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Jeffrey David Travis

Summary

With over 16 years of broad experience in software engineering and development, I'm an experienced software architect focused on innovative business and scientific applications. As an entrepreneur, I have launched several startups, but also have worked as Director of Engineering for a large firm (Compuware Corp). I have created patented commercial products and courses for Web technologies that are currently licensed to many Fortune 500 companies. My expertise in business start-ups includes product development, branding, and marketing experience.

Currently I provide services as a technical and strategy consultant to several companies, including GE, Chevron, John Deere, and many smaller companies. I am also a published author of two best-selling software engineering textbooks.

In addition to my technical work, I am an award-winning film writer and director (filmmaker resume available on request), having created numerous short films and a TV pilot for 20th Century FOX. My most recent endeavour was to co-write, and direct an animated film starring Martin Sheen, Flatland The Movie (<http://flatlandthemovie.com>).

I work best in a creative environment, where **my ability to communicate with and coordinate projects between highly diverse participants (business, technical, and creative) is considered an asset.**

Skill Keywords

Executive/Business

Virtual CTO, director of engineering, strategic planning for e-business, technology architect, marketing strategy and product branding, project management, proposal writing, technical writing (published author of two books and a course kit), course instructor, business development, accounting systems, product development, business start-up experience, film directing and producing, digital video production and editing.

Technical

Internet development:, Web design architecture, HTML, DHTML, XML, CSS, AJAX, Javascript, PHP, SQL, ASP .NET, Perl, CGI, TCP/IP, streaming video/audio, functional design, user interface design.

Programming languages: LabVIEW, Java, C, C++, Objective-C, UML, Perl, Visual Basic, ActiveX, LabWindows, Pascal, Fortran

Environments: LabVIEW, Final Cut Pro, Rational Rose, Adobe Flash MX, Adobe Photoshop, Microsoft Visual Studio .NET, Windows, MacOS X, Linux.

Engineering: Electrical engineering, Video processing, Biomedical instrumentation systems, analog and digital circuit design, DSP, signal analysis, wavelet analysis, stochastic processes, acoustics, bio-acoustics. Data acquisition systems and hardware, GPIB, RS-232, VXI, National Instruments products, sensors.

Experience

Jan. 2000–present

Jeffrey Travis Studios, LLC

Austin, TX

Owner/Consultant

As owner of Jeffrey Travis Studios (JTS), I provide expert advice and expert development for enterprise and Web-based software and systems, as well as movie and video production. Clients include **General Electric (GE), Chevron-Texaco, John Deere3M, Honeywell-Tensor, Ingersoll-Rand, South African Large Telescope (SALT), National Instruments,** and numerous medium and small firms.

A few sample projects include:

- **Chevron – Design, Development and System Integration of an engine automotive test system.** I designed the data acquisition system and wrote the software (using LabVIEW, SQL, Access) to provide a standalone test system for gathering massive data sets on engine cylinder performance. The system runs 24/7 for 500 hours at a time or longer.
- **John Deere - Software and Hardware development and integration of a Gator “Be The Engine” Simulator.** For this project, done in conjunction with Chevron-Oronite, I was responsible for leading a team of engineers to develop several a showcase tradeshow displays, including a Gator and Tractor Simulator that integrated a real John Deere tractor for attendees to sit on while they “drove” it through a videogame simulation. Using a closed-loop control system, users would experience the mechanical effects of various oils. Combining the marketing appeal of a Disney ride with sophisticated hardware systems, we used LabVIEW to program the control system, Unity-3D to write the animation fly-through, integrated the hardware system, and did extensive testing.
- **Premise USA – Technical consultant for an IT Healthcare system.** For several years, I have provided technical consulting to Premise USA to develop and support their healthcare flagship product, the Bed Management System (BMS). BMS is used by hospitals nationwide to optimize and realize efficiencies in patient inflows and outflows. I architected part of their security system in LabVIEW, and worked extensively with MS SQL Server to help develop portions of the code.
- **GE Energy - Design and Development of an enterprise system used for calibrating oil-drilling tools.** For the world’s largest supplier of oil drilling tools, I designed the architecture and GUI for a networked calibration software (LabVIEW, C++, and SQL Server) that calibrated the client’s hardware tools before shipping. This efficient software system runs 24/7 on over fifteen calibration stations. It replaced their legacy calibration software, increasing yield by 270% and providing a cost savings of over \$2 million/year.
- **FlatWorld Productions - E-commerce integration and deployment of a direct DVD sales store.** For one of our film projects, I oversaw the integration of various e-commerce components to provide sales, fulfillment and shipping of DVDs sold direct to consumers. Created integration and bridges to the warehouse inventory system, order processing system, and shipping portals, as well as bridges for Amazon.com orders.
- **CIU - Design and Development of a Video-Recognition Fruit Sorter.** For a client in Mexico, I designed and developed a software system that sorted fruit (such as lemons), using a video acquisition platform (NI-Vision) and LabVIEW. The system incorporated five video cameras reading 140 lemons per second and sorting them by size, color, and weight in real-time. The system allowed the client to move from a proprietary closed system to an open, scalable system that saves them over \$100,000 per installation.
- **Successful development of a commercial graphics software product.** I was responsible for the entire development of a six-figure project that involved porting a professional graphics software product, *Asiva® Photo*, to the Windows environment (from the MacOS). I hired and managed the team of three software engineers that delivered the finished product ahead of schedule. Development was done in C and C++ in the MS Visual Studio and Metrowerks Codewarrior.

