David E. Lieberman
Computer Methods
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| MISSION STATEMENT:	Provide software engineering services developing Windows®, Android and iOS* applications for medical, scientific and small-business clients.

*Registered iOS Developer

CLIENT LIST:

The AlterG Anti-Gravity Treadmill

AlterG Inc, Fremont, CA (2014 to Present): AlterG manufactures the Via Anti-Gravity Treadmill, engineered with NASA-developed Differential Air Pressure (DAP) technology that is able to unweight users to as little as 20% of their body weight. We design pressure control electronics, treadmill control firmware, gait analytics and user-interface software. **Atmel SAMA5D3, C, C#, WPF, .NET, SQL, Jira, SVN, C, IAR, VS2017**
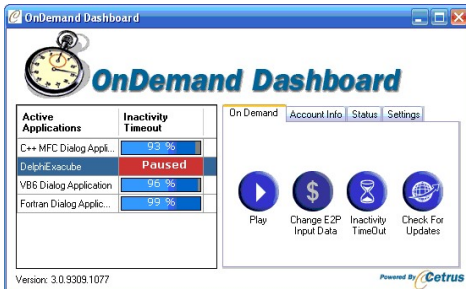

The Dashboard tool authenticates users and meters the publisher's applications.

Cetrus, San Ramon, CA (2008 to 2013): A provider of Pay-Per-Use Software Technology (**http://cetrus.com**). Develop support tools for Publishers to integrate Cetrus metering technology and deploy their applications. Tools include an **Windows API** Integration **DLL** and Dashboard application. The metering technology integrates with any language platform including **ASP.NET**, **C#**, **VB**, **C++**, **C**, **Delphi**, **VB6**, **VBA** and Fortran. The applications install on the user's local machine. Numerous security measures circumvent SSL vulnerabilities, spoofing, impersonation and bucket-brigade attacks.
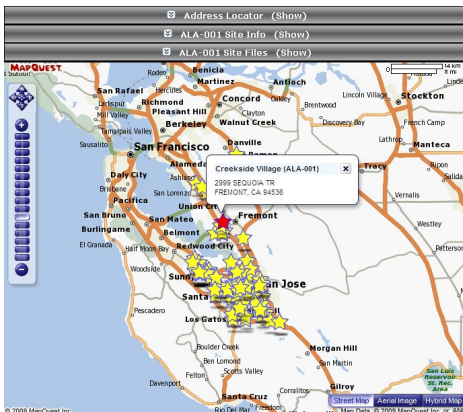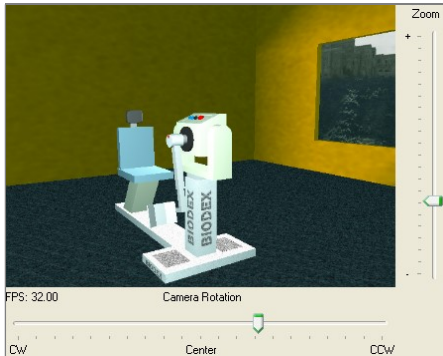

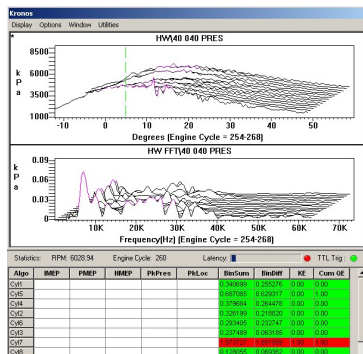*Security officers tracked in proximity to patrol sites*

ActivitySuite.com, Fremont, CA (2008 to Present):   Hosting **internet** applications for Private Security Companies to track and report daily activities. Web site builds and emails **PDFs** with client reports. **Geocoding** and **mapping** APIs render **mash-ups** of patrol sites and security officers. Developed Android **mobile apps** to push **GPS** data up to the ActivitySuite server for real-time tracking. Stand-alone GPS trackers connect to vehicle OBD-II diagnostics for fleet tracking. **Telerik** charting is used to display statistical analysis of security incidents. Site runs **ASP.NET** and **SQL Server 2016** on the back end.
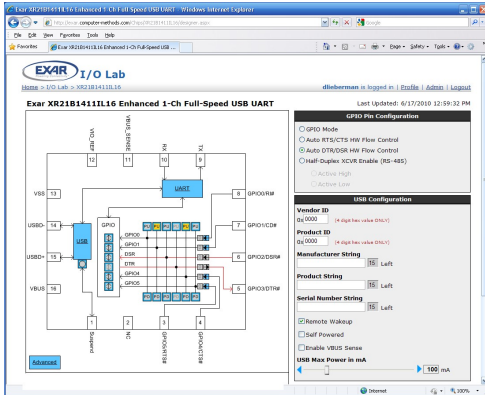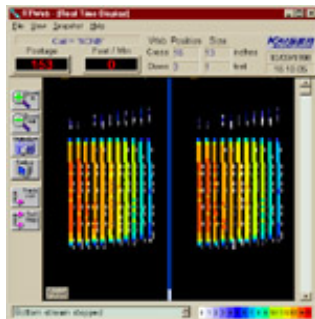
Design Template with USB Chip Configuration

