 20, 2003</b>		
07:30 – 08:30 am	<b>Registration/Continental Breakfast – Sponsored by Sensis Corporation</b>	
<b>Opening Plenary Session</b> <b>Session Chair – Pete Vrotsos, NASA Glenn Research Center</b>		
08:30 – 08:40 am	Welcome	Donald Campbell, NASA Glenn Research Center
08:40 – 08:50 am	Overview Week	Denise Ponchak, NASA Glenn Research Center
08:50 – 09:00 am	Opening Remarks	Pete Vrotsos, NASA Glenn Research Center
09:00 – 09:30 am	Keynote Address	Carl McCullough, Agency Representative for Federal Aviation
09:30 – 09:45 am	<b>BREAK</b>	
09:45 – 10:00 am	Introduction to Panel	Pete Vrotsos/NASA Glenn Research Center
10:00 – 11:15 am	Transforming the NAS	Robert Pearce, NASA Headquarters Claire Robinson, Federal Aviation Administration Neil Planzer, DoD Policy Board on Federal Aviation William Sears, Air Transport Association George Donohue, George Mason University
11:15 – 11:40 am	Questions to the Panel	
11:40 – 01:00 pm	<b>LUNCH – Sponsored by ARINC</b>	
<b>Session A1 – Emerging Network Technologies</b> <b>Session Chair – Chris Wargo, Computer Networks &amp; Software, Inc.</b>		
01:00 – 01:30 pm	Aeronautical Telecommunications Using IPv6	Bob Stephens, Tectura Corporation
01:30 – 02:00 pm	Mobile Networking – Including Application to Aeronautical Internets	Will Ivancic, NASA Glenn Research Center
02:00 – 02:30 pm	Internet Protocol for Aeronautical Exchange (iPAX-TF) – European Initiatives for IP Deployment	Eivan Cerasi, Eurocontrol
02:30 – 02:45 pm	<b>BREAK</b>	
02:45 – 03:15 pm	Applications Using the Airborne Internet for Cost Effective Airport Information	Edwin Tirona, Dynamic Systems Integration
03:15 – 03:45 pm	Unified Air-Ground IP Networks – Ground Infrastructure	Jocelyn Descallot, SITA
03:45 – 04:15 pm	ATN over IP Models for Evaluation	Crispin Netto, Computer Networks & Software, Inc.
<b>Session A2 – Integrated CNS Systems &amp; Architectures</b> <b>Session Chairs – Ann Tedford, FAA and Michael Zernic, NASA Glenn Research Center</b>		
01:00 – 01:30 pm	GCNSS Demonstration Segment A Flight Demonstration	Bob “Prof” Struth, Boeing Air Traffic Management
01:30 – 02:00 pm	A TDMA Broadcast Satellite/Ground Architecture for the Aeronautical Telecommunications Networks	Mohammed Shamma and Rajesh Raghavan, Analex Corporation
02:00 – 02:30 pm	MTSAT	Shigeki Masuda, Air Traffic Services Department, JCAB
02:30 – 02:45 pm	<b>BREAK</b>	
02:45 – 03:15 pm	Hybrid Terrestrial/Satellite High Bandwidth Aeronautical Communication Systems	Michael Farneth, Sensis Corp.
03:15 – 03:45 pm	Satellite Communications for ATM	Mohammed Shamma, Analex Corporation
03:45 – 04:15 pm	A Common Information Network for Aeronautical Communications	Mark Taylor, Boeing ATM
05:30 – 06:00 pm	Board Buses	
06:00 – 06:15 pm	Transportation to Evening Dinner from Hotel	
06:15 – 09:00 pm	Evening Dinner – Guest Speaker, Bob Jacobsen/NASA Ames Research Center <b>Cocktails sponsored by TECTURA Corporation</b> <b>Dinner sponsored by Raytheon Company</b>	

