Robert Gotchall

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Objective

Product/Test Engineer position.

Summary

22 years of increasing responsibility in semiconductor test, qualification and cost reduction. Experienced with NPI (New Product Introduction) processes. Created and kept project schedules and project management. Created test programs and test vector patterns, automating the process wherever possible. Characterized semiconductors with ATE and Lab equipment. Experienced with many computer platforms, languages and tools. Worked closely with tester and hardware vendors. Interfaced with many people across many job functions on many continents. Worked to balance both delivering KPI's and improving the process and tools along the way.

Highlights

- Teradyne IGXL
- Semiconductor device qualification
- DIB/Probe card design
- Data analysis and presentation
- Device handlers
- Cost reduction

- Yield analysis
- Strong communication skills.
- Takes initiative to get ahead of problems
- Process improvement
- Supplier management
- Packaging technology and qualification

Experience

Product Engineer | NXP/Freescale, Austin TX | 2008 – 2017

For i.MX family products. Led teams bringing devices to high volume, cost optimized production. Scheduling, resourcing, manufacturing and cost minimization plans. Worked with customers on bring-up issues. Frequent international travel to solve problems and bring up suppliers. Led effort to improve tools and processes in PE work. Rolled out Microsoft SharePoint for internal file storage and intranet for the division. Created customer-facing websites for project collaboration. Worked to roll out Sciforma for Project Management and costing. Used Tableau and MS Power Query for ad-hoc and systemic data analysis.

Product/Test Engineer (SMTS) | Sigmatel, Austin, TX | 2003 – 2008

For the highly successful STMP series of mixed-signal SOC's powering solid state MP3 players including Apple shuffle. Used Teradyne J750 to test and characterize. Worked closely with design, and application engineering to design packages, test and wafer probe hardware. Worked closely with international supply chain to reduce cost and keep production running smoothly. Brought up and qualified several mixed-signal SOCs.

Product/Test Engineer / Motorola, Austin, TX | 1995 - 2003

Worked on production and test support for many microcontroller chips used in the consumer marketplace, for personal computers, computer peripherals and home appliances. Brought up test for final test and probe on four projects. Used many complex tools (HW and SW) to evaluate, diagnose errors, and characterize new designs. Consistently seek best known practices.

Technical Skills
Test Systems
Teradyne J750, Hewlett Packard HP83000 MCU series, Advantest 332x

Product Qual/NPI
Very experienced with setting up, running and interpreting Semiconductor qual stresses such as HTOL, ELFR, THB, HAST, ESD, LU, and package qual stresses. Supplier selection and qualification. Managed first silicon schedules and deliverables. Made cost optimization plans and drove down cost to minimum. Handled qual failures with FA and design teams. Used statistical analysis and wafer mapping tools to debug yield issues and feed back to design and test.

Software
MS Power Query, JMP, SharePoint, Tableau, Sciforma, MS Power Query, JMP, Minitab, Python, Visual Basic/VBA , Linux, Sketchup, Perl, Excel, CAD/CAE tools, CVS; ClearCase revision control, Motorola 68HC05/8 assembly, Microchip PIC assembly, Microsoft office suite, other assorted common applications. Experienced with many proprietary languages and tools.

Hardware
Wafer probers, IC handlers, Printed Circuit Board (PCB) design and construction, Circuit design and construction, oscilloscopes, digital analyzers, Focused-Ion Beam (FIB) IC modification, Failure Analysis micro-probers and equipment.

Education

B.S., COMPUTER ENGINEERING | 1995 | KANSAS STATE UNIVERSITY, MANHATTAN, KS

Publications/Communications
Articles
"Build an Auto-ranging Capacitance Meter." *Popular Electronics.* Gernsback. Describes the design and construction of a microcontroller-based digital capacitance meter. Used a Microchip PIC 16C57. User simply inserts capacitor and 16-digit LCD displays capacitance with correct unit.

"Build a Thermoelectric Temperature Controller." *Popular Electronics.* Gernsback,. Describes the design and construction of a solid-state cooler/heater. Uses an MC68HC705J1A. Circuit switches up to 30A worth of Thermoelectric Peltier cooler modules.

Conference Papers
"Supplementing Teradyne Characterization Tools, Techniques and examples for useful device characterization," R. Gotchall and C. Nappi, Teradyne User's Group.

"Challenges of Testing High-Volume, Low-Cost 8-Bit Microcontrollers," M. Stout, K. Tumin, C. Vargas and B. Gotchall, IEEE International Reliability Physics Symposium Proceedings, pp. 366-371.

"Modular Program Development for IG-XL, A description of an IG-XL modular program builder tool and its usage," R. Gotchall, Teradyne User's Group.