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Web Sites Worth Mentioning

www.pcbrc.com The Printed Circuit Buyers Resource Center (PCBRC) is dedicated to the PCB buyer and specifier. Developed to support purchasing professionals, engineers and designers, the site offers services and tools to support the purchasing process. Buyers can use the online directory to locate suppliers by region, technology or company characteristics. Ask an Expert allows engineers and designers to get the answers they need about new PCB technologies, PCB specifications and design criteria.

www.xreftech.com Cross Reference Technologies Ltd. (XRT) has introduced a Web-based connector cross referencing application. The system is designed for connector industry and sourcing managers within the communications, defense electronics and avionics areas. The database provides suitable alternative component information and full supplier contact details. It also enables component drawings and specifications to be displayed with part numbers. Planned future developments include Military Specification and NATO stock numbering systems.

www.laserfume.com Many original equipment manufacturers, laser end users and colleges have problems when they encounter laser processes that generate hazardous fumes. To help laser operators and their employers, Purex International has developed a new site containing process survey forms that the laser operator can use to fill in their process details and find out which extraction system is required. Separate forms for laser marking, engraving, welding and cutting applications are available, as well as links to health and safety information and other resources.



Industry Resources

www.pcbupdate.com PCB Update is a bi-monthly newsletter published by UP Media Group. The newsletter's goal is to share the editorial content and expertise of UPMG's magazines and staff with e-newsletter subscribers.

www.pcdandm.com/pcdman/resource/pcb_basics.shtml The fourth edition of *Printed Circuit Board Basics* is now available. This edition contains an updated primer on single-, double-sided and multilayer PCB manufacturing processes; a review of new technologies; updated PCB specifications; a history of the industry; and an updated glossary of terms and definitions.



Surveys and Guides

www.circuitsassembly.com/online/0404/0404salary.shtml The results of our 2004 salary survey are now available online.

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• Process Defect Clinic
Bob Willis, EPS

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FEINFOCUS Acquired by COMET AG

FEINFOCUS (Garbsen, Germany, www.feinfocus.com) has agreed to be acquired by COMET AG (Flammatt, Switzerland, www.comet.ch), a supplier of conventional x-ray tubes for non-destructive testing (NDT), security, analytics, food inspection/irradiation and semiconductor applications. FEINFOCUS is known for microfocus and nanofocus x-ray inspection for electronics assembly, semiconductor and medical device industries, as well as NDT and the emerging micro-electromechanical systems (MEMS) markets.

The acquisition represents a partnering of microfocus and conventional x-ray technology. A provider of sealed x-ray tube manufacturing, COMET will be acquiring a provider of demountable, or open, x-ray tube technology. Both companies seek to capitalize on continuing opportunities from industry trends toward smaller feature sizes, 3-D computed tomography applications and the departure from film-based imaging.

FEINFOCUS will expand its presence in Asia through COMET's Shanghai office, and COMET will take advantage of FEINFOCUS' North American presence in Connecticut and California.

Celestica Appoints Stephen Delaney as CEO

Electronics manufacturing services (EMS) provider Celestica Inc. (Toronto, Ontario, Canada, www.celestica.com) has appointed Stephen W. Delaney as chief executive officer in April. Celestica's board conducted a thorough review of internal and external candidates as part of the search for a new CEO.

Delaney has been acting as CEO since Jan. 28, 2004, when Eugene V. Polistuk retired as chairman. CEO. Robert L. Crandall will remain in the role of chairman of the board of directors.

"Since joining Celestica three years ago, Steve has distinguished himself as a very strong leader, with a relentless focus on execution and a demonstrated ability to drive operating performance and build strong relationships with customers," said Crandall.

Since joining Celestica in 2001, Delaney has held positions including president of Americas Operations. Prior to 2001, he held executive and senior management roles in operations at Visteon Automotive Systems, AlliedSignal's Electronic Systems business, Ford's Electronics division and IBM's Telecommunications division.

Speedline Partners with Georgia Tech's CBAR

Speedline Technologies Inc. (Franklin, MA, www.speedlinetech.com) has entered into an exclusive agreement with the Georgia Institute of Technology (Georgia Tech, Atlanta, GA, www.gatech.edu) for the license of patent-pending closed-loop printing technology. The intellectual property facilitates the closing of the loop between an automated optical inspection (AOI) system and a printer with the intent to optimize the volume of printed paste deposits.