**3rd Integrated CNS Technologies Conference & Workshop Agenda**

**May 19 – 22, 2003**

**FINAL**

<b>Wednesday, May 21, 2003 – Track 1</b>		
07:30 – 08:30 am	<b>Registration/Continental Breakfast</b>	
<b>Session B1 – Datalink Communications Systems</b>		
<b>Session Chair – Mitch Huffman, Delta Airlines</b>		
08:30 – 09:00 am	Data in Voice (DIV) – An Aeronautical In-Band Messaging Service	Vince Campanella, FREQUENTIS
09:00 – 09:30 am	VDL Mode 3 Integrated Voice and Data Link	Thomas Kabaservice, Harris Corporation (presented by Carol Gabica)
09:30 – 10:00 am	Frequency Reuse, Cell Separation, and Capacity Analysis of VHF Digital Link Mode 3 TDMA	Mohammed Shamma and Thanh Nguyen, Analex Corporation, Rafael Apaza, Federal Aviation Administration
10:00 – 10:15 am	<b>BREAK</b>	
10:15 – 10:45 am	Controller Pilot Data Link Communications (CPDLC) Over VHF Digital Link (VDL) Mode 2	John Burks, ARINC
10:45 – 11:15 am	High Frequency Data Link Background and Future Plans	Pat deBarros, ARINC
11:15 – 11:45 am	ARINC ACARS Messenger	Rolf Stefani, ARINC
11:45 – 01:00 pm	<b>LUNCH – Sponsored by Boeing Air Traffic Management</b>	
01:00 – 01:30 pm	Developing the Air Traffic Controller-Computer Interface for Controller-Pilot Data Link Communication	Robert Potter and Benjamin Linn, CTA, Inc.
01:30 – 02:00 pm	Advanced Airport Data Link - Concept and Demonstrator Implementation for a Modern Airport Data Link	Erik Haas and Michael Schnell, German Aerospace Center
02:00 – 02:30 pm	SITA ATS Aircom Data Link Services and What's Next?	Kathleen Kearns, SITA
02:30 – 03:00 pm	The Aeronautical Data Link: Decision Framework for Architectural Analysis	A. Terry Morris and Plesent Goode, NASA Langley Research Center
03:00 – 03:15 pm	<b>BREAK</b>	
<b>Session C1 – Navigation</b>		
<b>Session Chair – Rafael Apaza, Federal Aviation Administration</b>		
03:15 – 03:45 pm	The Past, Present, & Future of LAAS	Gary Skillicorn, Federal Aviation Administration
03:45 – 04:15 pm	A Real-Time Bi-Directional Differential Global Positioning System	Chris Bartone and Ranjeet Shetty, Ohio University
04:15 – 04:45 pm	CNS/ATM for Tactical Military Aircraft	Steven Frain, Naval Air Systems Command and Garth Van Sickle, DCS Corporation
04:45 – 05:15 pm	Vertically-Guided Instrument Approaches Using the Wide Area Augmentation System (WAAS)	Emily Calle, H. Leslie Crane, S.Vince Massimini and Frederick Niles, The MITRE Corporation
12:00 – 06:00 pm	SATS Airborne Internet Demonstration	Board Room

**3rd Integrated CNS Technologies Conference & Workshop Agenda**

**May 19 – 22, 2003**

**FINAL**

<b>Wednesday, May 21, 2003 – Track 2</b>		
07:30 – 08:30 am	<b>Registration/Continental Breakfast</b>	
<b>Session B2 – Surveillance Systems</b>		
<b>Session Chairs – Len Carlson, Technology Services Corp. and Marc Viggiano, Sensis Corp.</b>		
08:30 – 09:00 am	Using Automatic Dependent Surveillance Broadcast (ADS-B) and Other Technologies to Enhance Safety and Efficiency in the NAS	Ken Leonard, Federal Aviation Administration
09:00 – 09:30 am	NASA AATT HITS Program (Helicopter In-Flight Tracking System) FAA Safe Flight 21 En Route and Oceanic Applications	Anastasios Daskalakis and Patrick J. Martone, U.S. DOT Volpe Center
09:30 – 10:00 am	Evolution Path of a Surveillance Data Network	Scott Remillard and Chris Smith, Sensis Corporation
10:00 – 10:15 am	<b>BREAK</b>	
10:15 – 10:45 am	Intent or How Do We Get to Trajectory-Based Air Traffic Control and Management?	Mike Harrison, Aviation Management Corporation
10:45 – 11:15 am	Development of a Vehicle Independent Surveillance Data Collection System	Seamus McGovern and Kam Chin, DOT Volpe Center
11:15 – 11:45 am	Implementing a Smart Landing Facility for Mixed Traffic	Tim Pratt, Eric Shea and Charles Florin, Virginia Tech
11:45 – 01:00 pm	<b>LUNCH – Sponsored by Boeing Air Traffic Management</b>	
01:00 – 01:30 pm	High Performance Situation Display Capability for the CNS/ATM Domain	Waseem Naqvi and Jean-Marie Dautelle, Raytheon
01:30 – 02:00 pm	Evolving Advanced Traffic Surveillance Prototype Avionics Towards Products	Sethu Rathinam, Rockwell Collins
02:00 – 02:30 pm	Improved Emergency Locator and Tracking Beacons for Aircraft	Tim Pratt, Eric Shea and Charles Florin, Virginia Tech
02:30 – 02:45 pm	<b>BREAK</b>	
<b>Session C2 – Airborne Internet</b>		
<b>Session Chairs – Pete McHugh, Federal Aviation Administration and James Meer, Microflight</b>		
02:45 – 03:45 pm	A Small Aircraft Transportation System... Can be Networked...	Ralph Yost, Federal Aviation Administration Tech Center (presented by Pete McHugh, Federal Aviation Administration)
03:45 – 04:15 pm	Real-Time Small Aircraft Transportation System (SATS) Engineering Test Bed for the Definition, Development and Validation of Operations Using an Airborne Internet (AI) Architecture	Steve Friedman and Wendell Turner, ADSI, Inc.
04:15 – 04:45 pm	Aviation Web Services the JEMPRS Story	Randy Schmidt, Ken Garove and Eric Kramer, Microsoft Corporation
12:00 – 06:00 pm	SATS Airborne Internet Demonstration	Board Room

