

In Brief

Fabrinet (fabrinet.com) will add an array of equipment to beef up its volume assembly of optoelectronic components. The company will add equipment for laser diode attachment and thermosonic ball and stitch wire bonding from Palomar Technologies (palomartechnologies.com) to its manufacturing facilities in Bangkok.

Cookson Electronics Assembly Materials (alphametals.com) opened a research center in India, making it the first electronics assembly materials company to do so, according to the company.

DEK (dek.com) signed an exclusive OEM partner agreement with Stork Veco (storkveco.com), a European manufacturer of electroform stencils. The companies will develop electroformed stencils for SMT and semiconductors. Stork will no longer sell directly to end-customers.

Autron Pte. Ltd., a subsidiary of Autron Corp. (autroncorp.com), will supply \$20 million worth of assembly equipment to Hangzhou Eastcom Cellular Phone Co. Autron will also help manage Hangzhou's spare parts inventories.

Components distributor Nu Horizons Electronics Corp. (nuhorizons.com) has expanded its agreement with Clare Inc. (clare.com) to cover sales of solid-state relays and high voltage ICs in Malaysia, China, the Philippines, Singapore and Thailand.

Vishay Intertechnology Inc. (vishay.com), a manufacturer of discrete semiconductors and passives, will acquire SI Technologies Inc. (sitechnologies.com) in a deal worth \$17.7 million. The merger is expected to close by March.

Microtek Inc. (microtek.co.jp/english) has chosen BP Microsystems' (bpmicro.com) equipment for a new programming services facility in Isehara, Kanagawa, Japan. The new facility, called the Atsugi Programming Center, uses programmers, vision inspection machines and marking machines.

World's Biggest Buyer, HP, Taking Back Procurement

San Jose – Hewlett-Packard's efforts to lower its costs could bode poorly for its EMS suppliers, according to research recently released from Deutsche Bank (db.com).

HP (hp.com) spends an estimated \$43 billion each year – the largest in the world – on supply chain procurement. The company seeks ongoing supply chain cost reductions of \$1 billion to \$1.3 billion annually through 2007, DB wrote, the bulk expected to come from lower procurement costs.

HP, which sources 88% of its spend with its top 40 suppliers, has plans to shrink its supplier base even more. In doing so, the firm will retake control of various purchasing that the company had previously outsourced to EMS firms.

HP is demanding its EMS firms compete on their manufacturing capabilities, rather than procurement. "While HP implemented this process over a year ago to get better clarity into its costs (and eliminate the CMs' profit from material cost arbitrage), we believe HP is accelerating this move and continuing to pressure pricing at the EMS level," DB analyst Chris Whitmore wrote.

Furthermore, the company is pushing toward greater standardization across its hardware platform, reducing the number of parts it uses.

Study Looks at Pb-Free Yields Across Europe

London – A new study launched by a U.K. electronics association will compare manufacturing yields of similar sized electronics manufacturers. The PPM Project, sponsored by SMART Group (smartgroup.org) and the U.K. Department of Trade and Industry, seeks to measure defect levels of tin/lead and lead-free assemblies. The groups will use parts per million defective as the main metric. Companies across Europe will be included in the study, which will be based on existing product acceptability methods to ensure results can be easily compared.

In a press statement, the groups said, "A common question is, How does my process compare with other companies' in terms of yield? The information did not exist or was not easily available to small and medium volume companies until the launch of the project."

IPC and IEC standards will be used to support the PPM evaluation, the groups said.

The PPM Project is part of LeadOut, an effort to prepare manufacturers for lead-free products. For more information contact technical@smartgroup.org.

Jabil Adding 2 Asian Plants

St. Petersburg, FL – Top tier EMS provider Jabil Circuit (jabil.com) will add two new plants in India and China. The company will build a 175,000 sq. ft. facility in Ranjangaon, India, its second in that nation. The plant is expected to be fully operational by mid 2005, and will perform assembly, enclosure integration, distribution and repair services, and design.

Jabil also broke ground on a fourth plant in Wuxi, China, last month. The 515,000 sq. ft. plant is planned to be fully operational next fall.

