

# Kevin R. Bulgrien

Sr. Electrical Engineer

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## OBJECTIVE

To engineer software, firmware, hardware, and computing solutions that help people; striking a strategic balance between the wants and requirements of business and customer while maintaining commitment to integrity, quality, service, and continuous improvement.

## SKILLS

- |                      |  |  |  |
|----------------------|--|--|--|
| Strengths Finder 2.0 | <ul style="list-style-type: none"><li>• Learner</li><li>• Intellection</li></ul>   | <ul style="list-style-type: none"><li>• Responsibility</li><li>• Belief</li></ul>  | <ul style="list-style-type: none"><li>• Strategic</li></ul>  |
| Hardware             | <ul style="list-style-type: none"><li>• Design &amp; Integration</li><li>• Manufacturing Support</li><li>• Logic &amp; Bus Analysis</li></ul>                  | <ul style="list-style-type: none"><li>• Embedded Technologies</li><li>• PCB &amp; Schematic</li><li>• Troubleshooting</li></ul>                      | <ul style="list-style-type: none"><li>• Digital Electronics</li><li>• Computer-On-Module</li><li>• Test Equipment</li></ul>            |
| Development          | <ul style="list-style-type: none"><li>• C &amp; C++</li><li>• Shells &amp; Scripting</li><li>• Interrupt Handlers</li><li>• GNU Make &amp; Autotools</li></ul> | <ul style="list-style-type: none"><li>• FORTH &amp; Pascal</li><li>• Web &amp; Markup</li><li>• Communications</li><li>• Technical Writing</li></ul> | <ul style="list-style-type: none"><li>• Assembly</li><li>• SQL &amp; Database</li><li>• GTK &amp; libglade</li><li>• Doxygen</li></ul> |
| Software             | <ul style="list-style-type: none"><li>• Office Tools, Utilities</li><li>• Difference Analysis</li><li>• CVS, SVN, Bazaar...</li></ul>                          | <ul style="list-style-type: none"><li>• Graphics &amp; Diagramming</li><li>• Debuggers &amp; Analyzers</li><li>• GNUCash, QuickBooks</li></ul>       | <ul style="list-style-type: none"><li>• Schematic Capture &amp; PCB</li><li>• Development Environments</li><li>• Installers</li></ul>  |
| Environments         | <ul style="list-style-type: none"><li>• Linux &amp; Unix</li><li>• HP-UX, Solaris</li></ul>  | <ul style="list-style-type: none"><li>• DOS &amp; Windows</li><li>• HP-Basic</li></ul>   | <ul style="list-style-type: none"><li>• Embedded</li><li>• Novell &amp; Other</li></ul>  |
| Servers              | <ul style="list-style-type: none"><li>• Various Linux &amp; Unix</li><li>• Firewall, Security Tools</li></ul>  | <ul style="list-style-type: none"><li>• Apache, PostgreSQL</li><li>• Web Applications</li></ul>  | <ul style="list-style-type: none"><li>• DHCP, DNS, NTP, SSH</li><li>• Virtualization Technologies</li></ul>                            |
| Infrastructure       | <ul style="list-style-type: none"><li>• Networking, Telephony</li><li>• Hubs, Switches, Routers</li></ul>  | <ul style="list-style-type: none"><li>• SM/MM fiber optics, Cat5e</li><li>• Multiplexers, Port Servers</li></ul>                                     | <ul style="list-style-type: none"><li>• T1, ISDN, RS-232, RS-422</li><li>• Printers, Terminals</li></ul>                               |

## EXPERIENCE

Oct 2000 - Present

General Dynamics C4 Systems, Longview, Texas

formerly TriPoint Global Communications, VertexRSI, General Dynamics SATCOM Technologies  
Senior Electrical Engineer

- Design, implement, and maintain Windows Embedded and Linux operating systems.
- Specify embedded system platforms, components, and operating systems.
- Design, implement, and maintain manufacturing equipment.
- Design, develop, and maintain C/C++ applications to deploy on or interact with embedded systems.
- Troubleshoot, diagnose, and mitigate severe embedded product technical issues including CFLASH/SSD corruption, system instability, etc.
- Mature and continuously improve product development via documentation and scripted process automation to drive quality and efficiency into product development.
- Design and implement monitor & control interfaces via data-driven model to generate documentation and code for embedded systems and associated client applications.
- Package software with tools like Flexera InstallShield.

