

LA/OC SMTA CHAPTER NEWS

JUNE 2003 EDITION

DATE

June 19th, 2003

AGENDA

5:30PM, Dinner/Presentation
6:30PM, Plant Tour

MEETING FEES

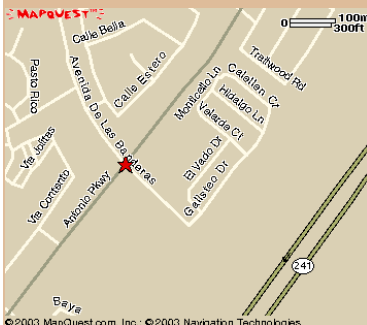
\$20, Members
\$25, Nonmembers

MENU

TBD

LOCATION

Viking/Interworks
30200 Ave. De Las Banderas
RSM, Ca. 92688



RESERVATIONS

Call: MaskTek
(714) 557-3383

NO SHOWS WILL BE INVOICED

If you can not attend, please cancel your reservation by 12 Noon on Wednesday, prior to the meeting. See you there!

UP COMING EVENT LA/OC SMTA is proud to Present...

August 2003 4th Annual Golf "Get Together"

You won't want to miss this fun filled event! Mark your calendar now! Whether you Golf or not it is fun for everyone!
Don't miss the party at the 19th hole!

Date: August 7th, 2003

Time: 1:30pm (Shot Gun Start)

Location: California Country Club, 1509 S. Workman Mill Rd., Whittier, Ca. 90601

Cost: \$99/player and includes Green Fees, Shared Cart, Warm Up Balls, & Awards Banquet.



"The Surface Mount Technology Association membership is a network of professionals who build skills by sharing practical experiences and developing solutions in electronic assembly technologies and related business operations."

LA/OC SMTA CHAPTER IS PROUD TO PRESENT...

June 2003 Dinner and Plant Tour Meeting

AT:

Viking/InterWorks

A Sanmina—SCI Company

Presented By: Ken Sprinkle, Director of Manufacturing Operations

Presentation Abstract

"Process Efficiency and Quality"

The concepts of the Lean Manufacturing model for electronics production processes represented a challenge in how to "get back to basics" in a semi-automated electronics manufacturing environment. Viking Components is a high velocity electronics assembly memory supplier that accomplished a metamorphosis from a "conveyorized assembly inspect the quality into the product" approach, to a work cell, "bump and flex", highly efficient integrated verification top quality process.

Ken Sprinkle will present methods that converted a sluggish inefficient two work-shift process into an energetic manufacturing engine that produces the same volume of product on a single work-shift as was formally done on two at yields consistently above 99%!

Speaker Profile

Ken Sprinkle is currently the Director of Manufacturing at Viking Interworks, a Division of Sanmina-SCI, located in Rancho Santa Margarita.

Ken is an innovative professional with over 25 years in Quality and Reliability Engineering Management positions that span telecom, medical, semiconductor, and high velocity electronics manufacturing environments.

Ken is a former ASQ Chair of Palomar section 708 and holds certifications in ISO 9000 auditing and Quality and Reliability Engineering.

Ken is currently pursuing a Masters Degree in Engineering Management at California Coast University in Santa Ana, CA.

What's Inside this Months News Letter...

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Page 4..... Technical Article — Lean Fundamentals: "The 5S System" by, Deon Nungaray & Peter Bernard

Page 5..... ISO 9000, Revision 2000 Workshop, Implementation Experience

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PRESIDENT'S MESSAGE

By: Scott Penin

Welcome to the June newsletter. Jim Blakenhorn presented a different view of Design for Manufacturability, by discussing the move of technology to China and what we can do to prevent this technology from being copied at our expense.

In June, as we are all aware, is the plant tour. Viking/Interworks has graciously agreed to provide the facility for this year. It is their new building and should be of immense interest to anyone in our profession. We thank them ahead of time for their donation of time and technology for our members. The order for the evening will be dinner, a presentation and the tour. Please call in early as the tour is our largest draw of the year and has limited space.

Congratulations to all the graduates this month. I know our sons, daughters, nieces, nephews, grandsons, granddaughters, and all other relations and friends are very happy to get to this point. I know we were.