Jabil currently operates 40 facilities worldwide.

Elcoteq to Take Over Thomson's Juarez Plant

Juarez, Mexico – EMS firm Elcoteq Network Corp. (elcoteq.com) will buy consumer electronics giant Thomson's Juarez operations and take over its manufacturing in a deal worth over \$1 billion.

Elcoteq is paying \$33 million for the plant, which makes set-top boxes. Elcoteq also signed a deal to build set-top box products for Thomson in Juarez. Thomson reportedly owns a 30% share of the global set-top box market.

Elcoteq expects the deal to boost the company's sales by approximately \$300 million during 2005 and by \$800 million to \$1 billion during 2005 to 2007.

The acquisition of the Juarez plant will double Elcoteq's manufacturing capacity in Mexico. The 2,000 current Juarez personnel will be retained.

In a statement, Finland-based Elcoteq said the acquisition is part of a larger plan to balance its global footprint. The company earlier announced an expansion into Brazil.

In Brief

Dover Corp. (dovercorporation.com), the parent company of Universal Instruments (uic.com), purchased Datamax Corp. (datamaxcorp.com), a supplier of bar code and RFID printers.

Merix Corp. (merix.com) acquired Data Circuit Systems Inc., a San Jose quickturn PCB plant, for \$43 million.

PCB maker Photocircuits (photocircuits.com) will cut its manufacturing operations outside Atlanta and lay off 500 staff.

International Manufacturing Services (ims-resistors.com), a manufacturer of thick-film resistors and substrates, named The Johnson Co. (johnsoncompany.com) as representative in North and South Dakota, Iowa, Minnesota and lower Wisconsin.

JNJ Industries Inc. (jnj-industries.com) has sold an AquaSonic AQS-7500 ultrasonic cleaning system with an RFS-25 recirculation and filtration system to Watlow Electric Manufacturing Co. in Winona, MN. The system features an ultrasonic wash tank and high-pressure spray chamber to clean stencils, wave solder pallets, misprinted circuit boards, tools and other accessories.

Brooks Software (brookssoftware.com) and AssurX Inc. (assurx.com) will codevelop an integrated MES and quality management tool for discrete manufacturers. Brooks will resell AssurX's CATSWeb non-conformance, corrective/preventive action and compliance applications to its global customer base. Brooks will also use CATSWeb components in solutions for the discrete manufacturing marketplace.

In partnership with TÜV America (tuv-america.com), LabTest Certification Inc. (labtestcert.com) has expanded its operations to Brazil and Ontario, Canada. LabTest-Brazil will provide consulting, testing, field evaluation and factory inspection services to manufacturers in South America; LabTest-Toronto will offer the same in eastern Canada.

TechSearch International Inc. (techsearchinc.com) is planning a workshop on "Low-Cost RFID IC Packaging and Assembly" to be held March 29-30 in Austin, TX. Call 512-372-8887 for more details.

China's Lenovo to Buy IBM PC Biz

New York – China's Lenovo Group (lenovogrp.com) will buy IBM's PC business for \$1.75 billion in cash and stock, plus the assumption of debt. With the acquisition, Lenovo would become the third-largest PC company in the world, with sales of \$12 billion, said Lenovo chairman Liu Chuanzhihe. Lenovo will acquire an 81.1% stake, with IBM holding 18.9%.

The IBM division posted a first-half loss of \$139 million on sales of \$5.2 billion. Since 2001, the unit has lost nearly \$1 billion. More than half of its products are manufactured through an unspecified joint venture – likely Great Wall Technology.

IBM is currently the third largest maker of PCs, behind Dell (16.4%) and HP (13.9%). The merged company will have an 8% share of the global PC market.

Stephen M. Ward, Jr., currently IBM senior vice president and general manager of IBM's Personal Systems Group, will serve as the chief executive of Lenovo when the deal closes. Yuanqing Yang, currently vice chairman, president and chief executive of Lenovo, will become chairman of Lenovo.

Lenovo, China's biggest computer maker, claiming a 27% share, is traded publicly on the Hong Kong exchange.

