## **EDUCATION**

**PhD in Aviation,** 2013, Embry-Riddle Aeronautical University, *Collaborative Audio Transcription and Repair as a Method for Novice Pilots to Learn Approach Briefing Crew Resource Management (CRM) Skills.* 

**M.S. in Aeronautical Science**, 2009, Embry-Riddle Aeronautical University, Worldwide Campus-Ft. Walton Beach, Florida, Aviation/Aerospace Safety Systems Specialization.

B.S. in Aeronautical Engineering, 1986, Rensselaer Polytechnic Institute, Troy, New York.

## AVIATION CERTIFICATIONS AND EXPERIENCE

Airline Transport Pilot Type Ratings: ATR42/72; SD3 Private Glider 7,500 Hours Total Time

Commercial Sea Certified Flight Instructor, Instrument/Multi-Engine Tail wheel and Turbine Experience FAA Physiological Training

## **AVIATION EXPERIENCE**

**National Transportation Safety Board.** November 2010 to present, working within the Office of Research & Engineering, Recorder Division, assist with transportation accident investigations with a focus on aviation. Principle responsibility includes leading groups of subject matter experts in review of cockpit voice recorders from aviation accidents and creation of factual transcripts and reports used to determine probable cause. Other responsibilities include analysis of flight data recorders, video recordings, and forensic analysis of devices found onboard accident vehicles. April, 2011, attended NTSB Basic Accident Investigator two week course (AS101), covering methodology of accident investigation, legal aspects of NTSB, party system, interviewing, aircraft performance, wreckage analysis and numerous case studies. Assisted in over 200 accident investigations, the large majority in aviation, with some in rail and highway.

**Flight Instructor.** From 1985 to present, engaged in part time flight instruction in varied locations. From 1985 to 1986 served as President of the Rensselaer Polytechnic Institute Flying Club and as a flight instructor for Richmor Aviation in Schenectady, New York. In summer 1986, taught full time in Fairbanks, Alaska and later in 1986, part time for Miller Aviation in Binghamton, New York. From 1996 to 2002, taught part time in Danbury, Connecticut and then St. Simons, Georgia. From 2002 to present, taught varied instruction including sport, private, instrument and tail wheel out of Eglin AFB, Florida and airports in the Crestview, Florida area.

**Aircraft Owner.** From 1986 to 1987 owned Bellanca Citabria, Binghamton, New York. From 2002 to 2009, owned Maule MX-7-180. From 2006 to 2007 owned Cessna 152. From 2009 to 2011, owned Cessna 182RG Skylane.

**Commuter Airline Pilot.** From 1988 to 1996 flew as a crewmember for American Eagle on routes in the Northeastern United States, Florida and the Bahamas. Served as first officer in FAR part 135 operations in Shorts 330 from 1988 to 1989; Captain in Shorts 330 from 1989 to 1990; Captain in FAR part 121 Shorts 360 from 1989 to 1993; and Captain in ATR 42 from 1993 to 1996.

**On-Demand Charter Pilot.** From 1987 to 1988, flew as FAR part 135 captain in Beechcraft Baron based out of Burlington, Vermont for Montair Flight Service. Operations were on-demand, single pilot charter and cargo operations.

## **TEACHING EXPERIENCE**

Flight Instruction. As previously stated in Aviation Experience.

**Inmate Re-Entry Training.** From 2009 to 2010, formulated a lesson plan and administered six classes to teach inmates re-entering society parenting skills at the Okaloosa Correctional Facility, Crestview, Florida. Class is part of an overall plan by the state of Florida to use community volunteers to educate inmates to reduce recidivism. Each class had about 20-25 inmate-students.

**Microsoft SharePoint.** From 2006 through 2009 designed and administered corporate, hands-on training on the use of Microsoft's collaborative software platform, SharePoint. Training was conducted at Eglin AFB, Florida for the 308<sup>th</sup> Armament Systems Wing and Air Armament Command (AAC). In addition to group training, also conducted one-on-one training on an as needed basis. Additionally, wrote software learning management system software for the Wing and AAC.

**Database Training and Consulting.** From 1997 to 1999 taught one-on-one for the Corporate Angel Network in White Plains, New York the skills necessary to migrate a Paradox database to Microsoft Access. Custom database design was used to link the travel needs of cancer patient families with unused space on participating corporate flights.

**Corporate Software Training.** From 1997 to 1998 designed and administered training on word processing and corporate policy at the law firm of Davis, Polk and Wardwell in New York, New York.

