Alex Song

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OBJECTIVE

A full-time position in a software related field where my skills can be utilized to develop cutting edge products.

Key areas of expertise include:

- Multi-threaded programming
- Digital audio/video
- Real-time embedded systems
- Linux kernel, drivers and apps
- Low latency video streaming
- DSP firmware development

PROFESSIONAL EXPERIENCE

Senior Software Engineer, Maxim Integrated Products, Sunnyvale, CA   **Aug 2006 - Present**

- Designed and developed embedded realtime firmware for the company's H.264 codec processor.
- Lead software engineer architect for entire video input/output subsystem.
- Developed multiple virtual video input, preprocessor and output software instances per hardware instance.
- Designed and developed a video rendering engine utilizing virtual video preprocessors.
- Worked closely with FAE's and customers to resolve customer issues.
- Worked directly with key customers on integrating multiprocessor based 16ch surveillance DVR products.
- Developed verification firmware and unit test programs for board bring up and FPGA processor prototype.

Software Engineer, XVD Corporation, San Jose, CA   **Apr 2002 - Aug 2006**

Contract work carried out in Brisbane, Australia   *Apr 2002 - Jan 2003*

- Designed and developed products based on the company's proprietary audio and video codec.
- Project lead for decoder performance, low system latency and OEM product integration.
- Developed firmware for single/multiple DSP based broadcast grade real-time encoders and decoders.
- Developed a scalable, live streaming video Linux server for surveillance and consumer markets.
- Developed an embedded Linux consumer set-top box, video drivers and multi-view media player.
- FAE role with various broadcasters and solution providers such as ABC, NHK and Harris.

Software Engineer, EDMI Ltd, Brisbane, Australia   **Feb 2002 - Apr 2002**

- Developed custom token ring based network protocol for company's industrial power meters.

Software Engineer, Ravisent Technologies Inc, San Jose, CA   **Nov 2000 - Jan 2001**

Contract work carried out in Brisbane, Australia.

- Optimized the font engine memory footprint for a web browser and email client on an ARM set-top box.

TECHNICAL SKILLS

OS:	DSP/BIOS RTOS, Embedded/Desktop/Server Linux, Windows 2K/XP, Mac OS X.
Languages:	Expert C, C++, Assembly, MMX/SSE, TI 64x, ObjC, Java, UNIX Shell, HTML, JavaScript.
Protocols:	Video over IP/Satellite, ProMPEG FEC, TCP/IP, RTP/UDP, Multicast, HTTP.
Tools:	GNU tool chain, TI Code Composer, Subversion, CVS, SourceSafe, Bugzilla, Cygwin.
Open source:	Linux kernel/drivers/network stack, DirectFB graphics driver.

EDUCATION

University of Queensland, Australia - Bachelor of Engineering, Elec/CompSys (Honors I)   **2001**

- Awarded the University Medal as well as attaining the highest departmental GPA (6.86/7.0).
- Honors thesis "A Wireless Ad Hoc Network for Mobile Handheld Devices" (http://piconet.sourceforge.net).
- Honors thesis cited in IETF Mobile Ad-hoc Networks RFC 4728 (http://tools.ietf.org/html/rfc4728).

PERSONAL PROJECTS

www.axoniclabs.com - personal software projects for Mac OS X.

REFERENCES

Available upon request.