Deutsche Bank (db.com) analyst Chris Whitmore said Sanmina-SCI (sanminasci.com) generates about 20% of its revenue from building PCBs for IBM, and could lose up to \$50 million in annual operating profits if Lenovo were to end that supply deal.

NEMI Goes Global, Changes Name

Herndon, VA – The National Electronics Manufacturing Initiative consortium has changed its name to the International Electronics Manufacturing Initiative, or iNEMI (inemi.org).

"As a member-driven organization, we evolve to meet the demands of the changing industry landscape, which means our focus is becoming more global," said Jim McElroy, executive director and CEO. "[W]e have chosen a new name that retains some of our hard-earned brand recognition while signaling our move to a broader geographic scope."



McElroy said the iNEMI board has consistently guided the consortium toward a more global perspective. The organization opened its membership to all North American companies in 1996 and in 2004 actively recruited international participation in several activities.

Furthermore, the 2004 iNEMI technology roadmap marked the first time the group actively recruited participation from Asia and Europe. The consortium has also revised its bylaws and meeting structure to incorporate companies in Asia and Europe.

Suntron to Triple Tijuana Plant Size

Phoenix – EMS provider Suntron Corp. (suntron.com) has signed a five-year lease to expand its footprint in Mexico as more business migrates to lower-cost regions. The company will expand its plant in Tijuana to 110,000 sq. ft. The plant is currently 35,000 sq. ft.

PTC Nabs DARPA 3-D IC Grant

Needham, MA – The Defense Advanced Research Projects Agency, the central research and development organization for the U.S. Defense Department has selected PTC as the prime contractor for a research project to deliver 3-dimensional integrated circuit design management capabilities.

Reportedly, key to DARPA's decision was PTC's (ptc.com) history of working with commercial and military electronics companies to improve their product development processes by producing higher quality, lower-cost products that can be delivered in a shorter timeframe.

As part of this multimillion dollar, multiyear funded research project, PTC has subcontracted with Raytheon and North Carolina State University. PTC and its partners plan to deliver three main components of the IC research project including design process management, design collaboration and design tool integration. Specifically, PTC will provide:

- Product development process management and design collaboration solutions.
- Mechanical and thermal analysis of these next generation ICs.
- Information extraction and visualization.
- Integration to third-party design and analysis applications.

As subcontractors, NC State will offer IC design and Raytheon will provide analysis and testing.

People

Cobar Solder Products hired **Bob S. Silveri** as applications manager. Silveri has worked in applications engineering in reflow, wave and selective soldering for Vitronics Soltec, Soltec and Conceptronic.



Pemstar Inc. named **Roy A. Bauer** president and chief operating officer and to its board of directors. Bauer was chief executive of Key Teknowledgy Corp., and spent 20 years at IBM in manufacturing, product development and quality management.

James Pomeroy will oversee strategic marketing and communications at Tyco Engineered Products and Services, and **Gwen Fisher** (pictured) will lead marketing and communications operations at Tyco Plastics & Adhesives. Previously, Pomeroy was VP of communications for Tyco P&A. Fisher joined Tyco as director of corporate media relations.



Kimball Electronics Group named **Steve Korn** subsidiary vice president, business development, responsible for new customers. Korn spent 17 years with Sanmina-SCI as engineering manager, marketing manager, production manager and vice president and plant manager.

Asyntis GmbH hired **K. Andrew Bernal** as business development coordinator for the U.S. He has 30 years of senior-level marketing and sales experience in semiconductor manufacturing.



Data I/O Corp. promoted **Bruce Rodgers** to vice president, Americas and Asia sales and marketing. Rodgers was previously director, semiconductor relations and marketing, and also served as president of Data I/O Japan.

Flextronics promoted **Thomas J. Smach** to CFO, succeeding **Bob Dykes**, who is leaving to become CFO and executive vice president, business operations, at Juniper Networks.

SMTA Announces Best Papers for 2004 Conference

Minneapolis – SMTA International 2004 announced the recipients of its top awards. Chrys Shea of Cookson Electronics won for Best of Conference; Alan Donaldson, Intel Corp., won Best of Proceedings; and Lars Boettcher, Fraunhofer IZM Berlin, won Best International Paper.

