MICHAEL BELLA

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WORK EXPERIENCE

KLA-Tencor December 2011 - Present
Electrical Engineer *Milpitas, CA*

– **350°C Calibration System**
· Rewired existing high temperature oven to be controlled by a National Instruments Compact FieldPoint.
· Developed state chart for control of both oven systems
· Tuned cascaded control loops to bring the calibration system up to each temperature set point with minimal overshoot.

– **High Temperature Wireless Wafer**
· Wrote LabView which automatically tests all possible failure modes of a wafer substrate with thin-film aluminum traces.
· Wrote LabView application to use an Agilent 3490a as a curve tracer to manually diagnose faults in substrates
· Designed a lump element model of the inductive wafer charging system in order to implement a simulated wafer communication system.
· Hand wired prototype of a nanoamp current measurement fixture.
· Hand wired interface board prototypes to enable the test and calibration of these wafer prototypes

– **New Sensorised Wafer Project**
· Modified existing embedded C wafer code base to work with new types of sensors.
  - Rewrote measurement subsystem to interface with the new sensor type
  - Redesigned data-store format to support the new sensor
  - Fully tested all code changes against existing low power specifications for the product family.
  - Rewrote portions of existing Mfg software to support calibration
· Wrote PC software in LabView to launch wafer missions, and to retrieve data from these new sensors.
· Designed custom data processing software in Python to support data driven development of new sensor platforms.

– **FOUP Improvments**
· Designed a circuit to recover the wafer communication signal from the envelope detector with improved sensitivity over the existing design.
· Characterized the improved wafer communication system performance.

· Designed many different automated test and measurement applications in LabView.
· Wrote LabView software to acquire and process data from two spectrometers.
· Designed triggering system to enable the simultaneous capture data capture with two spectrometers.

KLA-Tencor Internship June 2005 - December 2011
Electrical Engineer *Milpitas, CA*

· Developed LabView code for a wide range different projects
  - Automated capacitor tester
  - Wireless communication system tester
  - Synchronous serial link to a custom embedded sensor system
· Characterized the magnetically coupled wafer communication system
· Performed PCB/PCA diagnostic work, failure analysis, rework of SMD and through hole components.

TECHNICAL STRENGTHS

Programming Languages	Embedded C, LabView, Python, C/C++
Tools	Eclipse, git, SVN, Code Composer Studio, IAR, Spice, AWR Microwave Office, CADSoft Eagle
Design Experience	Low Power Embedded Systems, RF Matching Networks & Amplifiers Analog Signal Processing, High Precision Analog Measurement, SMPS Design
Lab Skills	SMD Soldering, Wiring harness construction, PCA Bringup and Debug Prototyping, Build designs from print
Other	Proficient with Linux, Texas Instruments MSP430

EDUCATION

San Jose State University *December 2011*
B.S. in Electrical Engineering