**3rd Integrated CNS Technologies Conference & Workshop Agenda**  
**May 19 – 22, 2003**  
**FINAL**

<b>Wednesday, May 21, 2003 – Track 3</b>		
07:30 – 08:30 am	<b>Registration/Continental Breakfast</b>	
<b>Session B3 – Simulation and Modeling</b> <b>Session Chairs – Fred Seelig, MITRE and Thanh Nguyen, Analex Corporation</b>		
08:30 – 09:00 am	Boeing ATM Tools, Models and Simulations	Joni Robbins, Boeing
09:00 – 09:30 am	Modeling CNS for the Virtual Air Space Technologies Toolbox	Steve Mainger, NASA Glenn Research Center and Tom Mulkerin, Mulkerin Associates Inc.
09:30 – 10:00 am	Testing Complex Communication Systems in a Virtual Environment	Manuel Garcia, ViaSat, Inc.
10:00 – 10:15 am	<b>BREAK</b>	
10:15 – 10:45 am	IPv6 Modeling in OPNET	Taylor Salman, OPNET Technologies, Inc.
10:45 – 11:15 am	General Aviation Aircraft Data Communications Analysis Using a Web-Based Tool	Tom Mulkerin, Mulkerin Associates and Michael Zernic, NASA Glenn Research Center
11:15 – 11:45 am	A Performance Study of the ATN COTP over the VDL Mode 3 Subnetwork	Brian Hung, MITRE
11:45 – 01:00 pm	<b>LUNCH – Sponsored by Boeing Air Traffic Management</b>	
01:00 – 01:30 pm	Evaluating VDL Mode 2 Performance Through Simulation	Steven Bretmersky and Vijay Konangi, Cleveland State University and Robert Kerczewski, NASA Glenn Research Center
01:30 – 02:00 pm	A Comparison of Mode S ADS-B Performance in Three LA Basin 2020 Scenarios	Rajesh Raghaven, Analex Corporation
02:00 – 02:30 pm	RF Design and Spectrum Analysis Methods	Minh Nguyen, MITRE
02:30 – 02:45 pm	<b>BREAK</b>	
<b>Session C3 – Digital Flight Information Service</b> <b>Session Chair – Mike Jarrell, NASA Glenn Research Center and Tom Tanger, Lockheed Martin M and DS</b>		
02:45 – 03:15 pm	Turbulence Auto-Pirep System (TAPS)	Paul Robinson, AeroTech Research
03:15 – 03:45 pm	Evaluating Safety Results from Capstone Phase 1 and Interim Assessment of 2000-2001	Worth Kirkman, MITRE
03:45 – 04:15 pm	Updating Electronic Charts Using ADS-B Broadcast Services	Gary Livack, Federal Aviation Administration and Ken Staub
04:15 – 04:45 pm	CoopATS: The Cooperative Air Traffic Services Concept	Jose Roca, Eurocontrol
04:45 – 05:15 pm	Integrated Cockpit Systems as Aviation Moves Forward	Gary Stuteville, Honeywell
12:00 – 06:00 pm	SATS Airborne Internet Demonstration	Board Room