- Diagnose and repair embedded system software and tools – often without prior application experience. For example, troubleshoot and maintain embedded systems implemented in FORTH, diagnose and repair malfunctioning CPLD code, debug NI LabVIEW software, and patch a malfunctioning assembler.
- Use tools such as assembly language, gcc, and Dynamic C, etc. to implement embedded product subsystems.
- Deploy, maintain, and utilize information tools such as Wiki, forums, and newsgroups to capture and preserve business critical data.
- Deploy and administer Linux servers that host version control, web and database applications, shell environment, etc.
- Configure and maintain SQL Server instances to support Windows XP Embedded Development Suite.
- Maintain HP BASIC, FreeDOS, and various legacy operating systems on manufacturing equipment.
- Maintain and support HPUX and Solaris servers that host legacy product intellectual property and development tools.
- Utilize schematic capture and board layout tools to implement/modify board designs. Implement resolver and optical encoder interfaces in embedded systems.
- Specify and utilize design comparison tools to assure accurate implementation of schematic and printed circuit board engineering change orders.
- Design and implement embedded software on a Delta Tau Turbo PMAC2 for data acquisition in multiple 4-meter optical telescopes.
- Configure, deploy, and leverage virtualization tools such as VMware ESXI, Oracle VM VirtualBox, and Microsoft Virtual PC, to facilitate engineering development.

Jun 1999 - Oct 2000 Ronald Hill dba CompSupport, Longview, Texas  
Network Engineer

- Support SCO and NCR UNIX systems, data terminals, output devices, and personal computers.
- Multi-user computer system serial and network communication systems support.
- Network cable plant installation, certification, and as-built documentation.
- Consultation, design, implementation, and maintenance of enterprise-wide LAN/WANs deployed over POTS, Ethernet, ISDN, T1 and SM/MM fiber optic services.
- Site surveys, project estimating, proposal drafting, project management, and deployment of telephone cabling and telephone services as an authorized contractor for a Competitive Local Exchange Carrier (CLEC) in two metropolitan areas.
- Y2K problem diagnosis and intermediate solution provided for cable TV switching router at AT&T/TCI Cablevision in Dallas, Texas.

Apr 1992 - Jun 1999 EDP Enterprises, Inc., Longview, Texas  
Senior Systems Engineer

- Extensively deployed and supported NCR System 3000 UNIX and Microsoft NT 4.0 servers and their serial data and Ethernet LAN/WAN communication networks.
- Responsibilities included in-depth telephone support, diagnosis, and on-site analysis/repair of operating systems, application software, third-party software, computer systems, and serial/Ethernet/POTS/FDDI/T1/ISDN/56K/Frame Relay communication equipment.
- Designed, developed, and maintained comprehensive software diagnostic tools to facilitate problem diagnosis and resolution.
- Technical programming in C, COBOL, Seay Systems I-Shell, Awk, and Bourne Shell scripting for interfacing client software, third-party applications, and hardware, including printers, terminal servers, print servers, and port servers.

- Extensive technical writing to document support and installation procedures.
- Technical consultant to internal development personnel and customer support staff.
- Performed component level and card level repair of NCR data entry terminals.
- One year of departmental supervisory experience.

Nov 1998 - Dec 1998 Encore Multimedia, Longview, Texas

Technical Consultant

Supported production of an interactive, multimedia CD-ROM.

Jul 1986 - Aug 1991 LeTourneau University, Longview, Texas

formerly LeTourneau College

Information Technology

- Responsible for enterprise-wide software and hardware support of Windows 3.x, DOS, CP/M personal computer systems, peripherals, and users. Occasionally supported DEC MicroVax II and IBM System 36 servers and users.
- Duties included need/problem analysis, product assessment, procurement, installation, end-user training, and support.
- Repaired computer equipment at card and component levels.
- Developed software for campus personnel.
- Authored procedure manuals for tasks and repairs performed by the computer information technology office.
- Analyzed office operation and developed custom software to facilitate office organization and information management.

Jun 1991

Riverway Company

Contract Programmer

- Develop software to monitor, process, and display barge tug engine, fuel, and Global Positioning System real-time data collected via multiple RS-232 serial ports.

Nov 1987 - Mar 1989 LeTourneau University Research & Advanced Development Institute

Longview, Texas

Contract Programmer

- Design and implement an escrow accounting program using dBase III and Clipper.
- Provide documentation, training, and support.

## EDUCATION

1982 - 1986

LeTourneau University, Longview, Texas

B.S., Computer Science & Electrical Technology

1982 - 1982

Saint Clair County Community College, Port Huron, Michigan

1978 - 1982

Sandusky High School, Sandusky Michigan