

Job Description

Post/Job Title:	Software Development Architect (KTP ASSOCIATE)
Postholder:	
Ref:	503510/FST115
Location:	Precision Acoustics Limited/Bournemouth University
School/Professional Service:	Faculty of Science and Technology
Duration if temporary:	Fixed-term for up to 18 months
Normal hours per week: (Some flexibility will be required in order to ensure that key time scales and deadlines are met).	Full time
Accountable to:	Dr Paul Morris, Principal Development Engineer at Precision Acoustics and Dr Richard Gunstone at Bournemouth University

Job Purpose

Precision Acoustics Limited are seeking a Software Development Architect to work on a joint project with Bournemouth University, focused on the development of a new software platform (and associated output) to control acoustic and ultrasound measurement instrumentation.

The project will seek to develop a platform and development process that has the hallmarks of a well-engineered software system, including all documentation and verification outputs. The solution will ideally integrate existing software developed by the company from internal development, balancing the need for re-use against the need for a best-practice architecture. This must be undertaken in a way that supports the short, medium and long term business operations of the company.

Main Responsibilities

The main responsibilities of the successful applicant will include, but are not be limited to:

1. Planning the development, deployment and documentation of the software development process and subsequently the software platform itself. To include requirements gathering, quality verification, timing, cost expectations, reviews against plan, developing User manuals, training materials and associated documentation for the project.
2. Delivery against the plans, objectives and goals of the project, expectations of stakeholders, and any clarifications or revisions to plans and the management of the documentation for the project as appropriate (i.e. project plans, etc.) and organising regular review and signoff at points throughout the project.
3. The application of requirements analysis techniques to frame the development of the software platform architecture, including an understanding of current solutions and how they may be integrated. Application of design techniques to an effective level, to address the design, abstraction and process aspects of the problem area and development of reliable, consistent algorithms to integrate into the software platform solution.
4. Development of a reliable, modular and scalable software platform solution that has the required attributes to include cohesion, coupling, information hiding, encapsulation and consistent algorithms to integrate into the software platform solution.

5. Assisting in the development, as appropriate and with management approval, of prototypes to gain participation and involvement.
6. Application of industry-standard testing techniques, to include reliability, robustness, performance and correctness factors of the proposed/developed system and testing of the requirements gathered through stakeholder engagement.
7. The learning and use of National Instruments LabVIEW and techniques appropriate to the problem space, employing best programming practice including the use of standardised techniques (including documentation)
8. Management of the code base using accepted techniques, to include regular backups and versioning and source code control. Deployment of the solution considering implementation factors, including versioning, configuration management, fault reporting, and related techniques.
9. Engaging with colleagues and others in the spirit of the person specification. The applicant will play a key role in the liaison between the company and university and will be responsible for ensuring both partners make the most of the collaboration.
10. Using techniques, procedures and approaches in a sensible way that balances time, cost and quality objectives in the furtherance of the business plans of Precision Acoustics Ltd.

Organisation Chart

Precision Acoustics Limited

Director > Company Supervisor > Post Holder

Bournemouth University

Lead academic > Academic Supervisor > Post Holder

Dimensions

This is a challenging project that will require a significant degree of autonomy, requiring organisation and a diligent attitude for accuracy and completeness of tasks. At the same time engaging with specialists at the appropriate points to ensure the developed solution is effective. In that vein, the KTP Associate will need to develop a network of contacts rapidly and effectively.

Contacts

Internal: Precision Acoustics; Line manager, other employees in the company, specialists in the company

Bournemouth University; Business Relations Officer for Faculty of Science and Technology, KTP Supervisor, staff in the Design Simulation Centre, staff in the Software Systems Centre, RKEO liaison, Heads of Department, Associate Dean

External: Professional society (BCS), specialist interest groups, stakeholders, clients

Challenges

Developing the solution to meet expectations, time, quality and cost factors; quickly developing network of contacts to act as sources of advice; driving forward the project to successful completion; understanding complex ultrasonic measurement systems needs and requirements of the wide range of potential end users.

Additional Information

NB: The post holder must at all times carry out their responsibilities with due regard to the University's Dignity, Diversity and Equality Policy Statement.

The purpose of the job description is to indicate the general level of responsibility and location of the position. The duties may vary from time to time without changing their general character or level of responsibility.

All employees have an obligation to be aware of the Universities Environmental Policy, Carbon Management Plan and associated documents, and to ensure that they carry out their day-to-day activities in an environmental responsible manner.

October 2015



Person Specification

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School / Service: Faculty of Science and Technology	Date: October 2015
SELECTION CRITERIA	
	Essential / Desirable
Knowledge (including experience & qualifications)	
Good first degree in computer science (or similar)	E
Technical aptitude	E
Knowledge of requirements gathering	E
Knowledge of the application of software engineering principles	E
Software project-based development experience	D
Experience of LabVIEW	D
Knowledge of software testing	D
Skills	
Good writing and project management skills	E
Good communications ability	E
Software development capability	D
Problem solving capacity	D
Attributes	
Team player	E
Effective planner	E