**3rd Integrated CNS Technologies Conference & Workshop Agenda**  
**May 19 – 22, 2003**  
**FINAL**

<b>Thursday, May 22, 2003</b>		
07:30 – 08:30 am	<b>Registration/Continental Breakfast</b>	
08:00 – 08:30 am	<b>Prep Meeting for Workshop Breakout Session Chairs – Board Room</b>	
<b>Session D1 – Security Initiatives Impacting CNS</b> <b>Session Chairs – Marie Stella, FAA and Gus Martzaklis, NASA Glenn Research Center</b>		
08:30 – 08:40 am	Introduction and Session Objective	Gus Martzaklis, NASA Glenn Research Center
08:40 – 09:00 am	MOMS (Management, Operational and Maintenance Security) in the NAS – the Challenge of the New Millennium	Marie Stella, Federal Aviation Administration
09:00 – 09:30 am	Data Link Security for Airline Operational Communications and Air Traffic Service - <i>An Opportunity for Synergistic Efforts</i>	Donald Kauffman, Honeywell
09:30 – 10:00 am	Providing the Foundation for Security Certification within U.S. Government Civil Agencies Integrated Communications, Navigation, and Surveillance (ICNS)	Beryl Hosack and Joe Guirrerri, Computer Sciences Corp.
10:00 – 10:15 am	<b>BREAK</b>	
10:15 – 10:45 am	An Architectural Concept for Intrusion Tolerance in Air Traffic Networks	Jeff Maddalon and Paul Miner, NASA Langley Research Center
10:45 – 11:05 am	Security Considerations for the Future e-Enabled Aircraft	Chris Wargo and Chris Dhas, Computer Networks & Software, Inc.
11:05 – 11:25 am	North American Aerospace Surveillance Council (NAASC) & Inter-agency Homeland Air Security (IHAS) Foundations for the Future	Tim Wallace, Federal Aviation Administration (presented by Dave Vechik)
11:25 – 11:45 am	Securing the Vehicle and the NAS: Information Security and CNS Hardening Research Issues	Gus Martzaklis, NASA Glenn Research Center
11:45 – 01:00 pm	<b>LUNCH</b>	
<b>Session D2 – Software Radio</b> <b>Session Chairs – Jim Budinger and Richard Reinhart, NASA Glenn Research Center</b>		
08:30 – 09:00 am	Software Radio (R)Evolution and its Application to Aeronautical Mobile Communications	Minh Nguyen, The MITRE Corporation
09:00 – 09:30 am	Software Definable Radio Aviation Key to Global Interoperability	Michel Gelinias, Mike Durkin and Chris Long, General Dynamics Decision Systems
09:30 – 10:00 am	The Software Defined Radio	Edward Calhoun, Rockwell Collins
10:00 – 10:15 am	<b>BREAK</b>	
10:15 – 10:45 am	Wideband Software Defined Radio (SDR) Design Using Field Programmable Gate Arrays (FPGAs)	John Porcello, Booz-Allen & Hamilton and Ramon Llanos, Electronic Combat Division, Intelligence and Information Warfare Directorate (I2WD), US Army CECOM
10:45 – 11:15 am	Software Reuse in Safety-Critical Systems	Leanna Rierson and Barbara Lingberg, Federal Aviation Administration
11:15 – 11:45 am	Joint Tactical Radio System (JTRS) Program Status and JTRS ORD Waveforms R/Evolution	Gene Harrison, MITRE
11:45 – 01:00 pm	<b>LUNCH</b>	
<b>Workshop Breakout Sessions</b> <b>Break 3:00 – 3:15 pm</b>		
01:00 – 01:15 pm	I-CNS Workshop Overview	Robert Kerczewski, NASA GRC
01:15 – 05:00 pm	Integrated CNS Architecture - Future Directions	Art Feinberg, Aviation Management Associates, Inc. and Chris Wargo, CNS, Inc.
01:15 – 05:00 pm	Modeling and Simulation of CNS Systems	Thanh C. Nguyen, Analex and Fred Selig, MITRE/CAASD
01:15 – 05:00 pm	Software Defined Radio - Technology and Requirements	Jim Budinger and Rich Reinhart, NASA GRC
01:15 – 05:00 pm	Next Generation Terrestrial Air-Ground Datalink	Rafael Apaza, FAA, Rob Fuschino, United Airlines
01:15 – 05:00 pm	Future Surveillance Systems	Jim Branstetter, FAA
01:15 – 05:00 pm	Information Security and CNS Hardening	Gus Martzaklis, NASA GRC and Marie Stella, FAA
05:00 – 05:30 pm	Breakout Session Brief Out	All

**3rd Integrated CNS Technologies Conference & Workshop Agenda**  
**May 19 – 22, 2003**  
**FINAL**

<b>Friday, May 23, 2003</b>		
8:00 am	Executive Committee Continental Breakfast	
8:30 am	Executive Committee Session	
12:00 pm	Executive Committee Adjourns	