**Junior Systems Integration Engineer**

**Job #524**

**Pay range: $29.00 – 49.00/hour**

**Description / Responsibilities include but not limited to :**

The Junior Systems Integration Engineer is a member of the Systems Integration team in accomplishing the systems integration phase of product manufacturing process. This role closely coordinates work efforts with the Chief Systems Architect & Technical Director to design and upgrade electro-mechanical and optical systems.

This position works with a cross functional engineering team that specializes in developing state-of-the-art test range instrumentation but also be responsible for day-to-day monitoring and control of projects from inception to delivery and acceptance at the government military ranges.

**Responsibilities include but not limited to:**

* Perform mathematical analysis of optical tracking system performance
* Support new product development and ongoing programs
* Review customer requirement documents, interface with customers to validate understanding of requirements and support technical proposal activities
* Work closely with Chief Systems Architect as well as with program team to define system concept, develop system performance models and flow down system requirements to sub-systems; manage and document system configurations
* Integrate and test the hardware and software elements of our optical tracking mount systems, including commercial off-the-shelf (COTS) components
* Integration and testing occur on-site both at Photo-Sonics and at various customer locations throughout the United States
* Duration of travel requirements can range from days to weeks
* International travel may be required, on occasion
* Develop and execute system electrical and software test plans for product releases
* Other duties and projects as assigned by management

**Requirements:**

**Education:**

* B.S. in a Mechanical, Electrical, or equivalent. Master’s degree in engineering a plus

**Skills and Experience:**

* Entry-level engineer
* Outstanding Math and Science knowledge, abilities to integrate it into the code. A combination of applied mathematical experience and electrical engineering skills are necessary for this position, including background and work experience in design optimization using matrices, coordinate transformations, algebra, and solid geometry modeling
* Strong desire for self-learning, research and analysis of various programming environments, adapting to PSI needs, maintaining the relationships with various government software development groups
* Strong programming skills in C/C++
* Experience in Python or MATLAB is a plus
* Complete knowledge of Object-Oriented Analysis/Design and C++ Development, progressing from problem statement to well-documented design and successful deployment
* Strong Microsoft Office skills
* Ability to handle priorities, write proposals, technical reports, define problems, collect data, establish facts, draw valid conclusions, and meet internal deliverables, schedules and deadlines
* Ability to work on multiple projects simultaneously
* Candidate must possess excellent reasoning, communication and interpersonal skills to interact with multiple departments and customers
* Individual must have knowledge and experience in the application and adaptation of COTS products to meet government system requirements
* Candidate must be able to obtain security clearance
* Software/Systems Integration will lead periodic field-testing at customer sites for extended periods of time
* Domestic and international travel will be required
* The ideal candidate will have interest or prior experience working on government military systems and ranges
* The ideal candidate will have prior experience working in servo control methods, electro optical system performance modeling, design and testing; as well as integrating and analyzing visible and infrared focal planes or detectors
* Strong skills in mathematical algorithm design with experience in the use of design tools such as MATLAB, Scilab or similar and able to perform complex mathematical and engineering calculation is desirable
* Knowledge of fiber optics; cameras and lenses; and designing and planning architecture for network communications systems, including familiarity with video interfacing systems, TACLANE Encryptors, and other communication devices are beneficial

**Physical requirements:**

* Position requires ability to lift (15 lbs.), stand, walk for long periods of time.
* Position may require some climbing.