Andrew Burns

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I am an enthusiastic, resourceful, intelligent, and able person who is not scared of responsibility. I am looking for employment somewhere exciting and challenging where I can develop myself by learning and gaining experience.

I have keen interest in the investigation and development of new concepts such a MSPSR that I investigated in my undergraduate thesis. I am also interested in digital signal processing, FPGAs, algorithm design, MATLAB and system design.

In my spare time I enjoy windsurfing, surfing, mountain biking, basketball and play in the Aberdeen underwater hockey team.

Education

The University of Aberdeen

2005 - 2008

BEng Honors, Electronics and Electrical Engineering

Courses: Digital Electronic Systems; Electrical Power Engineering; Engineering Design; Signals and Systems; C Programming; Control Systems; Engineering Analysis and Methods; Electrical and Mechanical Systems; Engineering Mathematics; Engineering Project and Manufacturing Management; Group Design Project; Communications Engineering; Optical Engineering; Signal Processing; Engineering Design and Practice; Fluid Mechanics and Thermodynamics; Electronics and Programmable Systems; Materials and Structures; Economics, Resource and Safety Management.

The group project title was *Simulation of Pulse Propagation in Optical Fiber Transmission Systems*. The aim of the project was to simulate the pulse propagation in dispersion managed (DM) optical fiber transmission systems. Effects like optical losses, group-velocity dispersion and self-phase modulation are analyzed in this project. Part of my contribution to the project was the production of a *MATLAB* simulation of the pulses' propagation through the wave-guide.

My undergraduate thesis considered the concept of a multi-static radar system as a primary navigation source in civil aviation. The radar system is intended to provide coverage for civil aviation where the trajectories have been opened and new routes established as a result of the Galileo European satellite navigational system. My thesis describes and proves the concept of a multi-static TDOA radar system. The system was simulated proving its ability to track single and multiple targets. A geometric dilution of precision model for the system was also developed in my thesis.

The University of Aberdeen awarded me a 2:2.

The University of Edinburgh

2003 - 2004

BEng, Electronics and Electrical Engineering (first and second year)

Courses: Electronics and Software 2h; Industrial Management 1; Intermediate Applicable Mathematics; Computer Programming Skills and Concepts; Electronics 1; Engineering 1; Elementary Applicable Mathematics; Elementary Mathematical Methods; Intermediate Mathematical Methods; Physics 1Bh.

I was awarded an Undergraduate Certificate of Higher Education by the University of Edinburgh.

Portlethen Academy

Course	Level	Grade	Date
Technological Studies	Higher	Α	08/2000
Information Systems	Higher	Α	08/2000
Mathematics	Higher	В	08/2001
Physics	Higher	В	08/2001
Chemistry	Higher	С	08/2001
English and Communication	Higher	С	08/2001
Physics	Advanced Higher	С	08/2001

Skills

Communication and Team Skills

- I developed keen interpersonal skills while working at Hydrafit Subsea a small oil services company. There I was required to work as part of a dynamic team in a high-pressure environment. I also had a chance to develop strong team skills when working on group projects at university.
- While working at Hydrafit Subsea I had responsibilities that included the production and modification of engineering manuals
- I gained experience presenting complex ideas during my undergraduate thesis and group project, where I had to present and defend my thesis and poster

IT and Technical Skills

- AUTOCAD; Microsoft Office Suite; MATLAB
- I am competent in the use of PC, MAC and UNIX (GUI and command line) operating systems

Experience

Computer Services Technician, BJ Tubular Services

2008 - 2009

- While working at BJ tubular services I was responsible for the servicing and calibration of salvo computer monitoring systems. Salvo monitoring systems are used in the oil industry for controlling the torque equipment during the completion of oil wells. The salvos also have logging capabilities to record the torque and turns when making up tubing and casing during completions.
- Servicing the salvos involved function testing and general maintenance. If during a service a fault is found, it was necessary locate it on the component level and rectify it. I was also responsible for the calibration of the salvos. This ensures the performance and accuracy of the measurements and repeatability of the make-ups in the field.
- While working at BJ tubular services I gained experience working with two salvo models. The mark 3 models are based on the MOS Technology 6502 microprocessor. The mark 5 models are based on the more modern PC/104 architecture.
- Towards the end of my time at BJ Tubular Services I designed and prototyped replacement parts for the Salvos based on the 6502 microprocessor. One of the solutions developed was a replacement clock for the main board. The replacement clock had to be built from currently available components but have the same functionally and compatibility as the original. I also investigated the replacement of obsolete CRT displays used in their mark 3 models. During the investigation I developed a circuit to separate the composite sync signal from the RGBS output from the microprocessor. The circuit generated TTL level horizontal and vertical sync components compatible with a VGA interface. After a detailed investigation of the output video signal, I developed a requirement specification for the replacement for the CRT displays with modern LCD screens.

