

## RESUME

### **Alan N. Serino**

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### **QUALIFICATION PROFILE**

More than 25 years of experience in Test and Measurement in Calibration and Metrology, Instrumentation, Application and Project Engineering. Set-up Electrical/Electronic laboratories for AC/DC, RF and Microwave, Impedance and time and frequency standards with the quality system to ISO/IEC 17025 and train technical staff for technical competence. Built test stations and test labs including setting up GTEM, Calibration of Antenna & H Probes, and RF and Microwave equipment. Conduct training in calculation of uncertainties of measurements based on ISO Tag 4 GUM or JCGM 100. Conduct training to customers national and international locations. Has equivalent of BS Degree in Electronics and Electrical Engineering Technology in the United States. Member on Metrology Society of Australia. Was an Approved Signatory by NATA(1992-2000), A2LA (2006-2012), PJLA (2012-2014). Computer knowledge in Microsoft Words, Excel, and Power Point including close loop DAQ measurement systems.

### **PROJECT ACCOMPLISHMENT**

#### **Engineering Design and Projects Completed:**

- Set-up GTEM GegaHertz Transverse Electro-Magnetics for Antenna, E-Probe, ESD and EMI/EMC Testing
- Set-up RF test stations- Advance Test Equipment, Singapore Technologies
- Set-up Test and Measurements/Calibration Laboratories-SGS Testing and Control Services
- Characterization of newly designed Impedance Analyzers – Keithley Instruments
- Designed and build Capacitance Standards for newly designed Impedance Instrument.

### **PROFESSIONAL EXPERIENCES**

**Scientific Test Technologies, USA and Philippines**  
**Test and Metrology Technical Consultant**

**July 2013 to Present**

Design and set-up test/calibration laboratories, conduct training and assist companies to gain ISO/IEC 17025 Accreditation on the following Test applications:

#### **-Electrical and Electronics Test and Measurements**

- AC/DC Calibration
- RF and Microwave, antenna and probes
- Impedance
- Telecommunication and Aviation Instrumentation
- Fiber Optics

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**-Dimensional and Metrology Engineering**

- Pressure and Flow Measurement
- Weights and Masses Measurements
- Heat and Temperature

**Perry Johnson Laboratory Accreditation, Inc , USA  
Technical Assessor-Calibration and Metrology**

**July 2014 - 2016**

Conduct technical assessment to those laboratories applying PJLA accreditation to ISO/IEC 17025 International Standards.

**Precision Instrumentation Corporation, Brea, California USA  
Metrologist**

**August 2013-October 2014**

In-charge on the scope of accreditation of the laboratory for electrical and mechanical calibration including the calculation and evaluation of uncertainty of measurements.

**In-charge on the calibration on the following :**

**- Electrical/Electronics Measurements and Instrumentations**

AC/DC Test and Instruments- Voltmeters, Ohm meters, Current Meters, Power Supplies, Stabilizers, Resistance boxes, Multi-meters and Instrument calibrators

Impedance Measurements- Impedance Analyzers, Capacitance and Inductance boxes and AC Resistors

High Voltage Test- Hi-pot testers, Earth Testers, Insulation Testers, Transformers up to 20kV etc.

Medical Equipment comply to IEC 60601-1-2-32/ISO 14971

Instrumentation, process and controls-electrical- PLC, HMI, SCADA, Process Calibrator and other Controller and Process Equipment, etc.

**Advance Test Equipment, San Diego, CA  
Metrology-Project Contractor**

**August 2012 to May 2013**

- In-charge on the Quality System and Generation of Quality Manual to ISO/IEC 17025
- Set-up GTEM Gigahertz Transverse Electromagnetic chamber, for radiation emission testing
- Calibrate instruments for medical and pharmaceutical instruments
- Set-up temperature lab and pressure lab
- Evaluate and calculate uncertainties of measurements for AC/DC, ESD, RF, EMI/EMC, Antenna and E-probe Testing comply to JCGM 100 International Standards
- Generate test procedures and test reports comply to defense and aerospace
- Create algorithms of new test methods.
- Generate Test Data Report comply to ISO/IEC17025