The recipients, chosen by attendees, win \$1,000.

Shea was awarded Best of Conference Paper for "Optimizing Stencil Design for Lead-free SMT Processing." The paper identifies optimized stencil aperture geometries and explores the lower spread of lead-free alloys on some alternate surface finishes.

Donaldson's paper, "Hot Air Lead-free Rework of BGA Packages and Sockets," presents rework profiles and a process developed based on actual package reliability tests.

Boettcher's paper, "Development of 3-D Redistribution and Baling Technologies for Fabrication of Vertical Power Devices," reveals the development of a 3-D wafer-level redistribution process based on fully additive metal deposition.

The SMTA is seeking papers for its 2005 conference in September. Abstracts will be accepted through Feb. 7 at smta.org/smtai/call_for_papers.cfm.

Kester Gets Reflow Encapsulant Patent

Des Plaines, IL – The U.S. Patent and Trademark Office has granted Kester (kester.com) a patent covering a reflow encapsulant material and method of use.

US Patent 6,819,004 covers an epoxy-fluxing technology that enables no-flow underfill. The methods and materials covered within the patent permit attachment of flip chips to electronics assemblies sans underfill adhesive processes. Kester is offering licenses for the patented technology.

In a press release, Kester said the novel technology halves the number of process steps by eliminating steps for flux residue cleaning, capillary underfill, lengthy dispensing and capillary underfill post-curing.

Going Mobile: LG Electronics Opens Paris R&D Hub

Paris – LG Electronics (lg.com) in December week opened an R&D center here and will staff it with more than 100 researchers, part of its strategy to crack the top 3 of the handset industry market by 2006.

At the center, LG will work on multimedia features for its next-generation (4G) GSM and WCDMA phones. The company will also use the location to enhance its links with major European service providers like Vodafone, Hutchison, T-Mobile and Orange.

LG also has R&D centers in San Diego, Beijing, Bangalore and Moscow.

In a statement, James Kim, president for European Headquarters, said, "[T]he establishment of R&D center in Europe has created an environment in which we can efficiently respond to R&D issues in the region. We will position our research center as the R&D hub penetrating European mobile phone market by increasing the number of researchers by more than 100-plus people next year."

December Cold for Taiwanese PCB Makers

Taipei – December blew cold for three major Taiwanese PCB fabricators, all of which reported drops in sales and shipments.

Compeq Manufacturing, and Wus Printed Circuit Board and Unitech Printed Circuit Board, three of Taiwan's six largest PCB makers, said shipments and revenues will likely fall again in January.

Compeq and Unitech dropped about \$6.24 million, while Wus was down about \$3.12 million.

The companies reportedly expect January revenues to fall as well, DigiTimes said, reporting Compeq and Wus losing 10% and Unitech 15 to 20%.

Compeq was the 8th largest PCB maker in the world in 2003, while Wus was 25th and Unitech was 35th, according to Dr. Hayao Nakahara of N.T. Information.

PLM Tool Cut ECO Times 90%, TFS Says

San Jose – Three-Five Systems has deployed product lifecycle management software from Agile Software across its worldwide electronics manufacturing sites, Agile said in January.

In a press release, TFS (tfsc.com) said the software cut engineering change order cycle times by 90% and improved communication at its design centers.

Agile software (agile.com) is currently deployed in seven TFS locations.

Richardson Acquires Chinese Distributor

Lafax, IL – Richardson Electronics has acquired assets from Evergreen Trading Co. Ltd., a distributor of power components in China.

“Evergreen has been able to realize exponential growth in the Chinese power conversion market through their longstanding relationships with customers in the UPS and industrial markets,” said Murray Kennedy, executive vice president and general manager of Richardson's Industrial Power Group, in a statement.

Richardson (rell.com) provides power components. Evergreen supplies power components and devices to small- to medium-sized companies in China.

SigmaTron Gains Medical Clearance

Elk Grove Village, IL – SigmaTron International Inc. (sigmatron.com) has received a key certification for building medical devices, the EMS firm said in January.