- **E-commerce and back-end development of a commercial website.** In addition to this software product, I did a complete revamp of the above client's website, including the implementation of a online ordering system tied to a CRM database, using Java servlet technology with WebObjects.
- **Development of a web-based training system.** I designed, developed and maintained a web-based training course for legal firms, for the WJF Institute. The system included graphic design, database design (mySQL) and programming (PHP). The web-based system replaced a tedious and costly paper-based system.
- **Large enterprise bed and patient management system.** I helped design (using UML and Rational Rose) the architecture for a client's commercial bed management system that streamlines patient and bed management at hospitals. I was part of development team for GUI interfaces and database access (using MS SQL Server and ADO).
- **Network architecture and software requirements consulting.** For the South African Large Telescope (SALT) project, I provided consulting and expert advice on the communications and architecture for the telescope control system, a distributed LabVIEW-based system running Linux.
- **Development of a web-based game prototype.** This game is used as a tool by marriage counselors to allow couples to interact with each other by taking a "virtual trip". I provided the design and coding (Perl and PHP).
- **Development of an web-based training and survey system** for a lawyer training institute. I provided a complete end-to-end (interface design, middle tier code in PHP and mySQL server, business logic, database design) solution currently in use.
- **Initiated and created an open source tools** set for the LabVIEW community, known as the LOST (LabVIEW Open Source Tools) project. Collaborated with other developers to create products like LabVNC (remote Java-based web control), LabSQL (database access) and LabPerl (LabVIEW-Perl connectivity), at <http://jeffreytravis.com/lost>
- **Film director and writer.** As an award-winning filmmaker, I write and direct short films that are have been showcased at film festivals around the country. See <http://burningmyth.com>

Jan. 1999–March 2000 **Compuware Corp.**

Austin, TX

Director of Engineering

- Was hired to launch an Austin, Texas branch and build a consulting and engineering group that focuses on instrumentation projects, e-business applications, and web development. As part of the management team, I helped grow the branch from 3 people to over 60 people and over \$6 million in revenue in only 15 months. We started the branch with zero customers and achieved profitability (with over 30% gross margin) in only 9 months.
- Used a team-based approach to recruit top technical talent and maintain a high retention rate. For one large client project, successfully helped recruit an e-commerce team of 30 professionals in seven days.
- Authored *Internet Applications in LabVIEW* (2000, Prentice-Hall), the first textbook on

applying Internet technologies to virtual instrumentation.

- Developed coding and project deployment standards among the engineering group to provide measurable procedures and processes for fixed-price projects.
- Responsible for project management and development on numerous customer software projects.

1997– Dec. 1998

Nacimiento Software Corp.

