

Ralph Yost

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Objective: Contribute to the advancement of aviation and UAS-NAS Integration; implementation of the Next Generation Air Transportation System and air traffic management

Overview:

- Over 34 years of leadership experience in UAS-NAS Integration, aviation communication, navigation & surveillance systems as a senior engineer and team leader.
- Strategic thinker who links technical capabilities/goals with political realities to create realistic corporate solutions.
- Expert in UAS-NAS integration.
- Originated aviation's Airborne Internet/Networking concept.
- Author and prolific writer, public speaker and effective communicator.
- Led teams performing UAS Integration, electromagnetic compatibility testing; testing of surveillance, navigation, and communications systems.
- Extensive knowledge of FAA's NAS system labs.
- Former Test Director for Telecommunications for the FAA.
- Nationally recognized expert in airport security systems.
- Entrepreneurial experience with computer networking business for 12 years.
- Extensive Interagency government experience working across government agencies: DoD (Pentagon, Air Force, Army and Navy, Air Force Comm. Agency, Air Force Research Lab, U.S. Army Aviation and Missile Command), Energy (Sandia National Labs), NASA (Langley and Glenn Research Center); State and local government and authorities.
- Supported the establishment of the NextGen Aviation Research Technology Park (ARTP) anticipating the creation of more than 2000 professional jobs.
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Aviation Engineer Consultant: (Anchor Aviation LLC, 2011-present) Independent aviation consultant supporting clients with expert knowledge in systems engineering relative to UAS-NAS Integration, the NAS, NextGen, Airborne Internet (especially communication, navigation and surveillance, systems.) and proposal writing/editing. Proposal team member who won one of six UAS Test Site designations from the FAA. Primary engineer to stand-up the UAS Test Site, writing early docs, designing/implementing infrastructure capability, briefing FAA, etc.

Expert in NAS and NextGen systems: (FAA, 2000-2011) Expert in NAS and NextGen systems, implementation and integration. Provided expert consultation to FAA management on NAS system integration issues. Contributor to NextGen R&D, system engineering planning, Enterprise Architecture. Contributing author of the Joint Planning Development Office's Concept of Operations for NextGen. Coordinated corporate matching with FAA project areas to support Cooperative Research and Development Agreements (CRDA).

Unmanned Aircraft System (UAS) (FAA, 2007-2009) Project Lead of technical team researching the integration of UAS into the National Airspace System (NAS). Created the UAS integration lab within the NextGen Integration Evaluation Capability (NIEC) lab. Responsible for the acquisition of two UAS simulators, a flight management system simulator/trainer which comprised the core UAS capability of the UAS Integration Lab. Was the FAA Technical Center's lead to the DoD's Ground Based Sense and Avoid (GBSAA) UAS program, Joint Integrated Product Team for UAS working on early solutions to UAS Integration into the NAS. Expert on the use of various ground-based radar, sites and geographic locations as early solution for UAS-NAS Integration. Creator of the UAS Communications Modeling capability for the FAA Technical Center. Selected the modeling software, servers, managed the personnel who operated it and oversaw the work effort to model UAS radio link scenarios. Member of RTCA SC-203 specializing in Command, Control and Communication Systems for Unmanned Aircraft Systems. Expert in UAS-NAS integration.

Airborne Networking R&D Program: (FAA, 1999-2007) Created and conducted the eight year advancement of Airborne Internet/Airborne Networking. Originated the idea to create an aviation

communications concept to provide network connectivity to aircraft based on an open system, scalable architecture which provides a robust datalink. The general purpose, multi-application data channel is for all communications, navigation and surveillance exchanges. Flight tested and proved feasibility. Led this world leader project in civil aviation airborne networking. Published numerous papers and articles. Drafted and put in place an Interagency Agreement with the Air Force Communications Agency. Established collaboration with the Air Force Research Lab and the Navy. Awarded NASA's prestigious "Turning Goals Into Reality" award for Air Mobility.

FAA Lead for Small Aircraft Transportation System (SATS): (FAA, 2000-2004) FAA's Technical Lead to NASA for SATS. Provided leadership role of Communications Navigation and Surveillance Working Group; NAS Systems Expert technical adviser to FAA's SATS Program Manager. Extensive interagency work with NASA Langley and Glenn Research Center. Leadership role in the SATS live High Volume Operations (HVO) flight demonstration; Responsible for planning and execution of FAA's aircraft in HVO and creation of the HVO, communications and surveillance technical capability on board FAA aircraft.

Aviation Weather Systems: (FAA, 1994-1998) Test Director for weather systems for NAS. Automated Lightning Detection And Reporting System (ALDARS), AWOS Data Acquisition System (ADAS), Airport Communications Equipment Integrated Display System (ACE IDS).

Aviation Security R&D: (FAA, 1991-1994) Program Manager Airports Research (Actg.): Directed \$27 million program; 25 staff., Created budget, responded to OMB pass backs, etc. Recognized as a national expert and leader in airport security. Lead national group to establish national airport access standards. Managed and conducted live security testing at a CAT X International airport. Conducted precedent setting analysis of economic impact on all domestic air travel for positive passenger baggage matching. Close working relationships with top executives of all major U.S. airlines and regional air carriers, Air Transport Association and Regional Airline Association.

Test Director for FAA Telecommunications: (FAA, 1986-1991): Created the FAA's only multi-site microwave link RF test bed to test NAS communications systems. Expertise in Radio Communications Link (RCL), Low Density Radio Communications Link (LDRCL), and RCL Circuit Restoral system (RCR).

Test Director for Electromagnetic Compatibility (EMC): (FAA, 1982-1986) FAA Test Director for testing of DoD's Joint Tactical Information Distribution System (JTIDS) against all NAS systems in the Aeronautical Radionavigation band, including. Mode S surveillance, 2nd Gen. VORTAC, Distance Measuring Equipment (DME), ATCBI-5 air traffic radar and avionics. Led testing of DoD's Identify Friend or Foe (IFF) system.

Landing Systems - Math Modeling, Data Collection & Analysis: (FAA, 1980-1982): Performed math modeling of Instrument Landing System (ILS) and Microwave Landing System (MLS). Performed flight data collection, reduction and analysis of MLS systems.

Master's Degree in Aviation Management: Embry Riddle Aeronautical University.
BSEE: Pratt Institute, 1981, Magna Cum Laude
Assoc of Science in Electronics 1978, Atlantic Cape Community College
Licensed pilot with instrument and sea plane ratings.

Additional Accomplishments -

Life member of Eta Kappa Nu (EE Honor Society)
2nd Class FCC Radiotelephone license w/ Radar Endorsement
Certified EMC Engineer by INARTE (Intl Assoc. Radio, Telecom & Electromagnetics)
HAM Amateur Radio License (General),