"The agreement governs the terms for commercial development of this intellectual property for ultimate product sale," said Robert Boyes, product marketing manager, Speedline Technologies. "The goal of this partnership is to advance process control technology for the printing process, which will ultimately provide improved yield opportunities for customers."

The closed-loop printing technology was developed by Georgia Tech at the Center for Board Assembly Research (CBAR, www.cbar.gatech.edu). Recent proof of concept testing conducted at Speedline validated Georgia Tech's findings. The technology embodies algorithms that utilize hybrid data-driven control techniques for calculating independent variable modifications. This effectively changes machine parameters in real-time and improves process yields and product reliability.

In Brief

During APEX 2004, Mike Young of **Beta-tron Inc.** (San Jose, CA), a contract assembler, won the free use of **Dage Precision Industries'** (Fremont, CA) XD6500 digital x-ray system for a year.

Preco Electronics (Morton, IL) received ITM Process Certification for Class 2, Electronics Assembly. **ITM Consulting** (Durham, NH) determined that the PCB assembly operation is in accordance with IPC-A-610, Class 2, Acceptability of Printed Circuit Boards.

Siemens VDO Automotive has completed the acquisition of **Chrysler Group's** Huntsville, AL, Electronics operations. The acquisition included two facilities with 1.1 million sq. ft. of space and around 2,000 employees.

Cookson Electronics (Londonderry, NH) recently expanded its **Polyclad Laminates** electronics material manufacturing facility in Elk Grove, CA. The new plant is 43,200 sq. ft. and situated on 8.3 acres.

People

Viscom Inc. (Norcross, GA) has added **Frank Marangell** as the vice president of sales. Marangell, who will manage the business in the Americas, brings 14 years of experience with automated optical inspection (AOI).

Alan Rae, Cookson Electronics' (Foxborough, MA) vice president of technology, has been named director of research by the National Electronics Manufacturing Initiative (NEMI, Herndon, VA). Rae will head NEMI's newly formed research committee.

Elcoteq Network Corp. (Irving, TX) has chosen **Joe Foster** as director of operations for Elcoteq Americas. Foster will oversee manufacturing operations in Monterrey, Mexico, and the new product introduction (NPI) centers in Dallas, TX, and San Jose, CA.

Teradyne (Boston, MA) chairman and CEO **George Chamillard** will transition out of his CEO role over the next few months, but will continue as chairman. **Michael Bradley** will succeed Chamillard as CEO.

Agilent, Digi-Key Announce Distribution Agreement

Agilent Technologies Inc. (Palo Alto, CA, www.agilent.com) and Digi-Key Corp. (Thief River Falls, MN, www.digikey.com), an electronic component distributor, have signed a distribution agreement. The agreement allows Agilent's Semiconductor Products Group (SPG) to make an array of its products accessible to designers via Digi-Key's distribution channel and real-time online service and support site.

Digi-Key's inventory of Agilent products includes a full range of LEDs and displays, optocouplers, motion control encoders, radio frequency (RF) and microwave devices and infrared and optical transceivers. These products are used in applications that span industrial, office automation, consumer electronics, home appliances, signs and signals, wireless, networking and automotive markets.

New Venture Research, E. J. McKay Partner to Develop China Solutions

New Venture Research (NVR, Nevada City, CA, www.newventureresearch.com), a U.S. market research and business development firm in the electronics industry, announced a joint venture with E. J. McKay & Co. (Shanghai, China, www.ejmckay.com), a corporate strategy and mergers and acquisitions (M&A) advisory group, to assist original equipment manufacturers (OEMs) and contract manufacturers (CMs) in developing China solutions.

Given the strong interest in outsourcing manufacturing production to China today, the two firms will assist electronics companies in identifying Chinese partners, acquisition targets and joint ventures.

The companies indicate that the China Solutions program provides services in search, qualification, due diligence and transaction execution of mergers and acquisitions, joint ventures, greenfield and other forms of vehicles. The program assists electronics companies through three critical stages: providing critical strategic business intelligence; assistance in identifying/choosing suitable Chinese business partners; and advising and facilitating the execution of M&A transaction.

Atlanta SMTA Hosts Successful Expo

Dick Russell of Clover Electronics (Newnan, GA), president of the Atlanta Chapter of the Surface Mount Technology Association (SMTA, Minneapolis, MN), recently announced the results of the April 22 Atlanta SMTA Expo held at the Gwinnett Civic Center. The Atlanta chapter sold 77 booths and had nearly 300 people attend the expo. In addition, the chapter raised \$672 through a door prize raffle at the expo for the Make-A-Wish Foundation.