**Educational and Business Software Training.** In 1996 managed the start up concept of delivering software training in retail, mall environment in Danbury, Connecticut for Computerology, Inc. The target demographic were ages five through adult. In addition to structured training classes, Computerology supervised children's use of educational software while their parents shopped in the mall.

**Business Software Training.** From 1992 to 1996, taught business software classes part-time for CompuTrain in Carmel, New York. Classes included word processing, spreadsheets, financial and database programming. Also taught quadriplegics how to control software through voice commands.

# **OTHER EXPERIENCE**

**Software Engineer,** TYBRIN Corporation, Ft. Walton Beach, Florida, June, 2005 to present. Administrative work included the documentation and use of software development models including agile practices and the Capability Maturity Model Integrated (CMMI). Research activities included comparison of competing software technologies and designs to solve the requirements problems posited by various customers. Teaching activities included design and administration of training programs to teach newly developed software products to the user community. Work conducted in the area of project and personnel management and mission and sortie scheduling.

**Software Engineer,** Fresh Beginnings, Niceville, Florida, November, 2002 to June, 2005. Administrative work included the documentation of created software products. Research activities included comparison of competing software technologies and designs to solve the requirements problems posited by various customers. Work conducted in the area of disintermediated customer relationship management and direct marketing for the auto industry.

Lead Developer, Software Quality Engineering, Orange Park, Florida, June, 2000 to November, 2002. Administrative work included the management of a development and test team of three employees and documentation of work products. Research activities included investigation of designs of legacy systems and discovery of replacement technologies and designs leading to corporate process reengineering. Teaching activities included teaching the user community how to use the newly implemented systems. Work conducted in the area of the management of magazine subscriptions, training seminars and conference registrations related to the software engineering community. Work also produced a new knowledge base website, http://www.stickyminds.com, related to best practices and guidance on software development.

**Chief Technology Officer,** Hollywood.com, MovieTickets.com and Broadway.com, Boca Raton, Florida, June, 1999 to June, 2000. Administrative work included the personnel management of four geographically separated technology departments as well as the local technology team. Research included discovery of designs and technologies to meet the business growth targets of the Chief Executive Officer, including the development of http://www.movietickets.com, the first real time seller of movie tickets on the Internet in the year 2000 and http://www.broadway.com, an online ticket seller for Broadway shows.

**Datamart Developer**, Integrated Health Systems, St. Simons, Georgia, September 1997 to March, 1999. Administrative work included the management of a datamart of home health care visits including the data quality of the datamart. Research included the discovery of legacy system designs used as data feeds to the datamart and methodologies to extract, transform and load such data into the newly developed datamart. The datamart empowered disintermediated operational reporting of home health care visits throughout the organization.

**Computer Support and Word Processing Specialist,** Davis Polk & Wardwell, New York, New York, September, 1996 to September, 1997. Administrative work included making edits to complex legal documents and Securities and Exchange Commission (SEC) filings based on pen and ink markups by firm lawyers. Teaching included the design and delivery of training on software products and corporate policy to firm employees.

**Entry Level Engineer,** Singer-Link Flight Simulation, Binghamton, New York, August, 1986 to June, 1987. Software development in FORTRAN programming language related to military flight simulators.

**Cooperative Education Student,** NASA Langley, Hampton, Virginia, June, 1983 to August, 1985. Alternating four month work assignments while attending college. Assisted researchers in the areas of cryogenic wind tunnel analysis, low speed wind tunnel analysis, material structural fatigue and laser polymerization.

## ACADEMIC PAPERS, THESES AND RESEARCH

Tuccio, W. A. (2013). "Aviation Approach Charts in an iPad World." *Journal of Navigation*, 66(1), pp. 135-147. doi: 10.1017/S0373463312000409

Tuccio, W.A.; Townsend, H. (2012). "A Linear Programming Model for Time-Alignment of Cockpit Voice Recorder and Flight Data Recorder Data." *Journal of Aviation Technology and Engineering (JATE)*, 2(1), article 4. doi: 10.5703/1288284314862

Joslin, R.E.; Goodheart, B.J.; Tuccio, W.A. (2011). "A Mixed Method Approach to Runway Incursion Rating." *International Journal of Applied Aviation (IJAAS), 11*(2), pp. 13-36.

Flight Risk Analysis Tool (FRAT). (2011-2013). Implemented the research website for FRAT, and gained Institutional Review Board approval for research as part of *Aviation Safety Information Analysis* and Sharing – General Aviation (ASIAS-GA): GA - Systems Safety Management Research sponsored by the Federal Aviation Administration.