Exar. Milpitas, CA (2009 to 2010): Manufactures analog and mixed-signal ICs for the video, imaging, and communications markets. We develop and support **I/O Lab** – a web-based design tool used by Exar's clients to configure the XR21B1411IL16 Enhanced 1-Ch Full-Speed USB UART chip. The application was developed in **C#.NET** with **SQL Server 2008** on the back end. http://exar.computer-methods.com.

Virtual 3D dynamometer model
visualizing anatomical fixtures

Biodex, Shirley, NY (1996 to Present): A medical equipment manufacturer for physical therapy, sports medicine, Nuclear Medicine and Radiology. We develop and support **C#, C++/MFC** applications for **System 4** -- an isokinetic dynamometer – a device that rehabilitates, measures and reports joint and muscle performance (Biodex Advantage). **WPF** (Windows Presentation Foundation) used to present simple yet functional GUI for manipulation of patient files. We also develop and support software for **Atomlab**, a multi-channel radiation analyzer for measurement of Nuclear Medicine isotope concentrations in the human body (**Atomlab** *950*).

Knock analysis of an eight cylinder engine

Spectral Dynamics, San Jose, CA (2000 to 2008): A manufacturer of high-speed data acquisition systems. We developed application software and drivers for **VXI** and **CAMAC** instrumentation. Customer sites include NASA, Livermore National Labs, Stanford Linear Accelerator, Arecibo Observatory, Ohio State University, Sandia National Labs, General Motors and Ford Motor Company. Includes *KRONOS*, a combustion analyzer that employs real-time **FFT**s to detect engine knock conditions.

Surface inspection images
of an aluminum coil

Kaiser Aluminum Research Center, Pleasanton, CA (1995 to 1998): A provider of scientific support services support to Kaiser-affiliated smelting facilities throughout the world. We developed a Visual Basic application for an aluminum coil-slitting machine used in a cold mill plant. Operators use the application to control machinery and inspect aluminum for defects as the coils are processed. Also developed an application to model and simulate the chemical processes in an aluminum smelting pot.

PROFESSIONAL EXPERIENCE:

1984 to Present: *Owner*

Physio Systems, Inc., (dba *Computer Methods*) Fremont, CA. Providing software engineering and support services (see client list above)

1980 to 1984: *Software Manager*

Diasonics, Inc., Milpitas, CA
Supervised a team to develop software for acquisition, display and post-processing of image data acquired from **digital subtraction angiography** systems. Designed an off-line **ultrasound** image review station with image archival, retrieval and quantitative functions.

1972 to 1980: Part-time *Software Engineer*

Medical Data Systems, Ann Arbor, MI
Developed image processing software for Nuclear Medicine applications.

ENVIRONMENTS:	Firmware: ST-Micro, Atmel, Nordic, TI, Microchip, IAR, Visual GDB, Eclipse, Code-warrior, PE Micro, ST-Link, i-Jet Software: Windows Platforms, Microsoft Visual Studio .NET, C#, Xamarin, C, C++/MFC, VB, ASP.NET, WPF, WCF, TCP/IP, LINQ, Device Driver DLLs, Windows DDK, Classic ASP & HTML, CSS, MS SQL Server, Legacy: ODBC, Access, DAO, ADO, API and SDK, VBX and Custom Control DLLs, Borland C/C++, Delphi, Pascal, Telerik, Quinn Curtis Graphics, ObjectWindows (OWL), Paradox, ObjectPAL, PC BIOS, 8086 Assembler, MASM, Modula-2, FORTRAN, Mac OSX, XCode IDE
EDUCATION:	**MSEE** - 1978, **BSEE** - 1976, The University of Michigan, Ann Arbor, Michigan
PUBLICATIONS:	Lieberman, David E., *The Fundamentals of Digital Nuclear Medicine*, The C. V. Mosby Company, St. Louis, MO 1978
APPOINTMENTS:	Visiting Professor, Devry University, Newark Campus, Newark, CA.
PATENTS:	*GAIT DATA COLLECTION AND ANALYTICS SYSTEM AND METHODS FOR OPERATING UNWEIGHTING TRAINING SYSTEMS* (62/574,138); Charles D. REMSBERG, David E. LIEBERMAN and Michael P. ARNOLD *Signal Processor for Personal Computers* (#5,133,055); David E. Lieberman; G. Mark Remelman
PERSONAL:	Married, Age 64. Hobbies include Amateur Radio (call sign **KT8E**), Martial Arts (Shotokan Black Belt), Scuba, Golf
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