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## Jeff Gros

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Jeff Gros is a firmware engineer working for Pentad Design Corporation.

### Technical Skills

- **Programming:** C, C++, Visual C++, Assembly (all micros listed), Micrium RTOS, MATLAB, Verilog
- **Processors:** TI MSP430, Microchip PIC/dsPIC, Atmel AVR, Chipcon 8051, ARM Cortex M3 (Stellaris, STMicro), TI C2000 DSP
- **Hardware:** A working knowledge of electronics to support embedded design.
- **Software:** IAR, MPLAB, Code Composer, AVRStudio, Borland Builder, MS Visual Studio
- **Specialized Knowledge:** Low Power (battery operated), Hard Real Time Systems, Resource Constrained Systems (cycles/memory), RTOS, Specialty CRC Algorithms, USB, ANT wireless protocol, FOC Motor Control, Digital Signal Processing, Control Systems, Verification and Validation

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### Highlights of Jeff Gros' Project Experience

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#### PC Programming (C/C++):

- Numerous PC applications used to support embedded development, including serial communication, USB, debug and data collection, and many stand alone applications such as CRC Calculators, Binary Fraction Generators, Baud Rate Calculators, etc.

#### Recent Embedded Projects (C/C++):

- High speed data recorder on Atmel AVR with digital filtering during low speed operation.
- Beverage dispensing machine on a resource constrained value line MSP430.
- Pressure based pump control system with digitally filtered inputs on a Microchip dsPIC for use in a medical sterilization device.
- Camera battery charger using a resource constrained value line MSP430 (< 1KB flash!).
- High speed data recorder using a MSP430, FPGA and USB device to pass data stored in NAND flash up to the PC.
- Digital Watch using a MSP430 which collected samples via radio and pass to the PC using ANT protocol.
- Implantable medical device using a MSP430 that discouraged overeating through electrical stimulation.
- Tilt meter with nanometer resolution using a MSP430. Motor Control was included for self leveling feature. Stored data was passed to the PC using a mesh network protocol.
- Toilet overflow prevention device using a MSP430.
- Extensive experience in conducting Verification and Validation of various devices in the Medical field.

PENTAD DESIGN CORPORATION

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**Education:**

- 2012 University of California, Irvine Irvine, CA
  - UCI Extension. Specialized Study. Device Software Engineering.
- 2011 University of California, Irvine Irvine, CA
  - UCI Extension. Specialized Study. DSP Systems Engineering.
- 2010 University of California, Irvine Irvine, CA
  - UCI Extension. Certificate Program. Embedded Systems Engineering.
- 2001-2005 University of California, Irvine, CA
  - B.S., Computer Engineering. June 2005.
  - Minor, Information and Computer Sciences.