For anyone taking a vacation next month, as our local chapter is, have a great time and relax as much as possible to get ready for the second half of 2003. Also try to get in some practice for the golf tournament in August. Until then, remember we are here for you. Call, e-mail, FAX, any communication method you see fit to tell us what direction(s) peak your interest, please let us know.

MAY 2003 MEETING REVIEW

BY: ATUL MEHTA

The LA/OC SMTA meeting for the month of May 2003 was held at the Embassy Suites located in Anaheim. Jim Blankenhorn from SMT Plus conducted the presentation. The topic was one of the industry's controversial ones - **Using DFM to Combat the Movement to China**. Jim presented some statistics regarding the effect of manufacturing jobs moving offshore. They were as follows:

- Several 100,000 U.S. Electronic Assembly Workers Have Been Laid Off
- Many of Those Workers Were in CA
- Unemployment Rate in Northern CA is Currently >8%
- Many Plants Have Been Closed in Favor of Moving to China
- Even Mexico has Lost Jobs to China

It appears that the bulk of SMT process development took place in the US during 80's and 90's and now China is getting the SMT processes given to them. According to a recent report from technology trends, very few US companies are making money in China and could end up losing a lot while trying. The trend in the early 80's was to send assembly to SE Asia and Japan. SE Asia's major advantage was components were 15% less and the bulk of them were produced there. Products delivered into Asia eliminated shipping and customs; however, some of the shortcomings of SE Asia were as follows:

- Poorly-Automated Plants
- Cost of Doing Business Overseas Required Filling the Supply Pipeline
- Engineering Changes Proved Difficult Due to Language
- Providing Tech Support was Difficult

Our response to reverse the trend was to improve our processes and embrace automation. The cost differential evaporated and we were able to compete, and did well until 2000. Since then we saw new assembly factories go up all across the US until recent times. Why China Now?

China is an emerging market that has a big potential need for many electronic products, and labor is cheap (\$8/wk outside Shanghai, but will rise just as Mexico has). Low to mid volume products are usually not suited for China, but may be caught up in the movement. This does not come without some risks though. China's potential problems are as follows:

- Government Stability
- Heavily Indebted Banking System
- Corruption & Bribery
- State Ownership of Properties
- SARS
- Lack of US Knowledge on Cost Comparison.

What can CM's do? Here is a recipe for competing against China:

- Further Streamline Design Through Manufacturing
- Design for Optimization
 - Reduce Time/Cost of Development
 - Reduce Cost of Production
 - Reduce Defects
 - Further Embrace Automation
- Design for Optimization
- Fix Areas Where Inefficiencies Lie
- Embrace Computerization
- Design by Forming Partnerships with Smart Manufacturing Engineers
- Use Computers to Link all the Data Together, Reducing Time and Mistakes

As in example: New packages, land patterns, design, purchasing, & assembly all need to work off a common or linked database(s)

Market Changes in recent times have OEM's rethinking their assembly strategy. They have less of a desire to manufacture in the US, people are moving out of the industry, and the U.S. is becoming more 'service' type industry. Loss of manufacturing jobs is not good in the long term since each mfg. job needs 4.5-5.2 suppliers versus service job needing only 1.9. This will further impact the job market. These market changes will slow GDP growth. DFO, suitable for the application environment, is summarized as using the best material/package selection, cost effective fabrication of panels, PCB & final assembly are done with minimal labor, testability is built into the design, QA/Inspection requirements are clearly defined, and field requirements are anticipated.

The Process of streamlining DFM can be described as follows:

- Sit Back and Look at the Design Thru Manufacturing Steps and Processes
- Perform Internal or External Audits
- Identify Where Computerization and Automation Will Improve Results
- Capital Investments Can Set the Stage for Large Returns
- Use this Time to Prepare for the Next Stage

To make the US competitive we must work smarter. Manufacturing is vital to all of us for jobs and economic growth. The presentation provided a good overview of reasoning behind sending manufacturing to China, some pros and cons of manufacturing in China, and what steps may be taken to counter the trend. The chapter would like to thank Mr. Blankenhorn for a great presentation.

