

David A. Gent

Portland, OR 97209

240-472-0675

davidgent@NotSoUrgent.com

Seeking a senior engineering position to employ my skills as a software & hardware integrator and comms specialist. My desire is to contribute to real-time data acquisition and control projects which mix cutting-edge and time-proven technologies.

SKILLS

- **Languages** JavaScript, Bash, Perl, C/C++, PHP, Python, Awk, Java, IDL/GDL/Octave/R, Fortran, MATLAB, ASM, PostScript, Basic, L^AT_EX, RegExp
- **Operating Systems** Ubuntu, RHEL, HP-UX, BSD, Windows NT & CE, MacOS, OS-9, Android
- **Services** Node.js, ROS, MySQL, SQLite, PostgreSQL, Oracle, NoSQL, Apache, lighttpd, Bind, Sendmail, NTP, syslog, Exchange, Microsoft SQL Server, VMware, RTLinux
- **Software Development** Git, Subversion, CVS, RCS, Mercurial, Trac, Make, GDB, Android SDK, Eclipse, Visual Studio, Vim, GNU tool-chain, SCons
- **Protocols** XML, HTML, JSON, Protobuf, SWIG, NMEA-0185, STANAG-4539, RFC 5322
- **Web Technologies** SVG, Node.js, WebSocket, Server-sent events, HTTP, HTML5, CSS3, JavaScript, JQuery, CGI-BIN, AJAX, KML, REST, Google-APIs, DHTML
- **Communications Standards and Tools** PPP, SMTP, SNMP, DNS, DHCP, TCP/IP, UDP, RS232/422, IEEE-802.11-2007, tcpdump, iperf, socat, Linux traffic control, Cisco IOS, MIDI
- **Hardware** Oscilloscope, Spectrum Analyzer, Lock-in Amplifier, NASA certified soldering, Cable crimping, Vacuum control systems, Precision machining, Power supplies, Signal generators
- **Miscellaneous Equipment** HF Radio 2&3G systems, AIS transceivers, Backbone Microwave comms, Maritime Radars, Gimble Cameras, Professional Audio, ADC/DAC, DGPS
- **Other** Linux guru, GIS enthusiast, I/O maven, DSP/FFT/Wavelet technician

RECENT EXPERIENCE

Freelance development and communication systems consulting *(2011 - present)*

- SVG controllers crafted for ROS through Node.js (dagent.github.com/rosNodeJoystick/)
- Created HF radio geolocation platforms; currently deploying in northern Africa.

Techno-Sciences, Inc. – *Trident Maritime Systems Division*

Managing Developer for Computers and Communications (2001 - 2011)

- Implemented low-bandwidth HF radio network for data and control of cameras and GIS sensors. Developed in-house data layer, and physical-layer linking software.
- Designed a hardened, semi-embedded, secure Linux platform for remote data terminals to ingest data from multiple maritime sensors deployed world-wide to detect piracy and natural resource theft.
- Integrated lens and pan/tilt control circuitry, video server capture system, and web-based display and control for remote camera systems deployed in harsh, remote environments.
- Coded real-time Linux software for data-acquisition of eddy-current sensor data to detect damage to jet-turbines and predict the onset of engine stall.
- Crafted a hand-held and server system for maintenance and SCADA needs at the U.S. Mint.

EDUCATION

University of Maryland, College Park

1999 MS Chemical Physics *Experimental Statistical Mechanics*