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AIRPLANE/SYSTEMS SAFETY & SYSTEMS INTEGRATION/ FLIGHT TEST ENGINEERING/ENGINE CONTROLS/ETOPS/SYSTEMS ENGINEERING/UAS/SPACECRAFT SAFETY AND SURVIVABILTY/AIR TRAFFIC SYSTEMS MANAGEMENT/ FLIGHT CREW OPERATIONS INTEGRATION/AVIONICS/ AIR SAFETY ENGINEERING/ FLIGHT TEST/ CERTIFICATION/ PROJECT COORDINATION/MANUFACTURING ENGINEERING

Offer a unique combination of education and expertise including Master of Aeronautical Science/Bachelor of Mechanical Technology, Airplane/ Systems Safety & Systems Integration Management/ Flight Test/ Engine Controls, ETOPS, Spacecraft Safety, UAS, Air Traffic Systems research and management, test set up and certification, Flight Crew Operation Integration, Air Safety Engineer, flight test engineer/crew member, and project coordination. Extensive experience with troubleshooting and problem-solving technical issues while interfacing with multiple organizations. Proven ability to deliver innovative solutions and leading teams that fully support meeting cost, schedule, and corporate objectives, e.g., saved millions of dollars on several programs through innovative solutions involving basic design, flight test vehicle choice, program planning, intellectual property protection, ensure compliance to applicable regulations, and reduction in overall program costs while meeting, or exceeding, program requirements.

**Senior Systems Safety Engineer**

**Stratolaunch Corp.** (contract via Aerotech)JULY 2018- DECEMBER 2018

*Senior Systems Safety Engineer*

* Performed hazards analysis on Roc carrier aircraft, using tools such as FHA/FTA/FMEA/JAMA
* Developed overall future continued airworthiness safety plan of Stratolaunch- Roc Carrier Aircraft

**CEO, Bixler Aerospace LLC** JANUARY 2018- present

*CEO- Aerospace Consulting – 34+ years of providing world class expertise in aerospace solutions*

* Airplane / UAS/ Spacecraft Systems Safety
* Systems Engineering
* Flight Crew Operations Integration
* Certification / regulatory agency coordination
* Air Traffic Management
* Flight Test support
* Project Management
* Manufacturing Engineering
* **(See below for further detail on experience offered)**

**MITSUBISHI AIRCRAFT** (contract via MITAC) FEBRUARY 2016-NOVEMBER 2017

*Engineering Manager- Particular Risks Analysis Specialist Advisor / Flight Crew Operations Integration*

Lead/ advise the PRA Team for Airplane Safety on the Mitsubishi Regional Jet

* Lead a team of engineers to perform the PRA per ARP 4761, and then advise on the PRA process for MITAC
* Mentoring engineers new to the PRA and safety design process
* Ensure compliance to regulations (JCAB/FAA/EASA)- FAR 25.1309
* Work across several groups, interface with upper management on a daily basis
* Troubleshoot and advise on major program issues, such as Avio Bay A/C 25.795-7 requirements
* FCOM / Flight Deck - Ensuring that MRJ meets the FAR Part 25/ 121 requirements with Vol1/ Vol2/ QRH/ CAS Messaging with the Flight Deck / Human Factors teams

**UNITED TECHNOLOGIES AEROSPACE** (contract via Adecco) MARCH 2015-JANUARY 2016

*Senior Lead Flight Test Engineer*

Innovate/ Consult on the PW1524/ Bombardier CSeries flight test certification program

* Innovate new processes/ procedures for the PW 1524G geared turbofan flight testing - support of the thrust reverser, fan cowl, inlet and associated hardware for UTAS
* Configure the flight test airplanes with the proper nacelles (inlets/ fan cowls/ thrust reversers)
* Lead a team of mechanics/ QA to get the airplane ready for test flights, then receive the airplanes and inspect/repair as necessary
* UTAS representative in pre/ post flight activities

**HONEYWELL AEROSPACE** (contract via Cyient, Inc) JULY 2014-OCTOBER 2014

*Senior Aerospace Engineer- Engine Controls*

Testing engine control software, writing test cases and requirements for the AS907 engine on the G-280 program

* Responsible for Time Limited Dispatch requirements testing and database management

**BOMBARDIER AERO** (contract through Noramtec) APRIL 2013-MARCH 2014

*Senior Aerospace ETOPS Systems Engineer*

Global 7000/8000 business jets are Entry Into Service - ETOPS ready, from design to flight test, to entry into service.

* Requirements management for ETOPS on these programs
* Ran the ETOPS Integrated Product Development Team
* Harmonized all ETOPS related program activities across all departments (Systems, Flight Test, Customer Services, etc.)