TECHNICAL EXCHANGE

By: Deon Nungaray & Peter Bernard, General Monitors USA

Lean Fundamentals: “The 5S System”

Moving on with our Implementation of Lean Manufacturing Systems written in our February Newsletter, we will explore an essential component of Lean Manufacturing. The component I am referring to is implementation of the “5-S System”. Amongst TPS: Autonomation, Minimization of movement, reduction of set-ups, Kan-Bans and one-piece workflow is the 5-S system. To help us understand the details of the 5-S system, Mr. Peter Bernard has been kind enough to elaborate on the topic and give us some insight to the details of what each of the 5-S components entails. Deon Nungaray, General Monitors USA

5S System

The Five-S System is derived from five Japanese words meaning: Sort, Set, Shine, Standardize and Sustain. What the 5S's are about is Organizational Behavior, being organized. Five S teaches us ways to be more productive through these techniques of organization. It may seem at first that 5S is about housekeeping, but it is more than that. It is about cleaning up all your clutter around your work area so you can find the tools necessary to do the job. A clean work area is more organized and people tend to be more productive when they work for an organized company. In addition to removing clutter, 5S teaches you to be more productive by eliminating unnecessary movement because you spend so much time searching for tools in cluttered work areas. Some benefits to 5S are: Make your work place safer, making your job more satisfying and productive, remove obstacles and frustrations in your work area, and make it easier to communicate with everyone you work with. Additionally, 5-S System is a great marketing tool for new customers, vendors, visitors and auditors. It improves quality, and most importantly, it frees up space for other uses.

To explore each of the 5-S components, we will explain what each “S” entails and means from an organizational standpoint:

SORT means you remove all items from the workplace not needed for current production. These can be things that for some unknown reason you are hanging on to just in case you need it someday. It can also be unneeded inventory taking up valuable space. Anything questionable such as, raw material, WIP, finished goods, fixtures, hardware, containers, carts, cabinets, tables, toolboxes, tools, and chairs just to name a few, should be red-tagged. Upon completion, supervisors or managers should determine on whether these “red-tagged” items should be donated, discarded, sold or stored at a different location. With all the unnecessary things out of the way, finding what you do need will be easier.

SET is where you begin to reorganize the things you do need to keep so that it is easy to use and easy to find. The theory is, that there is a place for everything, and everything in its place. This is where you decide where to keep necessary items, organize how to keep them, make it easy to find them, and make it obvious when they are missing. Visual organizational methods include the use of shadow boards for tools, and outlining locations on tables or floors where things go. In doing so, you know where to find stuff and will not waste time searching anymore.

SHINE means sweeping floors, wiping off machinery, & generally making sure everything in the factory stays clean and functional. You will need to set up daily, weekly, monthly maintenance programs for equipment and keep your work area clean and trouble free. Preventive maintenance plans are the key to a productive shop. You want to prevent dirt and stuff from piling up again. Spilled water on the floor can cause injury, poor maintenance can cause unplanned down time. Scrap lying around can get mixed up with production, and filthy work environment lowers morale.

STANDARDIZE is the state that exists when Sort, Set and Shine are fully maintained. This is where you set guidelines for maintaining the improved conditions. You want to make sure that you do not revert back to the old ways. Make sure that are not unneeded items left lying around, tool storage does not become disorganized. Standardize sets rules to help prevent the Pack Rat habits from starting up again.

SUSTAIN means making it a habit and stick to the rules. Now that all the hard work is done, you want to put in place ways to keep it going such as reward systems for maintaining the cleanest area. Peer pressure is another way for work areas to compete against each other for the cleanest work area. To be successful and keep the program going, 5S requires full company support. Everyone must buy into the system otherwise it will fail, and become the “flavor of the month” thing to do. You need to make 5S a part of your daily function, which means allowing the workers time to do the things needed to get the shop clean and organized. Like Cellular Manufacturing, Kanban and Just-in-Time, 5S is another sub function of Lean Manufacturing. In today's competitive environment it is imperative that companies stay abreast of the latest methodologies related to manufacturing and 5S can help you stay one step ahead of the rest.

Peter Bernard
General Monitors USA

**ISO 9000, Revision 2000,
Implementation Experience
June 27, 2003
Embassy Suites, Covina, California**

Conference Chair: N.T. "Bala" Balakrishnan, Technology & Operations Management, School of Business, California State Polytechnic University, Pomona, California

Arrangement Chair: Patty Worsham, Riverside Community College- Norco

ISO 9000 is due for a major makeover, with Revision 2000. Rev 2000 takes a process view of the ISO standard. Two new elements have been included in this revision: Measuring and Improving Customer Satisfaction and Implementing Continuous Improvement. Both these business strategies have now been formally endorsed by the ISO standard.

