

# Paul F Beard

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**Objective** To hold a leading technical position in a company devoted to market expansion leveraged on core competencies.

**Profile** Over 30 years of experience in positions of increasing technical responsibility with high-technology organizations. Demonstrated ability to lead a team to product success by combining broad technical awareness, focus and a determination to win from concept through implementation. Experienced in all areas of wired and wireless communications systems, DSP architectures, computer system hardware and software architectures, telecommunications systems and mobile computing. Hold 60 patents, a further 30 applications in review. Member of 5 technical advisory boards.

**Awards** Fellow, Cypress Semiconductor  
2008 BMFA Innovator of the year  
2008 Oleg Antanov FAI diploma  
2010 IRCHA Hall Of Fame inductee  
2012 AMA Hall Of Fame inductee

2005-Present                      Horizon Hobby                      www.spektrumrc.com

CTO

- Invented and Developed Spektrum™, a 2.4GHz DSSS system for Radio Control models.
  - Adapted both Code and Carrier collision detection schemes for Medium Access
  - Designed a 'many:1:1' network topology
  - Invented and developed a matrix fading mitigation scheme using a combination of path, frequency and time diversity.

2010-Present                      Oscium    Oklahoma

Founder, CTO

- Invented, Developed and Launched IMSO, WiPRY Mixed signal oscilloscope and spectrum analyzer for IOS devices.

2009-Present                      Unmanned Systems Inc                      Nevada

CTO

- Invented, "Longshot" IP based low latency, redundant network for real time control of UAV systems over the internet.

2000-2013                      Cypress Semiconductor (CY)                      San Jose, CA  
CTO Wireless Systems, Fellow

- Invented, Developed and Launched the WirelessUSB™ product line.
  - Winner of 4 international electronics products awards
  - Technical and Business “Home run” for Cypress
- Delivered a 0.35um BiCMOS 2.4GHz Radio IC (CY6961).
- Delivered a 0.35um CMOS Wireless USB baseband IC (CY6951).

1998–2000                      Alation Systems (CY)                      Mountain View, CA  
Founder, CTO

- Negotiated and closed Acquisition deal by Cypress Semiconductor.
- Founded and built a wireless product development company.
- Delivered a wireless LAN product to the market under cost targets and on time.
- Invented PFSK, a unique rf data modulation scheme robust to inter-symbol fading.

Developed a baseband ASIC.

1994–1998                      Norand (UNA)                      San Jose, CA  
Chief Architect, Fellow

- Responsible for all Pen-Based computer and wireless systems architectures.
- Technical representative for the company, participated in the merger of Norand and Intermec.
- Built and lead a product development team.
- Delivered a complete product line of wireless pen-based systems.
- Designed and delivered a spread spectrum wireless access point.

1991–1994      DSP Group (DSPG, INTC, DSP Semi)                      San Jose, CA  
VP DSP Systems Engineering

- Closed TrueSpeech licensing deal with Microsoft which lead to IPO.
- Ported TrueSpeech from DSP to Pentium.
- Technical representative for company in front of Wall Street.
- Member of startup management team .
- Architected PINE, a very low cost fixed point DSP.

1989–1991                      VMX Inc. (OTL)                      San Jose, CA  
Member Technical Staff

- Developed discrete digital ADPCM voice compression engine.
- Developed continuous analog CVSD voice compression circuit.
- Designed world-wide approved line interface circuit.

1978–1989                      British Telecom. (BTY)                      Martlesham Heath, England

#### Head of Group

- BT International Products. Led ISDN terminal business unit. Developed Voice / Data terminals and systems.
- BT ISDN Terminal Products. Development through to manufacture of the first ISDN terminal to market.
- BT ISDN. Worked with Fred Westall on the creation of 2B1Q modulation.
- BT Office Systems. Invented and developed GRANET - a "Guaranteed Reception local area NETWORK". Competed with Ethernet.

#### Past Advisory Positions

- Portal Player. Architect for dual ARM7TDMI MP3 encoder chip for iPod.
- Acucore. Design of iRacer ADSL modem.
- findTheDot. Startup technology for pen imager.
- Compaq. Participated in the architecture of the \$999 PC.
- NEC. Low power PC architecture for Notebook computers.
- Zymos (CRUS) Invented and licensed IDE interface accelerator technology (now part of EIDE)
- Philips. Architect for 802.11 chipset.
- Avasec (ICST). PC clock synthesizers.
- Fisher-Price. Design of "RC Racer" radio.
- Matel. Design of "Barbie" camera.
- Cisco. Asynchronous bridge.
- Luxcom. FDDI MAC implemented in Actel FPGA.

#### Education

- 1980-1983                      University of Manchester (UMIST) England
- B.Sc.(Hons), Electrical and Electronics Engineering.

#### Significant Inventions

- Dynamically Switchable Power supplies US Pat 5627412.
- Live TV replaying (TiVo DVR) US Pat 6172712.
- Digital Radio systems US Pats 6434187, 7103108
- Engine limiter 'RevMax' for RC Helicopters.
- Optical tachometer 'SkyTach' for RC Helicopters.
- Internet Radio US Pat 7194520
- Content Slingshot US Pat 7203456

#### Publications

- "Improve Clock Synthesis in Laptops with a Frequency Generator"  
Electronic Design September 12 1991.

Patents

6522299, 6762725, 8032107, 7103108, 69144566, 5969502, 6091227, 5747938, 8140013, 5838471, 20110225436, 7376848,  
6731713, 7221926, 6292437, 6172712, 7900067, 8093765, 5780992, 7701908, 5627412, 7230971, 5631539, 6124800,  
6928559, 5898290, 7848703, 7155196, 7215246, 5734585, 7245725, 8112615, 5818199, 7194520, 7203456, 5770923,  
5796359, 5835297, 5996080, 7356635, 6026027, 5710728, 7765354, 20110316756, 5873070, 7653118, 8121172,  
20060170598, 5773159, 5991830, 6825728, 6434187, 6144976, 7636382, 7257147, 7770096, 7391320, 8049600,  
20120027049, 8330583, 6109528