# Nine Dot Connects Resume

## OVERVIEW

Combining over 200 years of industry experience, the technical staff at Nine Dot Connects can provide expertise in the entire PCB design flow including, but certainly not limited to documentation and specification; design for manufacturing (DFM); simulation; PCB layout in digital, analog, high speed (with emphasis on DDR3/4 designs) and RF; mechanical co-design and integration; and library infrastructure. With our knowledge of the flow and our experience, we can provide the leadership and know-to to get the design moving quickly. Our core competency is in support of key PCB software products, EDA and PCB process training, and engineering design/consulting services.

## PROFESSIONAL SUMMARY

This is partial list of individuals on the staff at Nine Dot Connects. In addition to providing service on defined deliverables such as layouts, these individuals can also provide consulting, reviews, and guidance.

**Tom Cassidy, MSEE, Rice University, TX – Expertise: FPGA, Embedded coding, Mechatronics**
In addition to his hardware, system design and PCB design skills, Tom is also well versed in mechatronics, software, FPGA, and embedded programming. He has completed numerous DDR3 related complex projects. Tom is the "engineer's engineer" who can wear many different hats – inventing, architecting, designing, developing, and debugging.

**Sean Kelly – BSEE, Tennessee Technological University, TN – Expertise: Simulation, HS design**
Sean has 30+ years of experience in the entire PCB design process all the way to production. He has a great ability to teach and communicate effectively. His expertise is in high speed PCB circuits and RF design to include simulations/analysis with HFSS. Sean also has experience in FCC requirements and certification process.

**Erich Gross – BSEE, Fresno State, CA - Expertise: Mixed Signal Design, PCB Layout, Analysis**
Erich has over 25 years of experience in several industries including, Aerospace, Telecom, Defense, and Video. Experience in all phases of product development, from requirement definition through design, test, validation, production, and customer support. Erich has a full understanding of customer's needs no matter what stage of project development. He also has developed training manuals and taught at ITT as an adjunct professor.

**Tim Leiker, EET, Austin Community College, TX – Expertise: PCB Layout, Library methodology**
Tim has 30+ years of layout experience in ECAD tools such as Altium, Allegro, OrCAD, Viewlogic, and PADS. Tim is also an experienced component librarian and has assisted many customers in their library development. He has extensive experience with contract manufacturers and well versed in DFM.

**Paul Taubman, BSEE, USC, CA – Expertise: Library Methodology, Design Process, Tech Writing**
With experience in ASIC, System and PCB design flows, Paul has a deep understanding of design processes and methodologies. He is well versed in library methodologies and version control methods. In addition, Paul is a technical writer with numerous webpages, training manuals and articles to his credit.

**Christopher Chae, BSEE, Texas A&M, TX – Expertise: Project Management, Design Process**
With experience in system design, FPGA development, coding, and managing engineering groups, Christopher is well versed in PCB design processes and methodologies. He is able to assist clients through the design and methodology process to a desired outcome of their project.

## SOFTWARE / TOOL SUMMARY

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|---|---|
| Programming Languages | VHDL, Verilog, C, Visual C++, Assembly Language |
| EDA Tools | Altium Designer, Mentor PADS, OrCAD/Allegro, SOLIDWORKS CAD, SOLIDWORS PCB, Onshape 3D, iCD Design Integrity, Zuken E3, Desktop EDA, Downstream Blueprint, CAM350 |
| CAE Tools | Xilinx ISE, ModelSim, Microsoft Visual Studio, Sigrity, ANSYS HFSS |
| Office Tools | MS Project, MS Office Suite, Visio, GoToMeeting.com, WebEx |
| Lab Tools | Oscilloscope, Logic Analyzer, Logic Generator, Waveform generator |

## PROFESSIONAL SUMMARY

This is partial list of the accomplishments and experiences.

**Design and Design Consulting**
- Advanced Micro Devices – Validation platforms for several custom IC's
- Satake USA – Grain sorting equipment
- Xenex Disinfection Services – Circuitry for automated disinfecting robot
- Via Motors – Battery power assist circuitry in heavy duty tracks
- Accudyne – EMI consulting in preparation for FCC certification testing
- Halliburton – High temperature power supply for permanent downhole pressure monitoring

**Failure Analysis**
- Drill Quip – Analysis of schematics and layout due to field failures
- Alta Motors – Analysis of failed charger unit and recommendation of alternative circuit

**Full Service - Design and Layout**
- CRC-Evans – Automated welding equipment for oil and gas pipes
- Davidson Instruments – Design of Combustion Dynamics Monitoring System (CDMS)

**Printed Circuit Board Layout**
- Calliphony - 3 Banks of DDR4s, 3 large FGPAs, and 96 Pairs of 15 Gbps Signals
- Siemens – DDR3 interfacing with Xilinx Zinq processor
- Tyvak Nano – DDR3 interfacing with Xilinx Zinq processor and several projects
- Digi – Memory control board (1.5in x 1.5in) with cavity, 18 layers with match length tuning.
- Coin – Initial prototype layout for 1st generation single card wallet
- WiseWear – RF Circuit boards for the smart jewelry line

**Firmware**
- FPGA coding in either Verilog or VHDL
  - Northrop Grumman - Coolrunner, Vertex 4 for F-22 and F-35 test equipment
- Embedded coding
  - Davidson Instruments – DSP and PC104 on various critical sensor systems
  - Remote Ocean Systems – PIC16F1947 for a camera protocol translator

**Software**
- Davidson Instruments – User interface for the Combustion Dynamics Monitoring System (CDMS)
- Genosys Biotechnologies – Production management tool oligonucleotide synthesis system

**Documentation**
- Northrop Grumman – "Design to Specification" documents for outsourced test equipment
- Nordson Asymtek - Internal Specifications for work flow and component description protocol
- Altium – Training manuals for SPICE simulation and Library Management (both 2 day trainings)

**Library Management**
- Mallinckrodt Pharmaceuticals – Library database configuration and library clean up
- Altium – Trained and assisted customers as an FAE on library fundamentals
- Nordson Asymtek – Configuration management for the design group
- Nabors – Library database configuration