Companies that have already been registered to the ISO 9000, revision 1994 standards, have to make the transition to the 2000 revision by December 14th 2003. Companies that are planning to get ISO registration will move into the revision 2000 standards.

Lead auditors and RAB organizations have started auditing companies to this standard, it is estimated that less than 20% of the companies registered under the old standards have made the cut to the new standard. The proverbial rush to meet the December deadline will happen, which makes it imperative to understand the new requirements from those that have implemented the standard and more importantly from the lead auditors and RAB personnel who will most certainly have interesting experiences to relate on this subject.

Rounding off the paper sessions will be a ISO 9000, rev 2000 interactive roundtable specifically intended to address issues that participants wish to bring up for discussion. We have constituted a panel of experts who have made the transition to the 2000 revision. Attendees can send SMTA these questions prior to the conference which will be addressed during the roundtable Q & A session. Bring all your questions and concerns to the conference or better still e-mail them to SMTA prior to the conference.

Workshop Schedule

7:30am – 8:00am **Registration & Continental Breakfast**

8:00am – 8:10am **Welcome**, N.T. "Bala" Balakrishnan, Technology & Operations Management, School of Business, California State Polytechnic University, Pomona, California

8:10am – 8:40am **Keynote Presentation:** Dr. Howard Fuller, VP of Quality, Solectron Corporation

8:40am – 10:50am — **Session One**

- Six Sigma Quality and Productivity = Customer Satisfaction — Dr. Bill Kovacs, Reliability Management
- A Strategic Approach for Implementing Quality Management Systems — Dr. Phil Rosencrantz, Cal Poly Pomona
- How to Manage Continuous Improvement — Nick Vyas, Sears Roebuck
- From Customer Satisfaction to Loyalty — N.T. "Bala" Balakrishnan, Quality Control Manager, Standard Abrasives
- Case Study: Strategic Quality Management — Kim Victorine, CMTC

11:00am – 12:45pm — **Session Two**

- ISO 9000: Customer Focus Process — Hermann Ries, TUV Essen
- Tips and Techniques for Attaining ISO 9000 Certification — Burjor Mehta, America 2000 Inc.
- Case Study: ISO 9000, Medical Manufacturer — Bob Guziak, Procana
- New Training Technology Taps the Hidden Potential for Managing Continuous Quality Improvement — Teno Cipri, Effective Training Solutions

12:45pm – 1:30pm — **Lunch**

1:30pm – 3:15pm — **Session Three**

- Continuous Improvement by Aligning Performance with Strategic Plan and Vision — Dr. Rhonda Rhodes, California State Polytechnic University, Pomona
- Objective Customer-Satisfaction Measurement and Closed-Loop Improvement for Electronics Manufacturers — Narith Yos, Technology Forecasters, Inc.
- Case Study: Customer Satisfaction Index — Phil Laure, Luxfer Gas Cylinders
- Why Some Teams Fail While Some Succeed — Patty Worsham, Riverside Community College- Norco

3:15pm – 3:30pm — **Coffee Break**

3:30pm – 4:30pm — **ISO 9000, rev 2000 Roundtable Discussion**

4:30pm – 4:45pm — **Concluding Remarks & Speaker Evaluations**

Visit <http://www.smta.org/education/symposia/symposia.cfm#iso> for full workshop details and on-line registration.

Registration Fee: \$149 if you register by June 5, \$199 after June 5. Students: \$99

Workshop and Registration questions, please contact Kristin Stromberg at 952.920.7682 or kristin@smta.org



Thursday
August 7th, 2003
Shotgun Start 1pm

California Country Club
1509 South Workman Mill Road
Whittier, CA 90601
(626) 333-4571

Cost is \$99 per player, & includes, Green Fees, Shared Cart, Warm Up Balls, & Awards Banquet.

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Help Needed: Volunteers to support the Big Event. Don't worry you'll be taken care of!

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Don't let this fun-filled event pass you by!
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OR	3.75"	9.75"

Schedule

Ads should be submitted at least one week prior to the end of the month proceeding the first month of desired publication.

Vendor Tables

Display your products and literature at a Chapter Meeting for a fee of \$100, and receive a bonus of one free 1/4 page AD for one month.

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