**VTI Instruments, Irvine Ca  
Contract Metrology Engineer**

**Oct 2010 – March 2012**

- Revision of Quality Manual from ISO 9000 to ISO/IEC 17025
- Training of Uncertainty of Measurements calculation to engineers and technical staff
- Test and evaluate 5700 Calibrator and 3458
- Evaluate product specifications and traceability for ITAR, and defense and aerospace

**Shapes Aerospace –Metrology Management, Palm Bay FL  
Test/Metrology Engineer**

**Feb 2008 to Sept 2010**

**In-charge of the laboratory Quality System:**

- Revision of Quality Manual from ISO 9000 to ISO/IEC 17025
- Training of Uncertainty of Measurements calculation to engineers and technical staff
- Spearhead the ISO/IEC 17025 accreditation to A2LA.

**In-charge on the calibration on the following :**

**- Electrical/Electronics Measurements and Instrumentations**

AC/DC Test and Instruments- Voltmeters, Ohm meters, Current Meters, Power Supplies, Stabilizers, Resistance boxes, Multi-meters and Instrument calibrators

RF and Microwave Instruments and Measurements ( 40 GHz)- Counters, Signal Generator, Spectrum and Network Analyzer, RF Power Meter and Sensors, Attenuators, etc

Impedance Measurements- Impedance Analyzers, Capacitance and Inductance boxes and AC Resistors

High Voltage Test- Hi-pot testers, Earth Testers, Insulation Testers, Transformers up to 20kV etc.

Avionics and Telecom Instruments- Comply to FAA- Transponder, Radar Test Set, Communication Test Set, Altimeter, IFR test sets, Traffic Collisions Avoidance Systems (TCAS), BER, OTDR, CDMA Analyzers, etc. for U.S. Air Force and NASA.

Medical Equipment comply to IEC 60601-1-2-32/ISO 14971

Instrumentation, process and controls-electrical- PLC, HMI, SCADA, Process Calibrator and other Controllers and Process Equipment, etc.

**- Mechanical Measurements and Instrumentations**

Dimensional Metrology- Length, Flatness, Roundness, Squareness, Cylindricity and roughness

Physical Metrology- Force, Pressure pneumatic and hydraulic, Flow pneumatic and

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hydraulic, Speed, Mass and Weights, and Torque

Medical Equipment comply to IEC 6060-1-2-32/ISO 14971  
Instrumentations, process and Controls

Mechanical- Force(including boom crane), Pressure, Flow, Speed, Weights and Torque,  
including control valves.

**- Heat and Temperature Test/Measurements/Instrumentations**

- Sensors/Thermocouples/Transducers
- Controllers/ Temperature Simulators
- Meters/ Digital/Analog/HMI
- SCADA Type Systems

**Keithley Instruments, Cleveland OH** ([www.keithley.com](http://www.keithley.com))

**April 2006-Jan 2008**

**AC Application Engineer**

**Research and Development Engineering**

- Conduct evaluation, test and bench marking/characterization of newly designed product by providing a well define test plan and format based on the required specifications of the new product from DC to AC electrical measurements.
- Create algorithms and measurement techniques of capacitance and AC resistance standard using S- parameters techniques with the frequencies up to 1GHz.
- Review of product competitiveness and discuss to affected departments, marketing, design engineers, application engineers, metrology, process engineering and others.
- Evaluation of Uncertainties of Measurement of the test results on the CVU (Impedance Analyzer) and calibration standards.
- Build and designed reference standards for newly designed product
- Define the traceability calibration of the newly designed product.

**Baxter BioScience, Glendale CA**

**June 2005- April 2006**

**Metrologist**

In-charged of company reference standards and Temperature Reference Standard Laboratory. Fully in-charged on the calibration of reference standards and assist and lead on the calibration and modification of production test equipment. Calibration in fractionation area, temperature, pressure and turbidity  
Calibration in QA lab

**Scientific Test Technologies, Los Angeles CA**

**June 2003 – April 2006**

**Design and Test Engineer**

Developed and Set-up Test/Measurements and Instrumentation Systems to clients:

- RF Power Measurement System to calibrate and test RF power meters and RF power sensors up to 50 GHz
- RF Signal Generator Calibration and Measurement System; to test and calibrate attenuator , modulation
- Set-up and development of system in computerized close loop system ie MetCal, SureCal etc.