*I utilized my Safety experience by reviewing FHAs and FTAs on ETOPS critical systems with the associated Section Chiefs and Lead Systems enginerrs. Since Bombardier had never done an ETOPS program before, I performed extensive reviews of their PSSA/FHA/FTA/PRA/ZSA per ARP 4671/ 4754/D0-178B/DO-160, and ensured their requirements verification and validation plans were certifiable. I also assisted them with their overall PRA per ARP 4761. My supervisor for ETOPS, Mr. Brian Alphonso, was also the Section Chief for RM&S for the Global 7000/8000, and I worked with him and other R&MS personnel on a daily basis, mentoring as required.*

Highlight of Achievements

* Personally wrote the ETOPS flight test plan, and the corporate governance procedure on ETOPS execution for BA

**ICARUS INTERSTELLAR** (volunteer position) SEPTEMBER 2011-JANUARY 2016

*Lead Designer-Module 18 – Spacecraft Safety and Survivability*

Internal and external safety analysis. Educate and lead the II Team with regards to Safety & Reliability processes and requirements.

Highlight of Achievements

* Systems Integration, Systems of Systems Management, and Systems Safety implementation
* Leading the preliminary hazard analysis on several designs, using FHA/FTA/FMEA methods

*To sum, I was instructing 30 PhDs on the use of basic Safety methodology on an everyday basis, because their experience has been mostly writing scientific papers, and they weren’t grounded in the fundamentals of systems safety. I have introduced them to systems redundancy, system fail-safe design, failure modes and analysis, etc.*

**TASC, INC.** SEPTEMBER 2010 – APRIL 2013

NEXT GEN SYSTEMS INTEGRATION & IMPLEMENTATION – WASHINGTON, D.C.

*Senior Aerospace Systems Engineer – +Next Gen Implementation & Integration*

Senior consultant to the FAA on NextGen I & I, Program Risk Management, Integrated Master Schedule, Air-Ground Equipage, Unmanned Aerial Systems integration into the National Airspace System (member of RTCA SC-203), Systems Safety and Risk, Human Factors for Next Gen. Performed safety analyses for NextGen per SMS.

Highlight of Achievements

* Originator of new methodology for speedier and more precise way of getting overall acceptance of UAS in the NAS- improved safety and certification data tracking via the ETOPS process per Advisory Circular, Federal Aviation Regulations and FAA Orders
* Technical Lead for 1090 MHz Spectrum Congestion Mitigation safety analyses, leading 2 other subcontractors, assessing several alternatives from a safety perspective
* SC-203 Working Group 4- generating safety requirements for UAS in the NAS
* Interoperability Focal for Air-Ground Equipage, assessing NextGen systems effects on airplanes

**NATIONAL AERONAUTICS & SPACE ADMINISTRATION** JULY 2009 – MAY 2010

CREW SYSTEMS AND AVIATION OPERATIONS BRANCH – HAMPTON, VA

*GS-14/Senior Aerospace Engineer –Air Traffic Operations Simulation (ATOS) Lead/Senior NextGen Air Traffic Systems Safety Analysis*

Led planning and scheduling research in the Air Traffic Operations Lab (ATOL), coordinating between Branch management and Project Principal Investigators, developing 5-year plan for the ATOL, performing systems safety assessments on NextGen air traffic systems, and proposing/integrating new flight deck interfaces for these systems

Highlight of Achievements

* Conflict Detection & Resolution flight deck interfaces for Autonomous Flight Rules/AFR Safety assessment- work with industry pilots and NASA researchers to ensure that Airborne Self Separation proposals meet the safety requirements of the NAS

*I was the NASA Safety focal for Interval Management, an ATC process to ensure separation of air traffic using IM. One example- I reworked the fault trees for controller human error. Air traffic controllers were claiming a .9999 reliability rate. I was skeptical of that, and introduced and utilized the Kirwan Human Factors model for human reliability, based on methods from the nuclear power industry, which is in use by Eurocontrol. By applying that models methodology to the fault trees, I came up with a more reasonable numbers for the FTA, and those numbers were what was published in the official Interval Management safety assessment by the FAA.*

**THE BOEING COMPANY** AUGUST 1984 – JUNE 2009

BOEING COMMERCIAL AIRPLANE GROUP – SEATTLE, WA

*Engineer 3 – Flight Deck/Flight Crew Operations Integration (November 2006 to June 2009)*

*Airframe Systems for 747-8, 777 Freighter, 747/767/777 Production, and 747-8 Engineering Cab Simulator Focal*

*I had to call on my extensive Safety experience to rework the On Board Weight and Balance System for the 777F. To sum, the existing supplier was using Level D software, and I demonstrated several Level B, and 1 Level A, failure modes. After 6 months of extensive negotiation with 777 Program Management, with the backing from 777 Chief Technical pilot and others, the vendor was changed, and a supplier/ system that was in alignment with the ARP 4761 requirements was instituted, based on my Safety efforts and knowledge.*

