

# Stephen R. Palm

http://www.kiwin.com

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**Professional Summary:** Over 30 years of technical experience, specializing for the last 20 years in wireline and wireless data communication technologies, including 802.11 wireless local area networks, twisted pair and coaxial cable based home networking, DSL and voice-band modems. Responsibilities have included architecture design, technical evangelism, algorithm design, performance evaluation, optimization, and particularly the standardization of data communication technologies.

**Education:**

Ph.D. Electrical Engineering  
The University of Tokyo, RCAST March 1999  
Dissertation: Teleoperation via Bilateral Behavior Media: Visual Based Teleoperation Control with Accumulation and Assistance (Robotics & Image Processing)

M.S. Electrical & Computer Engineering  
Carnegie Mellon University. May 1989  
Thesis: Enhancement of Reverberated Speech using Models of Binaural Hearing.

B.S. Electrical Engineering, Cum Laude  
University of California, Irvine, June 1987

- Univ. of Cal. Regent's Scholar (4 years)
- Eta Kappa Nu Honor Society
- Alumni Scholarship (4 years)
- Tau Beta Pi Engineering Honor Society

**Experience:** Senior Technical Director, Technical Director, Principal Engineer & Marketing Development Mgr. Broadcom Corporation, Sunnyvale & Irvine, California. December 1999 – present

- Responsibility for driving Broadcom's Connected Home strategy to enable multimedia services via residential wired and wireless networks
- Technical evangelism to customers, analysts, press and internal groups
- Technical marketing development manager for IEEE 802.11a/b/g/e (wireless LAN) and HomePNA
- CableLabs CableHome project: enthused in all focus teams; developed architecture and QoS.
- Home networking, Quality of Service, and digital video distribution architecture development.

Senior Staff Engineer

Matsushita Graphic Communications Systems, Japan. September 1997 - December 1999

- xDSL: Technology, Intellectual Property and Market development; algorithm simulation
- ITU-T standards development: G.994 (G.hs); G.992 (ADSL) chair/editor, G.993 (VDSL) chair/editor
- Founder of Japanese Industry xDSL (JIX) working group
- 1999 Nikkei BP Technology Award for DMT DBM (Annex C)

Ph.D. Student

The University of Tokyo, Japan. October 1995 - March 1999

- Designed, developed, and implemented a real time visual feedback biological cell handling system which encompassed:
  - Real-time MPEG-4 System decoders and encoders
  - Visual-Object segmentation and compression system using Matrox Genesis TI TMS320C80 board
  - 4 DoF real-time cell handling system control software
  - Development environment: MFC/C++, C, Matrox MIL, and Windows NT DDK.
  - Protocols/Standards: MPEG-4 BIFS, TCP/IP sockets
- International Conference of Robotics and Automation 1999 - Best student paper award finalist
- Published and presented several journal and conference papers

Technical Planning, Senior Systems Engineer, Systems Engineer

Rockwell International Japan, K.K., Tokyo, Japan. September 1991 - August 1997

- K56flex: Market development and field testing
- V34fax: Product Champion, ITU-T standards development, implemented world's first T.30 Annex F
- Rockwell Internet promotion: Webmaster, Email technical support
- Market analysis for Japanese digital cellular and DSP products.
- Responsible engineer for firmware development of a 9600 bps Leased Line modem chipset.

**Experience  
(cont.):**

Research Engineer

**Matsushita Electric Works, Ltd.**, Osaka, Japan. September 1989 - September 1991

- Lead engineer responsible for developing a consumer product with digital image processing. Included product conceptualization, software prototyping, and the *de facto* product manager for production design.

Teaching Assistant

**Carnegie Mellon University**, Electrical & Computer Engineering. Fall 1987 - Fall 1988

- Weekly classes and laboratory sessions with 60 students in Logic & Processor Design, Network Analysis, and Analog Circuits.

Test Engineer I, College Summer Hire III

**Rockwell International**, Semiconductor Products Division. Summers 1986, 87

- Developed real-time software for testing a three bus (80286, 68000, Z80) based 9600 bps modem. Wrote a terminal emulator and system monitor in C/assembly, designed the hardware interface to IBM PC bus.

Laboratory Instructor

**University of California, Irvine**, School of Engineering. Winters 1986, 87

- Weekly instruction with 40 students in Computation Methods in Engineering (Programming).
- Prepared and graded exams and homework.

R & D Technician

**Diagnostic Retrieval Systems, Inc.** Summers 1984, 85

- Digital signal processing system check-out using logic analyzer and emulator.
- Design and assembly of analog and digital circuits.

Technician

**MGM Microcomputer Specialists, Inc.** Summers 1980, 81, 82, 83

- Intel 8080 microprocessor based hardware design; electronic drafting; software simulation.

**Standards  
Leadership  
Positions:**

- Board of Directors – Digital Living Network Alliance 2008-present
- Vice President, Board of Directors – HomePlug Alliance 2011-present
- Technical Advisor for Board of Directors – Wi-Fi Alliance 2005-present
- Alternate Director, Board of Directors – RVU Alliance 2009-present
- Certification Board Chair – MoCA Alliance 2011-present
- Chair Technical Future Task Force – DLNA 2006-2009
- Wi-Fi Alliance Recognition Award 2003 & 2005– For Outstanding Contributions to Wi-Fi.
- Chair Application Specific Device (ASD) technical group – Wi-Fi Alliance 2004-2005
- Vice-chair QoS marketing group – Wi-Fi Alliance 2005-2006
- Editor WMM PowerSave Test Plan – Wi-Fi Alliance 2004-2005
- Editor DLNAQOS Guidelines – DLNA 2004-2005
- Editor WMM QoS Test Plan – Wi-Fi Alliance 2003-2004
- Editor Integrated Test Plan – Wi-Fi Alliance 2003
- Editor 802.11g Test Plan – Wi-Fi Alliance 2003
- Associate Rapporteur and Editor Q4/SG15, VDSL ITU-T Recommendation G.993.1 1999-2004
- Associate Rapporteur – Q14/SG9 Home Networking 2002-2005
- Vendor Architect – CableLabs CableHome 1.0 & 1.1 2000-2003
- President – HomePNA Alliance 2003
- SG9 Standards Chair –HomePNA Alliance 2002
- Associate Rapporteur and Editor Q4/SG15, ADSL ITU-T Recommendation G.992.1 1999

**Intellectual  
Property:**

- US Patents: 8250362, 8243705, 8243701, 8085748, 8069265, 8009642, 7948956, 7706338, 7697564, 7509096, 7508867, 7394796, 7333462, 7296086, 7277417, 7272173, 7224723, 7058123, 7051258, 7012954, 6999506, 6987802, 6952442, 6950459, 6934326, 6917647, 6901547, 6873652, 6768772, 6765957, 6751254, 6735245, 6694470, 5815199
- ~10 US pending patents in wireless/wired networking, multimedia technology, xDSL handshake.
- ~50 foreign patents

**Languages:**

English, Japanese - National Proficiency Test - Level 4 (1990)

**Languages /  
Systems:**

PERL, C++/C, Matlab, Assembly, Fortran, Basic, Visual Basic, Pascal, PostScript, and Lisp.  
Linux, UNIX, Windows, MS-DOS, Macintosh, and VMS

**Interests:**

Sailing, Audio, Skiing, and Flying (private pilot license)