



Sirius Design & Technology

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David Burton, President.

Sirius Design and Technology, LLC is a contract engineering firm specializing in electrical aspects of product development, design and test.

Areas of expertise include:

- Analog and digital circuit design.
- Embedded processors and firmware.
- DSP algorithms.
- Battery power systems. (Battery powered devices and battery charger or maintenance devices)
- Product test and manufacturability.
- PCB and product design for environmental and regulatory compatibility (RF emissions, ESD and RF susceptibility, temperature performance, etc.)
- Thermal scanning and imaging of power consuming assemblies. (Infrared imaging)
- Schematic capture and PCB design. (Multisim/Ultiboard design tools)

Other Capabilities:

Through close association with firms offering mechanical and software design we are able to offer multidisciplinary services. These services could be small contained portions of a project you need help with, or could range up to full product design and test - from concept to manufacturing. We have combined product design experience of over 70 years, mostly with Hewlett Packard Company designing a variety of medical instruments.

Professional experience history:

Sirius Design & Technology

2000-2006

- Contract design services including:
 - Product investigation and definition.
 - Product design.
 - Production test instrumentation design and construction.
 - Product qualification testing.
 - Medical instrumentation including resuscitation, monitoring, diagnosis and ultrasound.
 - DSP and algorithm development.
 - Special application PCB design services.
 - Manufacturing tool development and support.

Hewlett Packard (Agilent Technologies) Medical group

1986-2000

- Architecture and design of analog and digital control and power circuits for battery powered, defibrillators, cardiographs and battery support systems.
- Holter recording and playback system architecture. This included overall system design, an analog tape based recorder, an analog playback unit with multichannel ADC's, DSP processing architecture and algorithms, DSP processing hardware with 5 processors, and SCSI interface.
- Product testplans and qualification testing.
- Paper sensing circuitry in 2 axis pen plotter.
- Design for EMI compatibility, environmental endurance, manufacturability and testability for all of these products.

Hewlett Packard Computer Group

1981-1986

Floppy disc, hard disc and tape drive controllers and interfaces. Firmware and digital hardware design.

Patents:

6597948	22 Jul 03	Defibrillator with wireless communications
6496177	17 Dec 02	Liquid crystal display (LCD) contrast control system and method
6438417	20 Aug 02	Defibrillator test system with wireless communications
6429792	6 Aug 02	Digital displacement encoding system and method
6405083	11 Jun 02	Defibrillator with wireless communication of ECG signals
6381492	30 Apr 02	Defibrillator with mode changing infrared communications.
6249105	19 Jun 01	System and method for detecting performance components of a battery pack.
6141584	31 Oct 00	Wireless Defibrillator Communications.
6114838	5 Sep 00	Battery Capacity Test Method and Apparatus
6084380	4 Jul 00	Conforming intelligent battery label
D419131	18 Jan 00	Battery case.
5792185	11 Aug 98	Electrode Identifying Snap.
5601089	11 Feb 97	Method for Boosting Amplitude of ECG signals.
D372456	6 Aug 96	Battery Charger.
5515176	7 May 96	Interactive FAX imaging.
5503159	2 Apr 96	Method for Enhancement of Late Potentials Measurements.
5467774	21 Nov 95	Method and System for Precise Time Based Representation of Recorded Medical Data.
5423325	13 Jun 95	Methods for Enhancement of HRV and Late Potentials Measurements.
5406955	18 Apr 95	ECG Recorder and Playback Unit.
Pending		
20040267148	30 Dec 04	Method and System for Detection of Heart Sounds
WO/2005/065784	29 Dec 04	Shoe for Deep Water Running Exercise

References:

Neal Andrews, ACT president	503-565-2002
Martin Rockwell, HP project manager	360-212-6718
Rick Myers, Inovise Medical engineer	503-431-3847

Education:

University of Illinois (Urbana):	MSEE	Jun 84
Brigham Young University:	BSEE	Apr 81

Contact:

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