

JOHN T. MORING

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Summary

Systems engineer with extensive experience developing advanced communications systems from integrated circuits to international networks.

- System definition, specification, integration, verification
- Hands-on project management and business development
- Wireless communications systems, networking, and communications protocols
 - ⇒ Cellular/PCS, from AMPS, TDMA, CDMA, GSM, PHS to UMTS, LTE, WiMAX
 - ⇒ Wireless data: 802.11/Wi-Fi, 802.16/WiMAX, Bluetooth, Zigbee, SMS, paging
 - ⇒ Internet: TCP/IP, enterprise networking, network management
 - ⇒ Satellite networks & terminals
 - ⇒ Wireless applications: voice, data, location services, wireless local loop, enterprise
- Expert support for intellectual property development, evaluation, and litigation
- Standards contributor: IEEE, TIA, MIL-STD, 3GPP, 3GPP2
- Development and instruction of college and private courses in wireless and telecom
 - ⇒ University of Wisconsin-Madison, University of California-San Diego, University of Phoenix
- Co-inventor of US patents 7639159, 7813371, 7898432, 7969933, and 7974635 with multiple US and international patent applications pending

Employment History

1997 - present	Consultant	Encinitas, CA
1994 - 1997	Pacific Communication Sciences, Inc.	San Diego, CA
1991- 1994	Titan Linkabit	San Diego, CA
1988 - 1991	TRW, Inc.	Redondo Beach/Carson, CA
1981 - 1988	Hughes Aircraft Co.	Fullerton, CA

Education

1984	Master of Science, Electrical Engineering (Hughes Fellow) University of Southern California Specializations in Communications and Signal Processing.
1981	Bachelor of Science, Electrical Engineering University of Cincinnati Specializations in Communications and Computer Science.

Representative Experience

Communications Design & Analysis. Classical “systems engineering” work, including requirements definition and specification; functional partitioning; hardware/software high level design; interface definition; algorithm development; performance analysis. Products range from components, through modules, to systems.

- Standards development. Represented companies’ interests in standards bodies, including 3GPP2 (*cdma2000*), 3GPP, MIL-STD-188-182 (*UHF Satcom DAMA on 5kHz Channels*), ANSI-JSTD-014-1996 (*PACS*), TIA JSTD-036 (*Enhanced Wireless 9-1-1 Phase 2*). Primary author of several standards in the IEEE 1609 series *Wireless Access in Vehicular Environments*. Technical and editorial contributor to many Bluetooth test specifications.
- SCADA/telemetry system design. For a large metropolitan utility company, evaluated product offerings to support a robust wide area wireless monitoring and control network. Client has since implemented the recommended architectural approach using commercial cellular packet data services as the primary communication medium.
- Cellular smart phone design. Lead systems engineer on second generation (AMPS/TDMA/CDPD) consumer product, responsible for defining cell phone features and data modes, power management algorithms, user interface design, processor/memory choices, etc.

- Cellular handset location determination system. Generated a document set defining the requirements for locating cellular handsets to 125 meters in accordance with FCC mandate on wireless Enhanced 9-1-1 (E911), including system, subsystem, and interface specifications. Wrote test scenarios used by several major carriers for evaluation, acceptance and integration of E911 equipment.
- Network design and analysis. For two-way messaging start-up, designed national wide area network in support of a new wireless messaging/email deployment; developed capacity analysis, business case support, and protocols. For medical enterprise, analyzed network configuration/utilization and developed roadmap for increased security and capability, including routers, switches, firewalls, etc. Performed similar architecture tradeoff for rural electrical utility.

Business Development.

- Performed technical due diligence on pre-IPO and established companies, resulting in recommendations toward investment or acquisition. Individual deals valued in seven digits.
- For clients considering new products and services, performed market and partnership studies, including wireless E911 (cellular handset location), Personal Handyphone System (PHS) products, wireless local loop, and airborne voice communications business.

Management – Functional & Project.

- Supporting the Bluetooth Special Interest Group, responsible for developing documentation and process guidelines, reviewing new specifications, contributing to qualification documentation and web site, etc.
- As functional head of systems engineering group, responsible for career development, staffing, and reviews of 30+ systems and test engineers (concurrent with project/technical activity).
- Project lead for 12 engineers, plus subcontractors, in hardware identification and acquisition, software development, and system integration over two years for a military multi-continental intranet, later attached to the Internet.

Software Development. Have written a significant volume of software in the past, but have not kept coding skills current. Designed and built code in various environments using different methodologies, including C/C++, DOS/Windows, Unix, VMS, Fortran, HTML, and Visual Basic. Familiar with CASE tools, compilers, debuggers, emulators, problem trackers, etc.

Integration, Test, Certification.

- Wrote I&T plan and protocol test cases for early Bluetooth implementation. Developed a similar plan for a CDMA module. Wrote a test plan used for the formal qualification of a Bluetooth Baseband product.
- Collected and analyzed field interference data for 900 MHz vehicle location system; defined and executed cellular network characterization tests.
- Developed integration and trial (First Market Application) test plans for new features for multiple nationwide cellular carriers; managed the execution of same.
- Supported various aspects of the Bluetooth SIG's Qualification Program for seven years.

Intellectual Property & Litigation Support. Provided patent feasibility and value analysis, identification of potential inventions, and technical support during the patent application process. Have supported legal teams of multiple clients in wireless patent infringement litigation, including identification of prior art, claim chart development, alternate implementations to avoid infringement, Markman hearing, court filings, and expert report. In pre-litigation, researched existing products and performed tests and analysis to evaluate possible infringement.

Instruction & Other. Developed and teach multiple communications courses for University of Wisconsin-Madison and University of California San Diego extension programs. Taught college credit telecommunications classes for University of Phoenix. Developed training seminars for private clients, including *Personal Communications*, *Fundamentals of WiMAX*, *Enhanced 911 Services*, *Wireless LANs*, *802.x Wireless Capabilities*, and *Choosing the Right Short Range Wireless Technology*. Have spoken at industry conferences and contributed to *Newton's Telecom Dictionary* and *Handbook of RF and Wireless Technology*.