2004 - 2007

Support Engineer, Hydrafit Subsea

- ISO gap analysis performed on current management procedures and production of a formal report detailing actions required to gain ISO 9001 and ISO 14001 accreditation. Development of my communication skills through the production of the report. The success of the task was due partly to my self-motivation skills.
- Maintenance of engineering manuals and drawings of Hydrafit owned equipment. This included hydraulic pressure units (HPUs) for the operation of subsea trees, reels for the deployment of hydraulic control lines and subsea tooling. Maintenance involved the modification of manuals using Microsoft Office applications and drawings in AUTOCAD, to reflect modifications to systems. Production of new manuals and drawings for newly purchased equipment. These manuals included details of the operational, maintenance, installation and recovery procedures.
- I was involved in the procurement of parts from the maintenance and modification of equipment.
- The running of jobs in the workshop. This involves the creation of work orders to define and schedule operations in the workshop.

Twin Gardens Ethiopia Expedition

During academic year 2006- 2007, I was the equipment officer the Twin Gardens Ethiopia Expedition . The aim of the expedition was to investigate the local knowledge and management of natural resources, by Arsi-Oromo communities within the Harenna forest and to test their scientific relevance and provide qualitative and quantitative data to the authorities in a participatory conservation scheme context.

- I was responsible for the research into suitable equipment for the expedition and purchasing.
- Prior to the summer I was involved in the organization of the expedition and had responsibilities that included procurement and money raising.
- While in the Harenna forest my role was as a field assistant. My responsibilities included geographic information systems and the analysis of expedition data.

Scanning Operative, Iron Mountain

- Operating a large format scanner which include the preparation of media for scanning
- Entering, updating and verifying document information data in to the Shell Online document management system.

Project Knuckles Expedition

During the academic year of 2003- 2004 I was the equipment officer for Project Knuckles 2004. Project Knuckles was a scientific expedition from June to August in the Knuckles Mountain Range, Sri Lanka. The expedition's aim was to evaluate the state of the herpefauna biodiversity in the area.

- During the expedition I was involved in money raising and pre-expedition organization.
- I was responsible for procurement of equipment, involving research into suitable expedition equipment and purchasing. This also included the transportation of the equipment from the UK to the expedition site in Gampola, north east of Kandy.
- While in the field my role was as an assistant. My responsibilities included geographic information systems and the analysis of expedition data.

Outdoor Centre Manager

While I worked at Bennachie Mountainboard Center my responsibilities included:

- Bookkeeping. Keeping up to date and accurate records of purchases at the shop, customer numbers and the level of the float.
- Stock keeping. Keeping track of stock in the shop and checking for repairs
- Instructing the customers. Giving new customers an introductory lesson in mountain boarding and instruction on safety.
- Supervising two other staff.

2003 - 2004

2004

2003

2006 - 2007

Non-academic Achievements

- Member of the IET
- Qualified in small craft first aid
- Boys' Brigade: Awarded the Queens Badge, the highest accolade in the Boys' Brigade; equivalent to the bronze Duke of Edinburgh Award
- Proficient in the C programming language. Experience with *MATLAB*.
- Broad range of experience in web design. Projects include <u>www.glenkindiesteading.co.uk</u> and <u>www.chiprate.co.uk</u>.
- I maintain a blog <u>www.chiprate.co.uk</u> that I use to explore some of the ideas developed in my undergraduate thesis.

Referees

I feel that both of my referees are from critical times during my academic career. I worked with Kenny Watson while working at Hydrafit Subsea. It was here that I gained a huge amount of industrial and work experience. Prof. Tim Spracklen was my advisor for my undergraduate radar thesis. I worked with David Rose at BJ Tubular Services, Aberdeen.

Prof. Tim Spracklen

David Rose, CEng.

Kenny Watson

Referee details available upon request.