—Lisa Hamburg Bastin, Editor-in-Chief



GATE04 Buyer-Centric Sourcing Event Set for July

The Global Buyers Network (GBN) under the Global-Asia Trade Exchange 2004 (GATE04) platform at the Shangri-La Hotel Singapore will draw a host of global buyers to Singapore on July 19-23.

GATE04—organized by International Enterprise Singapore and HQ Link Pte Ltd—will see a host of suppliers from throughout Asia providing end-to-end solutions for the automotive, infocomm technology, precision engineering, electronics and semiconductor industries for global buyers, allowing them to source from multiple players and regions. Global buyers for the event include Leica Group, RS Components International, Hermes Epitek Corp Pte Ltd. and Infast Group PLC.

Another characteristic of the event is the system of pre-qualification in which the needs of buyers and the capabilities of Asian suppliers are thoroughly matched, so that only the most suitable suppliers are short-listed to meet buyers in exclusive meetings.

The event includes a GBN Forum that will cover topics on procurement trends and supply chain management issues specific to the relevant industries.

For more information, visit www.gate2004.com.



SMTA Offers Lead-Free Workshop

The Surface Mount Technology Association (SMTA, Minneapolis, MN, www.smta.org) is offering a full-day workshop, Implementing Lead-free Assembly at Your Facility. Process expert and SMTA Founder's Award recipient Dr. Ronald C. Lasky, Indium Corp. senior technologist and Dartmouth College visiting professor, will deliver information on establishing a lead-free process.

The workshop will focus on how to implement lead free. It covers everything from finishes, components, alloys and surface-mount processes to an actual example of a lead-free process implementation performed by Motorola that has been used to assemble more than one million cellular phones. The workshop finishes with a section on establishing a plan for lead-free implementation.

The workshop will be held at Asymtek in Carlsbad, CA, on June 24 and at Repron Manufacturing in Tampa, FL, on November 4.

For more information, visit www.smta.org/education/academy/academy.cfm.

Joint Development of CAMX API Underway

NACOM Corp. (Griffin, GA), a manufacturer of automotive electronics, is adopting computer-aided manufacturing using XML (CAMX), an exchange framework that will allow its equipment and applications to speak the same language. Now, any equipment or software the company purchases must be CAMX compliant.

NACOM has partnered with several suppliers and the Georgia Institute of Technology's Manufacturing Research Center (MARC, Atlanta, GA, www.marc.gatech.edu) to develop a CAMX application program interface (API). Other participants include Agilent, BTU International, DEK Printing Machines, IPTE, Orbotech, Panasonic, Pillarhouse International, Universal Instruments and Visiprise.

NACOM reviewed several data formats and vendors in the electronics manufacturing industry to establish an open source standards-based solution. Since none existed, IPC is working on the 25XX series, of which CAMX is a part.

Asymtek, Cookson Materials Group Collaborate on Jetting Underfill Project

Asymtek (Carlsbad, CA, www.asymtek.com), a supplier of automated fluid dispensing systems, has teamed with Cookson Electronics' Semiconductor Products Division (Alpharetta, GA, www.cooksonsemi.com) on a new project to jet underfill. Cookson Electronics Semiconductor Products visited Asymtek's application labs to test their fluid materials on Asymtek's X-1000 series configured with the new DJ-9000 DispenseJet.

The collaboration enables the investigation of new jetting methods and material optimization. The two companies work together as a part of Asymtek's Win3 program, in which key fluid formulators, technology institutes and equipment suppliers join together for the benefit of customers, each other and the industry as a whole.

Student Builds Micro Biosensor Chip to Move DNA Molecules

A Johns Hopkins University (Baltimore, MD, www.jhu.edu) undergraduate has constructed a new type of microchip that can move and isolate DNA and protein molecules. He believes that by linking the chip with analysis equipment, a user could identify medical ailments, monitor a patient's health or detect viruses and other biohazards before they spread.

Eric Simone, a senior biomedical engineering major, fabricated and tested the chip in the lab of Jeff Tza-Huei Wang. Simone devised a biosensor chip with an innovative circular electrode design, which performed more effectively in certain bio-analytical applications.