**Singapore Technologies-Kinetics** ( [www.stengg.com](http://www.stengg.com) )  
**Singapore Test Services , Singapore**  
**Principal**

**April 2001- April 2003**

Supervise Instrumentation and Measurement Section to conduct testing and calibration :

- Electrical and Electronics; AC/DC, RF and Microwave, GPS Time and Frequency Standard Impedance
- Temperature and Humidity; EMF, Resistance and Glass Thermometry Std, Thermograph, ovens and furnace.

Set-up/designed and developed the following facilities :

- Liquid Flow Meter Calibration Laboratory in PLC Control System instrumentations.
- RF and Microwave (26.5GHz) Frequency Measurements Systems with Rubidium GPS standard

Conduct hands-on test and calibration for RF/Microwave and other telecommunication and avionics instruments. Avionics and Telecom Instruments- Comply to FAA/CAAS- Transponder, Radar Test Set, Communication Test Set, Altimeter, IFR test sets, Traffic Collisions Avoidance Systems (TCAS) ,BER, OTDR, CDMA Analyzers, etc.

**Telecommunication Indonesia ,Indonesia**( [www.telkom.co.id](http://www.telkom.co.id) )  
**Technical Consultant – Metrology and Maintenance**

**January 1998- March 2001**

Responsible in building and setting up 4 Testing, Repair, Calibration and Measurement Laboratories and the development of the Quality Systems accreditation compliance to ISO/IEC 17025, Set-up test system in computerize close loop system. Spearhead the NATA accreditation on the following.

- AC/DC Electrical Calibration
- Impedance
- RF and Microwave
- Telecommunication Instruments
- Time and Frequency Standard

**SGS Testing and Control Services, Singapore** ( [www.sgs.com](http://www.sgs.com) )  
**Principal Test and Measurement Manager**

**February 1991- December 1997**

Managed Standard Measurement Department Services for commercial and military, telecommunications and aerospace clients for avionics and telecom Instruments, transponder, radar test set communication tests, altimeter, IFR test sets, Traffic Collisions Avoidance Systems (TCAS),BER, OTDR, CDMA Analyzers, etc.

Build up the calibration and repair laboratories and generates/developed Quality Systems and technical procedures according to ISO/IEC Guide 25, DIN, BS, etc standards. An Approved signatory to **National Association of Testing Authorities-Australia on all classes of test in the laboratory.**

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**Electrical Test - AC/DC, RF and Microwave, Time and Frequency Standard, Impedance  
Metrology - Dimensional and Physical  
Heat and Temperature**

Conduct consultancy and training services in the field of testing, calibration, measurement and instrumentation.

Responsible on the Quality System and its accreditation to ISO Guide 25,

Responsible for sales and revenue for the department and in the region.

**National Semiconductor Corporation ,  
Cebu City, Philippines**

**September 1983 -January 1991**

**Supervising Calibration Engineer and Project Engineer**

Supervise Maintenance Support engineers and technicians on the test and finish calibration, maintenance and repair of production, quality and test equipment. The following sections :

- Preventive Maintenance Computer Management Section
- Maintenance Tool Shop
- Calibration Laboratory
- PCB Repair Center

## **EDUCATIONAL QUALIFICATION**

Educational attainment evaluated by Global Education Group Inc, Florida. Equivalent to United States B.S. Degree in Electrical and Electronics Engineering.

- B.S. Electronics and Communication Engineering -Cebu Institute of Technology, Philippines
- B.S. ASC. Electronics Engineering Technology – Mindanao State University – Iligan Institute of Technology, Philippines

## **SOCIETY MEMBERSHIP**

**Metrology Society of Australia Membership No. 381**

**APPROVED SIGNATORY NATA: National Association of Testing Authorities-Australia**

- **4213 Electrical**
- **4214 Engineering Metrology**
- **9976 Heat and Temperature**

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**TRAINING AND COURSES ATTENDED**

- Internal Quality Audit - SGS
- Laboratory Management –Singapore Institute of Standards Industrial Research
- Leader Team Building – SGS
- Dimensional Measurement - Singapore Institute of Standards Industrial Research
- Asia Pacific Metrology Symposium – (APLAC) Asia Pacific Lab Accreditation Cooperation
- Chemical Safety Training
- Fire Prevention Course
- General Safety Training
- ESD- Electro-Static Discharge