Randy Dunton

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SUMMARY

Innovative systems engineer with extensive and broad experience. An expert at balancing customer value, business needs, and technology. Demonstrated ability to influence and collaborate at a company-wide level. Working experience with large and small teams, vendors, and customers. Creator of intellectual property. Experienced instructor. Passionate about the energy transition to a sustainable future.

- Instructor & Mentor
- System architecture
- Influence and lead
- Solar PV system design
- Micro-grid design
- Project management
- 1st level management
- Prototype development
- Innovator
- Low and medium voltage
- Customer interaction
- Vendor management
- Staff development
- Inventor (35 patents)
- Expert witness

EXPERIENCE

Hawkins Design Group **2012-present**
PV System Project Developer & Designer, commercial solar PV power plants
Project development, System design, project management, team leader, peer-review of commercial & industrial renewable energy power plants (up to 16MW)

- Designer of micro grids; responsible for system component selection, overall site and electrical design, modeling of energy production and storage state of charge, integration of monitoring systems, gensets, and MODBUS control systems (Ethernet & fiber). Experience with TESLA & CAT micro grid architectures.
- Developer of grid tied and off grid (storage based) solar PV power plants; responsible for initial customer contact, technical sales, technical system design, construction documents, project management, system inspection, commissioning, and documentation. Collaboration with utilities to design & provide remote monitoring systems and protective relay controls per utility requirements. Experience designing communications networks, control systems, low voltage power (208-600V), and medium voltage power (up to 34.5KV)
- Peer review of PV power plants in preparation for PE stamp & seal (Solar City, etc.)
- Tool development (spreadsheets) to reduce errors and increase productivity.

Helios Engineering LLC, Phoenix, AZ **2009-present**
Freelance PV Systems Engineer, planning & design of solar photovoltaic power plants
Site planning, equipment selection, solar analysis, electrical and performance calculations, blueprint development

- Created construction documents (7-30KW grid-tied and battery backup systems, AutoCAD)
- Expert witness in solar intellectual property or other legal matters (declaration & deposition)

Helios Focus, Phoenix, AZ **2009-present**
CTO, development of safety components for solar photovoltaic systems
Co-founder of a privately owned venture to research and develop electrical safety components for solar PV systems, developed prototypes and patents (three patents awarded).

- Collaborating with industry to advance safety features in future products, goal is to license technology

Arizona State University, Chandler-Gilbert & Gateway Community College, Phoenix, AZ **2009-present**
Instructor, developer of PV curriculum

- Instructed PV instructors and engineers in island & developing nations through ASU's VOCTEC program
- Developed a 64 hour NABCEP class consisting of instruction, lab exercises and hands-on experiences
- Developed a 40 hour virtual classroom NABCEP Associates and 24 hour NABCEP Inspector degree, self-paced (2020 with Green Solutions International)
- Awarded as subject matter expert a 25'000$ grant by Pima Community College to develop PV curriculum (workforce development)

INTEL CORPORATION, Chandler, AZ **1993-2009**
Sr. System Architect and Team Leader
Numerous responsibilities researching & developing leading edge consumer electronics technology; ASICs and software

SMA Solar Technology America LLC v. Tigo Energy Inc.
IPR2023-01184
Patent No. 8,823,218 Ex. 1003

OLIVETTI Advanced Technology Center, Cupertino, CA **1988 - 1993**
Personal Computer research and development project leader, graphics processors and motherboard chipsets

VIRTUAL IMAGING, Santa Clara, CA **1987 - 1988**
Medical & satellite image workstations - **System Engineer (product development)**

IMAGEN, Santa Clara, CA **1985 - 1987**
Laser Printer design and manufacturing - **Hardware Engineer (product development)**

3M, Test & Measurement Systems, Santa Clara, CA **1982 - 1985**
Portable telephone line testing equipment (Dynatel) - **Hardware Engineer (product development)**

DR. WITMER Electronics Inc., Switzerland **1980**
Power-supply prototypes – Jr. **Engineer (R&D)**

Swiss Federal Railways Switzerland **1976 - 1980**
Apprentice in *electro-mechanics*, failure analysis, overhaul, and repair of industrial electrical & mechanical systems - both medium and low voltage AC and DC systems

GENERAL SKILLS & EXPERTISE

- Electro-mechanical systems	- Technical documents	- Network protocols
- PC system architecture	- Photovoltaic system design	- Leadership
- Creativity and innovation	- Digital audio and video systems	- Embedded systems
- Man-machine interface	- Training	- Consumer electronic systems

EDUCATION

Gateway Community College – NFPA 70A NEC Code and residential wiring (Fall 2009)
Solar Energy International (SEI) NABCEP based training - grid and off-grid system design (Fall 2009)
Photovoltaic inverters (SMA Solar Academy) residential on/off-grid and commercial systems design
Continuing Education Courses (ASU) in image processing, and Multimedia Image and audio processing
Managing Through People - Intel Management development course
Foothill & De Anza College, California: EE and CS courses
Technische Berufsmittelschule, Zurich, Switzerland - *electro-mechanical technologist (4 year degree)*

PATENTS

Over 38 patents; Photovoltaics, digital imaging, man machine interface. Member of Intel's patent committee. Served as expert witness in patent litigation (declaration & deposition)

ADDITIONAL SKILLS

Dual citizenship: U.S. & Swiss - Fluent in German and Swiss German languages - Served in the Swiss Army