Tuccio, W. A. (2011). "Aviation Accident Investigation Compared to Civil Litigation (AVA01)." *The Center for Computer-Assisted Legal Instruction.* Interactive lesson explaining the difference between aviation accident investigations and civil litigation. Case study approach reviews two accidents to explain concepts.

Safety Management Systems. (2010-2012). Assistant to Dr. Alan Stolzer on Contract No. DTFA03-02-D-0037 from the FAA WM J Hughes Technical Center "System Safety Management Transformation (SSMT) Safety Management System (SSM), Pilot Project Criteria/Requirements Development". Grant purpose was to provide guidance to design and manufacturing (D&M) firms on implementation of Safety Management Systems. Assistance included interviews with companies, summary reports and draft text. Contributed to documents providing guidance to D&M firms on how to write a system description. Advised the FAA on the data management issues related to SMS. Created a matrix comparison between SAE AS9100B and FAA preliminary D&M SMS framework.

Stolzer, A. (2011). "Appendix D: System Description & Hazard Identification Process" of the document *Design and Manufacturing Safety Management System (SMS) Pilot Project Guide*, 2011, published by the FAA, AVP-300 (my role was to compose document under direction of Alan Stolzer, PhD, principal investigator, and respond to peer reviews by SSMT working group and FAA)

Tuccio, W.A. (2011). "Heuristics to Improve Human Factors Performance in Aviation." *Journal of Aviation/Aerospace Education [JAAER]*, (Volume 21, Number 3), pp. [].

Tuccio, W.A. (2007). "A Comparison of Turf Management Practices at Turf Runway Airports in the Southeast." Capstone project, Master of Aeronautical Science, Embry-Riddle.

## AWARDS, PUBLICATIONS AND PRESENTATIONS

2012 FAA Center of Excellence for General Aviation (CGAR) Outstanding Student of the Year Award.

Tuccio, Bill. Various factual reports for *National Transportation Safety Board* accident investigations summarizing the contents of cockpit voice recorders, flight data recorders, and other electronic devices. Available in public dockets at <u>http://www.ntsb.gov</u>.

Tuccio, W.A. "Big Brother Testing". *www.stickyminds.com*, *http://www.stickyminds.com/s.asp?F=S14876\_ART\_2*, 2009.

Tuccio, W.A. "Turf Airport Study". Presented at Sun n' Fun Aviation Forums, Lakeland, Florida, April, 2008.

Wood, Janice. "Got Turf?" General Aviation News, pp. 25-26, March 21, 2008.

Tuccio, W.A. "Living With Your Plane: The Joy of Living with Your Plane". *Southern Aviator, August 6, 2003.* 

Tuccio, W.A. "Arnie Odegaard and his Sky Ranch Inn". Southern Aviation, March, 2003 (estimated).

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Tuccio, W.A. "Flight Plans, Stormy Requirements, and Other Extremes". *www.stickyminds.com*, *http://www.stickyminds.com/s.asp?F=S2481\_ART\_2, 2002.* 

## ENTREPRENEURIAL

**Aerocharts.com,** 2010-present. Apple Mobile applications including, aviation approach charts (iTerps), aviation trip planner (iFlyWhere), social aircraft site (Planes on Poles), airport time zone app (AirportZulu).

**W59.net**, 2002-2003. Developed a mail order concept to convert 8mm, DVD and VHS tapes to streaming video for delivery on the internet. The concept was targeted at a five year technology window where emerging internet broadband was ahead of the consumer ability to upload large, video files. The business strategy was to enable consumers and businesses to post links to video of products being sold on the internet and print classified publications.

**GPSNavSource,** 1998-1999. Investigated the possibility of using available government data to create an FAA approved, aviation GPS database source for GPS navigation devices.

**Internet E-Commerce,** 1997-2000. Developed internet based, generic e-commerce software in an effort to create an application service provider model for e-commerce. Application demonstrated on the Wright Brothers "Century of Flight" e-commerce store.

**One Way Round Trip,** 1997-1999. Developed internet based system to manage pilot rental currency and qualifications for Fixed Base Operators (FBO) around the world. The concept took advantage of emerging internet connectivity to enable general aviation aircraft renters to share aircraft qualification (i.e, checkout) information between different FBOs. The system also facilitated flight sharing through a geographical search engine. See www.archive.org, searching on "www.owy.com".