Highlight of Achievements

* Led, planned and performed all regression testing for 747-8 Simulator (Engineering Cab) in support of FAR Part 25 certification program- flew Boeing B1 profile 2-3x/week as PIC
* Innovated with new crew operations procedures for all models listed above, using CRM and other flight deck safety processes
* Led safety analyses on new flight deck designs
* Flew the engineering cab on all other Boeing models as well, and tested avionics systems interfaces/ procedures including FMS/ HGS/ Wx Radar/ OBWBS

**THE BOEING COMPANY** AUGUST 1984 – JUNE 2009

BOEING COMMERCIAL AIRPLANE GROUP – SEATTLE, WA

*Engineer 3- Airplane Safety Engineering* (October 2000 to November 2006)

787 Airplane Safety/Analysis: Led the Systems Survivability Review Team. Represented Airplane Safety as focal for Propulsion, ETOPS, Mech/Hydraulics and Flight Controls. In-service Air Safety included analyzing aircraft events and making safety determinations/dispositions, and representing the Air Safety organization at Engineering Investigation Board/Fleet Support Review Board/Safety Review Board/AIR Board. Supported accident investigations and continuing airworthiness objectives for Boeing aircraft.

Highlight of Achievements

* ETOPS. Mechanical Systems/Hydraulic Systems, and Flight Controls focal for Airplane Safety on the 787
* Led the Systems Survivability Review Team for 787 Airplane Safety
* Established Particular Risks Analysis plan for 787 Program per SAE ARP 4761, utilizing such tools as FHA/FTA/FMEA
* 707/727/737 Safety Advisor focal for all Air Safety issues and supported accident investigations on these aircraft
* Propulsion Technical focal for Safety on 707/727/737/737NG/787 aircraft

*Specialist Airplane Level Test/FAA Part 21/25 Certification Engineer* (June 1993 to October 2000)

Flight Testing/Certification: Boeing Flight Test- FAA Coordination- ensured all FAR Part 25 certification efforts on the 777 series, the 767-300/-400ER and the 747-400 airplanes were successful; creating and implementing Behavior Assurance Plan/Service Ready flight testing. Planned/conducted all First of a Model flight testing on the 777/747/767.

Highlight of Achievements

* 777 Flight Test certification/FAA coordination: Aided in obtaining joint FAA/JA type certification and ETOPS type design approval – an aviation first for transport category aircraft. Responsible for Function & Reliability flight testing per FAR 21.35, Part 25. Responsible for all 747/767/777 flight test certification programs
* Planned/performed ETOPS and F&R testing for 777-200/-300

*Senior Flight Test Operations Engineer* (January 1987 to June 1993)

Flight Test: Operations- control and maintenance of Flight Test airplanes' engineering configuration, test directing, flight test operations safety, certification testing, troubleshooting and resolving technical issues pertaining to Flight Test airplanes, controlling test airplanes' gross weight and center of gravity while in flight, and ensuring cabin safety.

Highlight of Achievements

* Flying and telemetry support, generating test plans and test cards, test risk assessment on all Boeing models
* Lead Operations Engineer on several Flight Test programs

*Manufacturing Engineer*  (September 1984 to January 1987)

Manufacturing: Completed two-year rotation program involving working in several diverse organizations and performing many different tasks. Organizations include 757 Change Management, Aircraft Body Structures Planning, Liaison and Manufacturing Coordination and Producibility, among others. In all of these assignments, a short training period was given, then full productivity was expected.

Highlight of Achievements

* Integral part of 707 Rohr Recall in which the subcontracted body structures were returned to Boeing and all of the manufacturing plans had to be revised rapidly
* Personally rewrote the overall manufacturing plan for 707 (E-6, E-3) 46 section lower lobe

**RELEVANT CONTINUING EDUCATION AND EXPERIENCE**

* Flight Safety Foundation- International Air Safety Summit, Seattle, WA, November 2018
* Private Pilot with ~ 1200 hours in various aircraft types. 3000 hours as a flight test engineer on all Boeing models
* Boeing representative, International Society of Air Safety Investigators- Seminar 2005
* Aircraft Accident Investigation & Management I & II – Embry Riddle Aeronautical University
* Aircraft Certification, University of Kansas, Lawrence, Kansas
* Certification and Continued Airworthiness for FAA – Designated Engineering Representatives, The Boeing Company, Seattle, WA

**EDUCATION**

Embry-Riddle Aeronautical University – Master Of Aeronautical Science (December 2004). Specializations in Flight Operations and Aircraft/System Safety

Purdue University – Bachelor of Science, Mechanical Technology (1984); Minors in Astronomy, Physical and Biological Anthropology