

Shawn Arnold
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Consultant - PCB Technologist, 6/08 to current

- Printed circuit design and design interface to PCB design service bureaus, PCB fabricators and EMS'
- High Speed and Signal Integrity specialist, authoring design and layout guidelines with CPU/GPU IC manufacturers
- Expertise in PCB material sets and surface finishes and PCB to chassis interface for EMI/ESD
- Direct interface with onshore and offshore PCB manufacturers and EMS providers
- Direct interface with high level management of Top 10 Graphics Processor manufacture

ChipStack Inc. - Founder/PCB Technologist, 6/05 to 6/08

- Developed, Patented and Marketed a low cost flexible FR-4 PCB manufacturing solution. Patent application number 20080047135
- Worked with investors to produce a Business Plan to maximize shareholder value for the technology
- Developed a Patent Pending multi-package module solution for decreasing PCB layer counts by compartmentalizing high layer count and high technology regions to discrete circuit packages allowing lower layer and technology base PCBs
- Targeted and nurtured business relationships with Fortune Top 500 companies
- Created technology presentations and evangelized solutions at industry symposiums
- Developed proprietary IC stacking solutions for memory devices; BGA's and TSOP's

High-Speed-Solutions and Design- PCB design and Signal Integrity, 1/03 to 6/05

- Printed circuit design for a start-up Home and Automotive Audio electronics company including DSP, microprocessor, wireless, USB and hard drive applications
- Worked closely with customers to thoroughly understand applications, determine appropriate material sets, stack-ups, surface finishes and best PCB manufacturing processes to meet stated goals.
- Technical Sales/Business Development for HVRFlex flexible FR-4 product.
- PCB design for SI/EMC/EMI and Agency approval for a medical devices company. Assisted in bringing the product to desktop PC market by converting existing product to current PCI standards
- Close work with PCB fabricators to develop high-volume high-yield design rules and processes to meet controlled impedance requirements, analog/digital noise separation and assy/test constraints
- Initiated creation of a solution to simulate 3D stacked die modules for cross-talk and power delivery

Cadence Design Systems- Sales Business Development Mgr, PSD (PCB products), 7/02 to 12/02

- Created and developed an incremental Sales opportunity of \$13.2M at a Top 6 PC supplier
- Developed and grew new business opportunities within the PSD organization by identifying, targeting and closing incrementally larger Sales opportunities within existing and new customers
- Responsible for creation of market demand, research, content, organization and hosting for all western region Sales seminars.
- Researched target OEMs and their markets, building customers'-customer EDA supply chain value propositions
- Created and wrote justification for internal business initiatives
- Developed, created, organized and hosted seminar series for existing and roadmap EDA tools

ISuppli - Principal Analyst, PCBs and Back Planes, 7/01 to 2/02

- Researched, wrote and published Market Intelligence reports on Offshore PCB Manufacturing and Large Scale Back Planes for top tier OEM and Top 10 EMS clients.
- Identification of worldwide players and estimation of the market size and direction through 2005.
- Identified and gave justification for potential onshore and offshore PCB supply chain problems while tracking and predicting industry trends.
- Maintained close working relationships with top tier PCB manufacturers.
- Frequent contributor to company fee-for-service weekly email newsletter.

International Product Design Inc , Backplane design and manufacturing- Founder, 10/96 to 7/01.

- An EMS and design company offering design services for PCB Signal Integrity issues to top tier OEMs and numerous start-ups: Nortel, Xros, Lucent, Broadcom, Copper Mountain, OnPrem, IBM
- Developed and implemented 3 dimensional PCB design rules for EMI/EMC, SI board design and controlled impedance including component grouping and placement, stack-ups, fabrication material selections, and Green PCB manufacturing
- Identify, troubleshoot, and resolve OEM issues during the engineering design, NPI, manufacturing cycle, and during FCC, UL, CISPER, and CSA Agency approvals.
- Significant background in leading edge PCB fabrication technologies, requirements and manufacturing processes for high-speed and high volume applications.
- Internal and external EMS services included quick-turn PCB design, parts procurement/inventory mgt, and PCB manufacturing and assembly services, and initial board and system bring-up.
- Created schematics and PCB design guidelines, per project, as an external Design Team.
- Simultaneous management of multi-client projects in a service bureau environment using Project Management tools and techniques.
- Assisted Consumer industry clients with New Product Introduction (NPI).
- Published white paper on DigitalOptical Back Planes for PICMG 2.16, November 2001.
- Patents pending on Digital Tape/Digital Floppy Disk Storage and DigitalOptical Back Planes.

