STEPHEN J. NUTZMANN

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Chippewa Falls, WI 54729
715 720-9441

QUALIFICATIONS:

* 13 years' experience in production test and repair of printed circuit boards
* Trained with experience on GenRad 227x/228x, HP3065 and Zehntel 8xx/18xx In-Circuit board testers
* Completed SCO UNIX System Manager & Windows NT System Manager Training
* Windows NT & 95, DOS, RSX-11, VMS, UNIX and MAC operating systems
* C, Perl, Pascal and BASIC computer languages
* Worked with CAD data from Mentor Graphics, PADS, Valid & Cadnetics
* Experienced in networking computers using various protocols including TCP-IP

EDUCATION:

UNIVERSITY OF WISCONSIN-MILWAUKEE — MILWAUKEE, WI
Bachelor of Science, Electrical Engineering — May 1988
G.P.A. 3.34 on a 4.00 scale

EXPERIENCE:

GenRad, Inc. — Westford, MA
PCB test equipment manufacture
Field Application Test Engineer — 4/98 to Present

Operated a remote office from my home.

Offered on-site support to many of GenRad's board test customers in the US and Canada. Support included training on GenRad's software tools which include: Alchemist, CB/Test, Library Modelling, BasicScan, Scan Pathfinder, Deep Serial Memory and AFTM programming.

Fully trained on all of GenRad's product line. This includes TestStation,8x,GR Pilot flying prober, Xray Imaging.

Wrote custom scripts in Perl to meet customer needs.

Performed software verification tasks for GenRad's new Navigate operating environment.

Johnson Matthey Semiconductor Packages, Inc. — CHIPPEWA FALLS, WI
Bare Board Package PCB manufacture
Sr Test Engineer — 4/96 to 4/98

Designed and implemented a test solution which included a GR2287a and Seiko Robots to electrically test 70,000 semiconductor packages per day.

Worked with two system integrators to customize standard platforms to meet our needs.

Fully trained on Seiko Robot Programming and Maintenance.

Specified and researched machine vision systems to detect defects down to .5 mil resolution.

Developed processes for equipment operators. Included SPC charts and Response Flow Checklists.

Took multiple international trips to evaluate production equipment.

emd ASSOCIATES INC. — WINONA, MN
Full contract PCB manufacture

Project Engineer **3/93 to Present**

Main contact for all technical issues before product is released to manufacturing for two customers.

Responsible for project coordination for all Design Engineering groups. These include Hardware, Software, CAD Layout, Test & Prototype Build.

Projects were tracked based on Earned Value Models. Projects followed the Project Life Cycle model as required to maintain ISO 9000 certification.

Developed test methodology for Xilinx FPGAs to meet customer specifications.

Test Engineer

Primary responsibility was to provide test support for a GenRad 2286 VMS test system.

Maintained and enhanced ICT programs. Enhancements includes on-board EEPROM programming, full cell memory testing and parallel testing to reduce test time.

Served as System Manager on both GR2286 VMS and GR2286e UNIX test systems.

Evaluated new testing techniques such as Opens Express, Analog Functional Test Module AFTM, Deep Serial Memory and Boundary Scan.

Designed a PCB fixture adapter plate for a GenRad ICT tester. This adapter plate will allow the AFTM card to be placed in a fixed location and still allow any size test fixture access it. This technology is very beneficial for fixtures that are already wired.

Implemented graphical debug on the production floor by utilizing DOS PC's.

MOTOROLA LIGHTING INC. **BUFFALO GROVE, IL**
Electronic Ballast Manufacture
Sr. Test Engineer - E08 **11/91 to 3/93**

Was project leader for the complete testing of electronic ballast. Factory was completely automated and all testers were in-line. Test process included Pre-Solder Vision, In-Circuit Board Test, Hi-Pot and Functional Test. Supervised four Test Engineers. All software and hardware development was done in-house.

Responsible for the design and support of a Pre-Solder Vision Inspection Station. This station inspected the bottom of the board for proper placement of SMD's. It also inspected for correct length and angle of the clinch for thru-hole components. A Macintosh PC controls the lighting and the four cameras that take the images. All software was written in McRAIL programming language.

MOTOROLA INC. **ARLINGTON HEIGHTS, IL**
Cellular Infrastructure Division - EMX
Test Equipment Engineering TEE - E52 **1/90 to 11/91**

Developed software to in-circuit test PCB's on a HP3065 board test system.

Implemented a computer link between the CAD department and TEE. This enabled TEE to download CAD files directly off a Mentor Graphics CAD system.

Installed a paperless repair and data collection system on the HP3065. Repair stations were connected via RS-232 and information was recorded into a database using barcode readers

PHILIPS CIRCUIT ASSEMBLIES **MILWAUKEE, WI**
High volume SMD PCB contract manufacture

Test Engineer **9/88 to 1/90**

Primary responsibility was to write programs to run on GenRad 2276 and Zehntel 8xx/1820 In-Circuit board testers. Tests were written to customers specifications. Supported 50 boards of mixed technology. Helped develop a temperature cycling burn-in oven controlled with a PC running HP BASIC.