Austin, TX

CEO and Co-Founder

- Launched software company to create a product that integrates instrumentation systems and remote Internet access.
- Created and developed AppletVIEW™, a commercial product now sold worldwide. AppletVIEW is Java toolkit for LabVIEW instrumentation.
- Engaged in sales, marketing and advertising for the company.
- Developed enterprise-level custom Web and Internet applications for businesses, mostly for medical institutions.
- Developed customized system integration and instrumentation systems using LabVIEW and data acquisition hardware.
- Streamlined business process to increase gross revenues 240% in first year.

1995-1997

VI Technology

Austin, TX

Project Manager and Systems Engineer

- Responsible for initiating, designing, and managing system integration contracts. Managed team of five engineers.
- Authored the textbook *LabVIEW For Everyone* published by Prentice-Hall.
- Developed custom software using LabVIEW and integrated data acquisition and instrumentation hardware systems, including analog and digital systems, GPIB, RS-232, VXI, SCXI.
- Completed functional systems for opto-electronic, semiconductor, biomedical, process control, and virtual reality systems.
- Successfully recruited and managed 75% of the company's workforce.
- Responsibilities also included being the Windows NT System Administrator and Webmaster.

1995

National Instruments

Austin, TX

Hardware Engineer (Summer Intern)

- Designed and prototyped a plug-in analog-output card (PCI-AO-10).
- Troubleshooted customer problems with DAQ cards.
- Performed comparative analyses for building new cards.

1993–1995

Applied Research Laboratories

Austin, TX

Research Engineer Assistant

- Designed and managed an automated system to experiment with human responses to vibration. Technical tasks included integrating LabVIEW software, DAQ cards, DSP programming, signal processing and analysis to run 2-interval forced-choice (2IFC) psychoacoustic experiments.
- Conducted thesis research involving using the wavelet transforms to perform pattern detection

and signature validation of otoacoustic emissions (bio-acoustic signals). Used LabVIEW and Matlab to write custom signal processing algorithms.

Education

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| 1993–1995 | University of Texas at Austin | GPA: 4.0 |
| <ul style="list-style-type: none"> • Master of Science in Engineering • Specialty: Electrical and Biomedical Engineering | | |
| 1990-1993 | University of Texas at Austin | GPA: 3.6 |
| <ul style="list-style-type: none"> • Bachelor of Science in Electrical Engineering, with honors | | |
| 1989 | Instituto Tecnológico de Buenos Aires | |
| <ul style="list-style-type: none"> • First year of Electrical Engineering | | |

Publications

Internet Applications in LabVIEW, Prentice-Hall, 2000 (book). The first-ever guide to developing and managing virtual instrumentation systems on the Internet.

LabVIEW for Everyone, 2nd ed, Pearson, 2008 (book). The best-selling textbook on learning the LabVIEW programming language from National Instruments, now in its second edition. Adopted by many universities as required text in engineering courses.

LabVIEW Internet Applications Course, Jeffrey Travis, 2000 (course kit). A course adapted from the previous book.

"An Open Invitation: Open Source Software in LabVIEW", *LabVIEW Technical Resource*, vol. 9, no. 1, 2001.

"Control LabVIEW over the Web", *LabVIEW Technical Resource*, vol.6, no. 2, 1998. (Received award from LTR for "Best Article in 1998")

"Using Java Applets to Remotely Control DC-Servo Dynamometers" (with Farhan Shah), *NIWeek 98 Proceedings*

"LabVIEW-Controlled Next-Generation Gas Delivery System for Semiconductor Manufacturers", *National Instruments Instrumentation Newsletter*, Summer 1996

The Wavelet-Transform as a Tool for Studying Otoacoustic Emissions, Univ. of Texas Press, 1995 (Master's Thesis)

"Wavelet-Like Analysis of Transient-Evoked Otoacoustic Emissions," *Biomedical Sciences Instrumentation*, Vol. 30, 1994

Interests

Independent film producer and director
 Church ministry with small groups
 Classical guitar degree from Schnabel Conservatory (City Bell, Argentina)
 Writing
 Literature
 Mountain biking

Languages

English (native speaker), Spanish (native speaker), French