Consultant- Senior Circuit Board designer, 5/91 to 10/96,

- Designed printed circuit boards for top tier and start-up clients to meet agency requirements for high volume consumer type applications.
- Concentration in EMI, ESD, and Signal Integrity issues.
- Design for Manufacturing (DFM) and Design for Test (DFT) practices for high volume applications. Helped clients move from thru-hole technology to surface-mount technology.
- Used PCB manufacturing background to teach clients how to design for PCB manufacturing.
- Taught OEM clients how to best utilize contract manufacturers.
- Significant designs for PCI, VME, telecom, and consumer applications.

Zymos/Appian Technology- Senior Circuit Board designer, 10/90 to 5/91

- Designed multiple PC clone motherboards and video cards for IC manufacturer.
- Close work with OEMs and Contract Manufacturers to bring PC clone products up to 3K per month run rate concurrent with offshore production.
- Worked closely with EMS provider Solectron to troubleshoot and correct manufacturing issues.
- Wrote and implemented the selection criteria for PCB fabrication vendor and EMS selection. Round tabled PCB fabricators to standardize high volume PCB manufacturing processes for plugged vias.

Stratacom/Cisco Systems- PCB Engineer, 9/89 to 10/90

- Designed high-speed communications based rack-mount PCBs and Back Planes for telecom applications.
- Began ongoing education in Electro Magnetic Interference (EMI), Electro Static Discharge (ESD), and Signal Integrity (SI) issues related to printed circuit boards.
- Trained internal designers on PCB design software.

Deico Electronics (Contract Manufacturer) Manager Computer Aided Design Services- 1/88 to 9/89

- Responsible for Management and workflow of 11 electrical and mechanical designers.
- Support of internal and external PC clone product designs from schematic capture, PCB design, PCB manufacturing, and PCB assembly.
- Brought completed designs to production of medium to high volume assembly requirements on 3 internal Fuji surface mount assembly lines.
- Wrote and implemented internal Design for Manufacturability (DFM) and Design for Test (DFT) processes, prior to the existence of IPC specs.

Sigma Circuits/Tyco- PCB manufacturing Sales and Technical Applications Engineer- 6/86 to 1/88

- Sales and Marketing of printed circuit boards and PCB design services.
- PCB fabrication theory and actual manufacturing application at a leading edge quick-turn fabricator.
- Responsible for design and manufacturing co-ordination between internal and external PCB designers, OEM Purchasing and Engineering departments.

Aged positions- 10/82-6/86

- PCB designer for many Silicon Valley companies including Counterpoint Computers/Acer Computers, Aehr Test Systems, Trilogy and Reivax Design.
- PCB designer, digitizer, and photo plotting lab supervisor for large service bureau
- Tape layouts of PCB designs, schematics drafting, and wet ink on Mylar documentation from engineering sketches for documentation

Education:

1987-1991 University of Phoenix, San Jose CA, Business Administration

1979-1982 University of Miami, Coral Gables FL, Architecture

1975-1979 J.P.Keefe Technical High School, Framingham, MA

Additional expertise- Well versed in sheet metal design, manufacturing and finishing.

Mentored under W. Michael King, world known EMI/SI/ESD expert and co-inventor of the ESD Body Model

Software programs

Most PCB and Mechanical EDA tools, use of Microsoft suite of Office tools, Customer Relations Management (Siebel), Project Management

Recent classroom training- The Art of Winning (Technical Account Selling) with Art Jacobs;

High Probability Selling with Jacques Werth and Nicholas E. Ruben

Industry associations- Surface Mount Technology Association (SMTA), IPC Technical Market Research

Committee (TMRC), Executive Member of the PCI Industrial Computer Manufacturers Group (PICMG) and committee member for PICMG 2.16, Member of Institute of Electrical and Electronics Engineers (IEEE)