

MICHAEL BELLA

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WORK EXPERIENCE

KLA-Tencor

Electrical Engineer

December 2011 - Present

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 Sensor Project

- Modified existing wafer code base to work with new types of sensors.
- Tested the modified code to ensure that all low power requirements are met.
- Wrote PC software 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 Improvements

- 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

Electrical Engineer

June 2005 - December 2011

Milpitas, CA

- Wrote automated capacitor tester, wireless communication system tester,
- 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 Tools

Embedded C, LabView, Python, C/C++
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

EDUCATION