The chips take advantage of the natural negative charge possessed by DNA or a surface charge imposed on the molecules. A tiny drop of liquid containing the DNA is placed atop the chip. The electric field then guides the molecules to a designated area, where they can be analyzed under a microscope.

Results from Simone's work were included in a paper presented at the IEEE International Conference on Micro Electro Mechanical Systems held recently in The Netherlands.

Teradyne Collaborates for Entry into Russian Market

Teradyne Inc. (Boston, MA, www.teradyne.com), a supplier of semiconductor test equipment, announced its first system installation in Russia. Teradyne, in collaboration with its preferred Russian distributor, Amideon Systems (www.amideon.com), installed the 512-pin J750 test system at the Scientific Research Institute of Electronic Engineering (RIEE, Voronezh, Russia, www.niet.vrn.ru). The system will be used in the design and development of integrated microcircuits.

"Initial interest in Teradyne's product range in Russia has been very positive," said Eoin Sugrue, director of Amideon. "Not only have we successfully completed the installation of the first system, but we are currently working on the installation of a second system in the Moscow region."

Samsung Electronics Joins Semiconductor Alliance

Samsung Electronics (Seoul, Korea, www.samsung.com) is joining a strategic semiconductor technology development partnership with IBM, Chartered Semiconductor Manufacturing and Infineon. The companies will focus on 65-nanometer technology and will eventually include 45 nm process developments.

Joint development takes place at IBM's 300 mm Advanced Semiconductor Technology Center in East Fishkill, NY, which began operation last July. Each company will have the ability to implement the jointly developed processes in its own manufacturing facilities.

A separate agreement with IBM will give Samsung license rights to 90 nm CMOS logic technology. Samsung plans to introduce IBM's logic technology to its highly integrated system-on-chip (SOC) product line such as HD-TVs, DVDPs and mobile applications.

Indium to Host Lead-Free Seminar in Nuremberg

A group of lead-free soldering and assembly providers will host a day of seminar presentations at the Hilton Hotel in Nuremberg, Germany, on June 16. The event is close to the nearby SMT/Hybrid/Packaging 2004 to allow participants the opportunity to attend both events.

A representative from Indium Corp. (Utica, NY, www.indium.com) and Vahid Goudarzi of Motorola will explain how Motorola implemented lead-free solder in the production of over 10 million cellular phones. The discussion will also cover initial quality and product implementation.

Dr. Ning Cheng Lee and Dr. Ronald Lasky of Indium will cover topics such as alloy selection and challenges and best practices of implementing lead-free assembly.

Other presentations include Hewlett Packard's discussion on implementation onto large boards; Vitronics-Soltec's Gerjan Diepstraten discussing lead-free wave soldering; and Hans-Juergen Albrecht, Siemens, covering reliability of lead-free interconnects. Ross Bernston, Indium, will cover mixed technology in lead-free assembly.

ACB, Peters and KIC will also give presentations. The event is by reservation only at www.indium.com/quickstart.

Italian Design Company Selects Tecnomatix Solution

Tecnomatix Technologies Ltd. (Herzlia, Israel, www.tecnomatix.com), a provider of manufacturing process management (MPM) software, has announced that TESCO T.S. (Turin, Italy), an automotive production design company, has signed a contract to implement Tecnomatix's eMPower software.

TESCO T.S. will use the product to enable a better response to tolerance management demands from the company's original equipment manufacturer (OEM) customers. The implementation spearheads the creation of a new department at TESCO dedicated exclusively to tolerance management initiatives.

Accton Establishes UK-based Product Development Team

Accton Technology Corp. of Taiwan (Hsinchu, Taiwan, www.accton.com) has established a new product development center in St. Albans, Hertfordshire, UK. Beginning with a staff of 18 professionals that will grow to 25 by year's end, Accton intends to invest \$15 million over the next three years to reinforce this research and development center.

The UK-based R&D group's first goal is to develop a product suite in the mid-range Layer 3 Ethernet chassis switch market targeted to the medium enterprise data center and enterprise edge distribution market. The product set will deliver low-cost, high-density copper Gigabit Ethernet ports to client systems and feature 10 Gigabit Ethernet uplinks to the network core.

The group, led by Mark Wingrove and Kevin O'Brien, recently joined the company from a tier-one LAN vendor's R&D center based in England.

Would you like to contribute
to **Europe WATCH**?
Contact Robin Norvell at rnorvell@upmediagroup.com.