The company's Fremont facility has been certified to 13485 quality standards for medical device quality systems. The standards are said to supplement ISO 9001 and 9002 standards.

The certification was conducted by Orion Registrar Inc., a quality and environmental systems registrar.

Wafer Packaging ‘Congress’ to Reconvene

Minneapolis – The second International Wafer-Level Packaging Congress will take place Nov. 3-4, in San Jose. The event will explore cutting-edge semiconductor packaging, including chip scale, 3-D, system-in-package, system-on-chip, system-on-package and wafer level.

Exhibit space will be available, said conference sponsor SMTA (smta.org), adding that IWLP 2004 sold out.

UGS to Buy Tecnomatix for \$228M

Herzlia, Israel – UGS (ugs.com), a supplier of product lifecycle management software and services, will buy Tecnomatix Technologies (tecnomatix.com), a supplier of manufacturing operations software, in a deal valued at \$227.7 million. Closing is expected by the end of the first quarter.

The agreement is subject to approval by Tecnomatix shareholders and regulatory authorities. Under the terms, Tecnomatix shareholders will receive \$17 per share in cash, a premium of 39%. Tecnomatix's board has unanimously approved the deal.

New WEEE, RoHS Guidance Available

London – The U.K. government has made available a series of publications on the WEEE and RoHS Directives, including best practice case studies.

The guidance is available for free at envirowise.gov.uk/electronics.

Among the suggestions:

- Talk to, or join, a recycling industry consortium.
- Talk to a recycler about the requirements and costs of recycling your own product, with a view to re-design.
- Find out what happens at the end-of-life for your product.
- Establish a dialogue with distributors and retailers to establish if your own take-back scheme is possible, or what the best options are for your business.
- Look at current contracts, both for equipment used and sold, to identify any possible transfer of responsibility.
- Evaluate customer opinions about who is responsible for WEEE and see if it is possible to negotiate.
- Evaluate B2B takeback obligations if selling equipment to businesses that are likely to have old stock which will need to be collected and recycled.
- Re-evaluate your business model.
- Identify any market opportunities, such as recycling, logistics.
- Consider a move from a selling to a renting business model.
- Evaluate design and re-design opportunities.

For additional information:

- U.K.'s Department of Trade and Industry (DTI), RoHS guidelines: dti.gov.uk/sustainability/weee/
- KPMG report on WEEE: dti.gov.uk/sustainability/weee/kpmgreport.pdf
- DTI commissioned assessment on WEEE strategies in other countries: dti.gov.uk/sustainability/weee/aeatreport.pdf
- DTI RoHS compliance reports: ROHS Compliance Executive Summary.pdf: dti.gov.uk/sustainability/weee/; ROHS Compliance Full Report.pdf: dti.gov.uk/sustainability/weee/
- Centre for Sustainable Design: cfsd.org.uk
- Sustainable Design Network: sustainabledesignnet.org.uk
- EC's Integrated Product Policy: europa.eu.int/comm/environment/ipp/home.htm
- United Nations UNIDO training kit on Cleaner Production: unido.org/doc/9753
- Lifecycle analysis tools: pre.nl
- Waste Resource and Action Programme: wrap.org.uk
- Intellect: intellectuk.org/campaigns/environment/default.asp
- Unep sustainable consumption: uneptie.org/pc/sustain
- Environment Agency life cycle analysis tool: environment-agency.gov.uk
- Sustainable Business: sustainablebusiness.com
- Design Council: design-council.org.uk

No Static at All: Desco Buys SPI Westek

Chino, CA – Desco Industries will acquire the assets of Static Prevention Inc., a supplier of ESD products. Financial terms were not disclosed.

Under the terms of the agreement, Desco (desco.com) will acquire patents, designs, inventory, tools and equipment and company brand names. Anaheim, CA-based SPI does business under the name SPI Westek (spiwestek.com).

Tom Seratti, president of SPI Westek, will join Desco.

DEK Ships Record 75k Stencils in '04

Weymouth, England – DEK shipped company record 75,000 stencils in 2004, the company said in late December.

