**Reza Amani** Pakuranga heights, Auckland 2010

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Summary

Electronics engineer with 15 years’ experience in a variety of positions and fields, including embedded hardware/software implementation, RF engineering, system architecture, DSP, test and debug with a great track record of accomplishing projects within limited budget and time.

Technical skills

* Microcontroller hardware and software
* Analogue, digital and mixed systems
* C, C++ and assembly
* Embedded programming within limitations
* Test and debug
* Python
* Visual C# and C++
* Developing peripheral drivers
* Agile methodology, Scrum
* TDD, unit testing
* Version control software; SmartGit, Gitlab
* Analog circuits; design and debug
* EMC and EMI
* PCB layout considerations for reducing interference and noise
* Power supplies, filters, signal shaping
* Noise challenges in mixed systems
* Schematic and PCB
* Developing communication protocols
* Analogue circuits simulation with LTSpice
* Predict future problems and providing best solutions during design stage
* system architecture
* RF design; RFIC’s
* Electronic measurements; Spectrum-analyzer, network analyzer
* DSP, SDR, implementing communication algorithms by DSP’s
* Signal processing

Soft Skills

**Problem solver:** Actively seeking and resolving technical and operational problems.

**Teamwork:** Extensive experience in team projects at different levels including small team leadership.

**Independent:** Able to work without being supervised; with preference for handle barriers in person.

**Supporter:** Eager to mentor colleagues and help them to debug their works.

**Time management:** committed to do the job in time with prioritising tasks and a fast pace

**Hands-on Engineering:** Involving closely and directly in all tasks of projects.

Attributes

* Action-oriented
* Co-operative
* Decisive
* Open-minded
* Detail-oriented
* Creative
* Calm
* Avid traveller

Experience

**R&D engineer** 2015-now

**Tru-test group, Auckland office**

Responsibilities:

* Supervising SW engineers of project team
* Embedded software programming
* Signal processing; real-time pulse processing
* HW/SW design for compliance with safety standards; IEC,AS/NZ, EN
* Gathering data from field tests, simulating real data in lab
* Design architecture, HW design and SW implementation for independent safety module
* Working on legacy codes, debugging and improving
* Code reviewing

Achievements:

* Suggested ideas for designing safety module and actively contributed to design discussions
* Redesigned signal processing method that enabled us to perform in-pulse calculations
* Provided ideas to increase software development pace
* Improved the cooperation between HW and SW team by a common understanding
* 3 times titled as “Most Valuable Engineer of the month”
* Involved in fixing mixed HW/SW bugs and cooperated in catching some HW issues

**Embedded designer, system architecture, RF designer, Analogue designer** 2005-2015

**Pardazesh Basamad Ltd.**

An agile, small size, high-tech Company performing high-level R&D projects

Responsibilities:

* HW and SW designing for DSP systems, SDR platforms
* Designing RF modules using MMIC’s
* Simulating
* Designing mixed systems (HW&SW); schematic and PCB
* Programming embedded systems with C
* Performing some mechanical calculations and interfacing electronic concepts with mechanical requirements
* Choosing and setting up platforms; ARM, PIC and AVR microcontrollers, Piccolo and floating point DSP’s
* Developing GUI for control applications with visual C#
* Designing, implementing and testing to meet military environment requirements
* Working on legacy codes, debugging and improving

Achievements:

* Designed and implemented a high-tech AD-HOC FH-SS handheld wireless radio, using TI DSP’s and Analog Devices ISM-band transceiver modules
* Designed and implemented a wide-band spread-spectrum radio link for safe and secure control of UAV’s
* Designed and implemented a secure FH-SS video down-link for UAV’s
* Proposed an under-ground communication system based on seismic signal processing
* Introduced a new idea of combining MAC and PHY layers in a frequency-hopping Ad-Hoc radio with a state-of-the-art robust routing algorithm
* Developed an automatic system to test digital cards of up to 80 I/O’s

**Digital electronics engineer, Driver/Firmware developer** 2002-2005

**Basamad Negar Ltd.**

Developer of laboratory and broadcast products

Responsibilities:

* Digital hardware designing; schematic and PCB
* Developing peripheral drivers for DSP and microcontroller in C and assembly
* Implementing simple GUI’s with visual C++ 6.0
* Designing signal processing algorithms
* Designing and testing analogue interfaces and high precision circuits
* Proof-of-Principle, Form Study and/or functional prototyping
* Planning and teaching costumers training courses

Achievements:

* Reached the record of 100MS/s sampling rate and 13.5 ENOB with an acquisition board
* Cut the hardware cost of future projects by 80% suggesting and developing a general purpose SDR platform

**Signal processing group member** 2000-2002

**Professor Hesabi organization (NGO)**

A scientific and research non-governmental organization

Responsibilities:

* PCB design, montage, primary tests
* Developing DSP drivers with assembly
* System test and evaluating

Achievement:

* As a team member, managed to develop a portable battery-powered DSP-based ANC (Active noise controller)

Education

**M.Sc. in Digital Electronics Engineering 2000**

**Sharif University of Technology**

Thesis: Debugging method for parallel-processing DSP systems

Implemented on a platform consisting 4 floating-point digital-signal-processors

**B.Sc. in Electronics Engineering 1998**

**Sharif University of Technology**

Final project: Implementing a narrowband FSK transceiver

Controlled and used by a MCS-51 microcontroller

Computer Skills

Altium/ Protel 99SE Microsoft office

Keil uvision Microsoft C#

TI code composer, Visual DSP Microsoft VC++

Xilinx ISE Analog Devices simulation programs

Code Vision, Keil uvision, Eclipse, AVR studio AWR (RF simulation)

Team viewer (remote teaching and controlling) Microsoft Visual Studio (.NET 2013)

Jira, Gitlab, Git, version control systems ProjectPlace

Awards

3 silver medals from physics, mathematics and computer students Olympiads, 1993

2nd place in university scientific competitions among 150 students, 1998

8th place in national electrical/electronic engineering Olympiad, 2000

Outside interests

Chess (Fide Rating: 1624, Howick club team member) Team sports, volleyball

Physics Classical music

Psychology Travelling

Referees

Available on request\*