Anthony G.P. Marini, MSEE

93 Highland Street • Clinton, MA 01510
(978) 365-4493 • tmarini@dtmassociates.com

PRESIDENT / PRINCIPAL, dtm Associates (www.dtmassociates.com)

- Accomplished and innovative engineering and technology entrepreneur and business executive with a large, diverse portfolio of consulting clients and projects.
- Established an excellent industry reputation of accomplishment and "can do" attitude for multidisciplinary product developments and projects.
- Creates lasting client relationships while adding 10-15% year-to-year to the client portfolio and retains clients in long-term relationships.

AREAS OF EXPERTISE

- Turnkey Product Development
- Technical Mentoring
- Electrical, Mechanical and Thermal Engineering
- Electronic Circuit Design
- Analog, Digital and Power Electronics
- MCM and Hybrid Technology
- System Design and Partitioning
- Project Management
- Rad-Hard Design Techniques
- PSPICE/SPICE Computer Circuit Modeling and Simulation
- Product Tear Downs and Competitive Analyses
- Microprocessors and Logic Design
- Design Reviews and "Sanity Checks"
- Worst Case Electrical Analysis

PROFESSIONAL EXPERIENCE

dtm Associates, Clinton, Massachusetts • 1998-Present
President / Principal / Founder
Serving industry as an independent electronic design consultant; presently servicing a military, industrial and commercial customer base of over 75 clients. Providing a wide variety of services including electronic design, turnkey product development, product tear downs and competitive analysis, power system design, EMC design and remediation, and component/system reliability prediction and analysis.

Major Accomplishments:

- Has become trusted technical advisor and resource for client base.
- Authored extensive marketing literature and collateral for various client's electronic products including data sheets, applications notes and theories of operation.
- Maintained client satisfaction and client retention leading to a 90% referral rate from existing customers.
- Expanded service area to include the entire continental United States and portions of Europe.
- Has authored numerous patents and created numerous unique inventions.

***dtm* Associates**, President / Principal / Founder (Continued)

- Designed and developed over 200 products, many presently in high-volume manufacture:
  - a 98%+ efficient Class-S Modulator system utilizing GaN switch technology;
  - multiple high efficiency, multi-megahertz POL DC-DC power converters utilizing GaAs switch technology;
  - a microprocessor-controlled power controller for military and recreational vehicles;
  - a 34kW/100kW/1MW, scalable three phase AC-AC power converter, utilizing proprietary resonant technology for renewable energy applications;
  - many AC-DC and DC-DC power systems for 1-5kW telecommunications and computer systems;
  - a 7.5kW complete power system (power processing, distribution and board power) for a carrier-class, optical telecommunications router;
  - an automatic, diagnostic charging/ test system for multi-chemistry batteries in the 1 to 50A-hr range;
  - several class K (space) hybrid and modular analog and power microcircuits;
  - numerous DC-DC, DC-AC and AC-DC converter designs in the 1-10kW range encompassing buck, flyback, Ćuk, boost and other novel topologies, both isolated and non-isolated, for both DC and AC inputs;
  - a 0.05°C accurate thermoelectric cooler driver for telecommunications applications;
  - an OC-192-class laser driver for fiber optic communications applications;
  - several high speed and high-precision data acquisition components and systems (A/D and D/A) for image and sound processing applications.

Stratus Computer, Marlborough, Massachusetts • 1989-1998
Senior Hardware Engineer / Consultant

Responsibilities included the design and development of computer power systems and the reliability/availability analysis for fault-tolerant computer systems, including power, analog and logic design to the component level. Also was responsible for company-wide technical leadership in the areas of EMC and reliability prediction and for the development of high-density hybrid microcircuits for power, analog, logic and mixed-signal applications, from OrCAD/Cadence Allegro schematic design to AutoCAD circuit layout.

Major Accomplishments:

- Served as the company-wide resource for analog and power circuitry reliability and availability prediction and improvement.
- Served as the company-wide technical resource for EMI/RFI immunity. Provided technical consultation to in-house and external customers and provided timely and cost-effective solutions to electrical design and EMC issues.
- Architected, designed and developed a 2kW+ fault tolerant power system for a low-cost, high-performance computer system. Performed extensive reliability and availability analyses (MTBF, FMEA and FMECA) which determined the final computer system (both logic and power) partitioning and architecture.

Stratus Computer, Senior Hardware Engineer / Consultant (Continued)

- Designed, developed and packaged numerous unique hybrid circuits including DC-DC converters, analog signal processing circuits and microprocessor/logic circuits.
- Designed and developed a low-cost, high-reliability 5kW and 10kW+ AC/DC power system with a unique battery back-up (UPS) scheme for a mainframe-class computer.
- Researched, specified and procured the equipment (receivers, exercisers) and facilities (labs, chambers) necessary to test to FCC, IEC, Bellcore and ETSI electronic test compliance requirements.
- Selected and developed a successful outsourcing partnership with a high-volume, low-cost vendor of computer power supplies.
- Developed several high-efficiency 10-200W DC-DC converter circuits for use as computer on-board power sources.
- Developed both SPICE- and spreadsheet-based analytical tools for evaluating the performance and efficiency of DC-DC converters and power systems.

Micro Networks Company (A Division of Unitrode Corporation), Worcester, Massachusetts • 1979-1989
Director - R&D Engineering
Provided hands-on technical leadership to an R&D Engineering group consisting of several engineers, technicians and CAD designers involved in the design and development of power supply, power control and motion control hybrid microcircuits.

Major Accomplishments:

- Developed over 100 high reliability analog, power and mixed-signal hybrids for major space, military, industrial and commercial programs, including linear and switching regulators; power switches; smart power devices; rectifier arrays; motor drivers; squib drivers; motor controllers, data converters, analog signal processors and power supply controllers.
- Authored numerous data sheets and application notes for power hybrid devices.
- Developed several innovative hermetic power hybrid packages, including the lowest profile hermetic power hybrid DIP package that is still presently available.
- Served as the power hybrid technology resource within the corporation.
- Developed numerous PSPICE/SPICE models for both discrete and integrated components as well as complex analog circuits.
- Provided engineering support for a high-volume product line of data acquisition (D/A, A/D and T/H) products.
- Developed test and laser trim hardware and software for ATE equipment for thick and thin-film hybrid microcircuits.
- Specified and procured high volume laser trim, electrical test and component handling equipment.

EDUCATION

Master of Science, Electrical Engineering
Worcester Polytechnic Institute, Worcester, Massachusetts

Bachelor of Science, Electrical Engineering
Worcester Polytechnic Institute, Worcester, Massachusetts

OTHER

Member IEEE, 7 Societies and IMAPS

Authored numerous technical papers presented at nationwide symposia