

Timothy B. Totten

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Enterprise Wireless Manager, Wireless Architect, Regulatory Affairs Expert

Career Profile

More than twenty-seven years' experience in the management of wireless technologies, wireless regulatory affairs, wireless systems architecture and related business functions at UPS

Broad experience managing highly productive teams responsible for all phases of the technology life cycle—strategic planning, system design, implementation and support

Elected to top leadership positions in key industry organizations including the Enterprise Wireless Alliance (Chairman of the Board), Aviation Spectrum Resources (Board of Directors) and the Aeronautical Frequency Committee (Chairman)

Expert in U.S. and international wireless regulatory strategy and compliance matters, specializing in aeronautical radio, land mobile radio and unlicensed wireless devices

Established UPS Spectrum Management Committee, providing an enterprise-wide approach to licensing, coexistence and device management, and management of wireless regulatory issues

Founded innovative UPS JetComm business unit, selling excess communications capacity and end-to-end services to other airlines; achieved consistent revenue and earnings growth while simultaneously reducing costs by leveraging existing technical assets and resources

Employment History

UPS - United Parcel Service (Louisville, Kentucky, U.S.A. - January, 1990 to present)

Wireless Architect (January, 2013 to present)

Wireless Manager / Lead Telecom Engineer (August, 1998 to December, 2012)

Radio Systems Supervisor (January, 1990 to July, 1998)

Subject matter expert responsible for architecture of wireless systems across the enterprise; represent the wireless regulatory interests of UPS at the FCC, FAA, U.S. Congress, ITU, EWA, IATA, A4A, ARINC, ASRI, RTCA, AEEC, ICAO, Ad Hoc Telecommunications Users Committee, USCIB, ICC and other industry forums; chaired UPS Spectrum Management Committee; provide expert technical consultation to UPS Strategic Enterprise Fund, Public Affairs, Advanced Technology Group, Transportation Technology Group, Aircraft Engineering and other business units; blend leadership, business acumen and technical skills to produce bottom-line results

SouthGain Enterprises, LLC (Louisville, Kentucky, U.S.A. - January, 2007 to present)

President. Manage all aspects of this startup, profitably engaged in import and online retail sales until 2015; currently pivoting toward opportunities in cryptocurrency and blockchain technologies

Speed Scientific School, University of Louisville (Louisville, Kentucky, U.S.A. - 1988-1989)

Graduate Teaching Assistant for ETEC-250 Communication Electronics and EE-551 Communication Lab; *Grader* for EE-550 Communication and Modulation

Gould Defense Systems, Ocean Systems Division (Cleveland, Ohio, U.S.A. - 1985-1986)

Cooperative internship. Designed noise simulator for MK48 torpedo testing; developed computer-controlled system for measurement of complex modulus; designed hardware and wrote controlling software for Wave Vector Driver; Confidential security clearance

Other Professional Leadership Experience

Chairman of the Board, Enterprise Wireless Alliance (EWA), 2005 to 2007; responsible for overall governance of this industry-leading trade association; continuously served in various roles on the Board of Directors and Executive Committee from 1992 to present

Director, Aviation Spectrum Resources, Inc. (ASRI) Board of Directors, May, 2017 to present

Chairman, Aeronautical Frequency Committee (AFC), three terms from 1995 to 2014; Liaison from AFC to ARINC Board of Directors, 1998 to 2006

Delegate, International Air Transport Association (IATA) delegation to the ITU World Radiocommunication Conference (WRC), 2000 to present

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Education History

Bachelor of Science, Electrical Engineering, December 1987; Speed Scientific School at the University of Louisville

Completed course work for Master of Engineering, Electrical Engineering, May 1989 (thesis pending). Merit scholarships: Eagle Scout, University Trustee's (full tuition)

Certificate, Fintech - Future Commerce, December 2016; Massachusetts Institute of Technology

Key Technical and Leadership Skills

- Aeronautical voice radio systems
- Aeronautical datalink (ACARS, VDL)
- Radio direction-finding (RDF)
- Communication console systems (Avtec)
- Trunked radio networks
- Point-to-point microwave links
- Satellite communication systems
- WiMAX/AeroMACS
- Antenna design
- High frequency (HF) radio systems
- Paging systems (1-way and 2-way)
- Radio/telephone interconnects
- RFID systems (active and passive)
- CMRS technologies—AMPS to LTE
- Voice Over IP (VOIP)
- Radio Over IP (ROIP), including ED-137
- Real Time Location Systems (RTLS)
- WLAN/Wi-Fi (802.11a/b/g/n/ac)
- Active filtering and noise reduction
- FAA T-PED allowance process
- ICAO-standard SELCAL
- Free space optics (FSO)
- Digital forward error correction techniques
- Ultra wideband (UWB)
- RF interference mitigation
- Ionospheric radio propagation analysis
- Digital logging recorders
- Bluetooth (802.15), BLE, iBeacon, Eddystone
- Wireless coexistence management
- Distributed antenna systems (DAS)
- Cryptocurrency and blockchain technologies
- Project planning and management
- RFP development
- System reliability analysis
- M & A analysis and implementation
- Technology lifecycle management
- PDIO technology management model
- Disaster recovery planning

Additional Qualifications

Aviation Industry Standards Development Experience - Served on numerous technical standards development committees and working groups under the auspices of RTCA, EUROCAE, AEEC and ICAO.

International Experience – Extensive travel experience throughout more than eighty countries in Asia, Europe, the Pacific, South America, the Caribbean and Africa. Skilled at conducting business in a variety of cultures. Eligible for Philippine residency status. Basic Spanish and Tagalog language skills.

Bitcoin, Cryptocurrency and Blockchain Technologies – Certified Bitcoin Professional (CBP Certification ID 1b8fc3). Provided technical review for upcoming book on dark web technologies by Ric Manning.

Writing Skills – Published articles in *Proceedings of the 31st Midwest Symposium on Circuits and Systems*, *Proceedings of the 111th Meeting of the Acoustical Society of America*, *The DX Magazine*, *CQ Amateur Radio Magazine* and other periodicals. Authored "Communications" chapter of UPS Flight Operations Manual (FOM) and sections of other FAA-approved technical publications. Authored numerous FCC and FAA regulatory filings.

Computer Skills – Strong skills across Windows, UNIX, Linux, Android; intermediate-level development experience in Pascal, BASIC, FORTRAN, Perl, HTML/CSS, Java, Javascript, PHP.

Licenses – Commercial FCC General Radiotelephone Operator License (GROL); top-level Amateur Radio licenses in U.S. (N4GN), Europe/CEPT (OH4GN) and Philippines (4F1GN).

Volunteer Activities – Co-founder, Temotu Development Fund; Director and Advisor, Northern California DX Foundation; Radio Merit Badge Counselor, Boy Scouts of America; Finance Chair and member of Administrative Council, Fern Creek United Methodist Church.