"Over the last four years, DEK has made significant investments in our logistics infrastructure, manufacturing capabilities and product R&D," said Michael Brianda, European general manager for DEK process support products. "It is very gratifying to see the fruits of our efforts – the 75,000th stencil shipment of 2004."

DEK (dek.com) manufactures a range of stencils and screens for electronics assembly.

Asian EMS Makers Avoid Tsunami Fallout

Penang, Malaysia – Early reports from Asia indicate that the electronics manufacturing services providers there emerged relatively unscathed from the tsunami that hit the coastline of the Indian Ocean and killed tens of thousands of people.

Dow Jones said in late December there were no reports of problems among outsourcing operations in Sri Lanka, Malaysia or Thailand.

Soletron Corp. (soletron.com) spokesman Dmitry Lipkin told the news agency the company's facilities were unaffected by the earthquake and subsequent waves.

Sanmina-SCI (sanmina-sci.com) reported that its operations in Thailand and Malaysia were not disrupted, Dow Jones said.

Henkel Opens Electronics R&D Lab in Irvine

Irvine, CA – Henkel Electronics Group (henkel.com/electronics) in January opened a state-of-the-art research and applications center here and relocated its global headquarters to the site. The center is now fully operational.

The 53,000 sq. ft. facility will house R&D and applications engineering for the company's die attach, semiconductor underfill, encapsulant and semiconductor mold compound products.

The company's electronics assembly materials headquarters will also move to the site.

"Combining the research and development operation with applications engineering has many benefits," says Dr. Larry Crane, global director of semiconductor research, development and engineering, in a press statement. "This shared expertise gives us the ability to enhance the coordination of customer projects, streamline product introductions, build and test parts for customers and bring advanced materials to market more quickly."

The facility houses a cutting-edge R&D lab, including an analytical and failure analysis lab. It boasts a 5,000 sq. ft. Class 10,000 cleanroom, for semiconductor applications, and a 2,000 sq. ft. surface mount production line.



Under observation: Henkel's new labs

Sanmina-SCI Restates Q4 Earnings

San Jose – Sanmina-SCI Corp. reported revised financial results for its fourth fiscal quarter and fiscal year ended Oct. 2, adding a total of \$5.5 million in charges.

Citing accounting problems at one of its plants, the EMS company reported a revised GAAP loss per share of 2 cents, up from a 1 cent loss previously announced. Adjusted non-GAAP earnings per share were not affected.

The company lowered its fourth-quarter earnings to \$5.4 million from \$11.5 million. In fiscal 2003, Sanmina-SCI posted a quarterly loss of \$85.7 million.

The company also revised its 2004 loss to \$11.4 million, about double its earlier reported loss of \$5.3 million. Sanmina-SCI reported a loss of \$137.2 million in the previous year.

Sanmina-SCI adjusted its GAAP selling, general and administrative expenses due to a stock-based compensation charge of \$2.4 million, an increase in interest expense of \$2 million and an increase in restructuring charges of \$1.1 million.

Hwang's Latest Effort on Implementing Pb-Free

Implementing Lead-Free Electronics, the latest book by Dr. Jennie Hwang, is a companion to the author's previous effort, *Environment-Friendly Electronics: Lead-Free Technology*.

The new work, which is published by McGraw-Hill, focuses on implementation and production, citing choices and tradeoffs facing manufacturers seeking efficient, cost-effective conversion to lead-free manufacturing.

Presented as a quick guide, the 507-page book offers up successful examples in conjunction with the basic principles on lead-free electronics implementation. For information: office@leadfreeservice.com.

Dr. Hwang is a veteran industry researcher and author who has held senior executive positions with Lockheed Martin, Sherwin Williams, SCM Corp., and International Electronic Materials. She holds a number of patents and is author of more than 250 publications including several textbooks. She holds a doctorate in engineering from Case Western Reserve, a master's in chemistry from Columbia and a master's in liquid crystal science from Kent State. Dr. Hwang is currently principal of H-Technologies Group Inc. and an invited distinguished adjunct professor at the Engineering School of Case Western Reserve.

