

## In Brief

Specialty Coating Systems' ([scscookson.com](http://scscookson.com)) new 1,700 sq. ft. cleanroom in Indianapolis is now operational. The design features ISO Class 7 and Class 6 rooms, and an ISO Class 5 area for component fixturing and examination.

AIM Specialty Materials ([aimsolder.com](http://aimsolder.com)) has formed a subsidiary which will produce solder spheres, preforms, epoxies, fluxes and pastes for semiconductor packaging materials. AIM Semiconductor Packaging Materials will also supply touch-up materials and thermal interface materials.

Speedline Technologies ([speedlinetech.com](http://speedlinetech.com)) has signed a number of service agreements to beef up its sales and marketing in southeast Asia. Niche Tech (2004) will provide services in Thailand, Sigmatek Corp. in Taiwan, SIP Technology Sdn Bhd in central and northern Malaysia, and SIP Technology Pte. Ltd. in southern Malaysia, Singapore and Indonesia.

March Plasma Systems ([marchplasma.com](http://marchplasma.com)) is celebrating its 20<sup>th</sup> anniversary of building gas plasma treatment equipment. Founded in 1984, March Plasma was acquired by Nordson Corp. in 1999.

DEK ([dek.com](http://dek.com)) has licensed its VectorGuard stencil technology to Christian Koenen GmbH. The Munich-based company will provide DEK customers with a second source for stencils in Germany, Austria and Switzerland.

BTU International Inc. ([btu.com](http://btu.com)) received a \$1.7 million order for multiple Pyramax 98N and Pyramax 150 X5 reflow solder systems. The systems will be installed in Jurong Hi-Tech's manufacturing facilities in Singapore, Malaysia, China and Indonesia.

YESTech ([yestechinc.com](http://yestechinc.com)), a supplier of yield enhancement solutions, has purchased a 5,400 sq. ft. building in San Clemente, CA, to accommodate its growth. The new corporate headquarters will house management, engineering, sales, marketing and customer service personnel.

## Pb-Free 'Like a Massive ECO,' Says Celestica GM

Toronto – Celestica Inc. is rolling out what it calls the EMS industry's first end-to-end environmental services offering, to aid OEMs converting to lead-free designs and processes ahead of European Union legislative mandates.

The EMS maker is offering what it calls its Green Services to OEMs seeking to comply with pending environmental initiatives, including the RoHS legislation.

Depending on the products designed, OEMs will go through the transition in stages, Celestica general manager of engineering services Dan Henes observes. "There's a suite of [stages] that each customer will have to go through. Some will go through [these stages] themselves, some will need help."

In a phone interview with *Circuits Assembly*, Henes said that Celestica ([celestica.com](http://celestica.com)) can offer either "point" services – specific solutions to specific problems, for example, help with certain design problems – or an end-to-end solution. "By breaking this into bite-sized pieces, customers can move at their own pace. They need to conduct an assessment of their designs and materials in terms of compliance. We can do that BoM/risk analysis for them."

Among the services offered are consulting services, turnkey product conversion and technology qualification to help the supply chain navigate through the dizzying maze of lead-free alternatives and paperwork.

Henes likens the transition to lead-free assembly to a "massive industry engineering change."

## Flextronics Acquires Flex Maker

San Jose – The PCB division of Flextronics ([flextronics.com](http://flextronics.com)) will acquire one of the oldest and largest makers of flex circuits in North America in a stock-for-stock deal. The acquisition is expected to increase Flextronics' annual revenues by \$80 million.

Multek, a wholly owned division of Flextronics, will acquire Sheldahl ([sheldahl.com](http://sheldahl.com)), a provider of flexible interconnects and materials. The deal was expected to close in the third quarter.

Founded in 1955 and publicly traded until emerging from bankruptcy in 2002, Sheldahl employs 450 and has facilities in Northfield, MN, the Philippines and Mexico. It is owned primarily by Ampersand Venture Capital, Molex Inc. and Morgenthaler Partners.

Multek manufactures rigid PCBs.

## ECS Adding EMS Services

Taipei – Notebook PC maker Elitegroup Computer Systems ([ecsusa.com](http://ecsusa.com)) will branch into EMS services following a recent internal reorganization.

The company is aiming for notebook contract orders from regional vendors and system integrators, reported *DigiTimes*, sourcing chairman Johnson Chiang.

ECS, one of Taiwan's largest ODM makers of motherboards, recently split into two units – EMS and brand products. While the company's history is in motherboard manufacturing, the EMS group will target a broader product range including motherboards, graphics cards, PC systems and notebooks, *DigiTimes* said.

## Reptron, Clear-Com Ink Multimillion Dollar Deal

Tampa, FL – Reptron Electronics ([reptron.com](http://reptron.com)) has signed a multimillion dollar contract to build electronics assemblies for Clear-Com Communication Systems. Full production is expected to ramp by the end of 2004.

Under the deal, Reptron will build 150 different subassemblies and PCBs for wired and wireless intercommunications products. Much of the current phase involves converting from plated through-hole to surface-mount technology.

## In Brief

Plexus Corp. ([plexus.com](http://plexus.com)) will take over complete PCB assembly for Fluke Precision Measurement products, which is consolidating its base of EMS providers. Plexus may in the future take over new product introduction, including design, prototyping and test.

IPC ([ipc.org](http://ipc.org)) has relocated to Bannockburn, IL. The office can now be contacted at 3000 Lakeside Dr., Suite 309S, Bannockburn, IL, 60015; (847) 615-7100.

Pro-Mation Inc. ([pro-mation-inc.com](http://pro-mation-inc.com)) has secured an automation contract from EoPlex Technologies ([EoPlex.com](http://EoPlex.com)), a miniature component and subassemblies manufacturer. The companies have been working together for over a year to develop a modular in-line automation process.

Cobar Solder Products ([cobar.com](http://cobar.com)) has signed Automation South to represent its line of solder pastes, fluxes and other electronics soldering materials in the southeast U.S.

Azores Corp. ([azorescorp.com](http://azorescorp.com)) is partnering with Kromax International to represent Azores' line of photolithography systems and accessories in southeast Asia and Taiwan.

Transition Automation ([transitionautomation.com](http://transitionautomation.com)) president Mark Curtin has established an open exchange industry forum for SMT users to share stencil printing experiences and testing capabilities. Discussions include advice pertaining to the lead-free process and solder paste printing. Visit the Web site to participate.

Speedline Technologies ([speedlinetech.com](http://speedlinetech.com)) reported second-quarter sales rose 61% over last year. Bookings were up 85% yoy.

Micron Technology Inc. ([micron.com](http://micron.com)) plans to produce NAND Flash memory solutions targeting memory cards, USB devices and other mass storage applications. The company anticipates bringing its first NAND Flash solution, a 2 Gb component, to market by the end of the year.

## NEMI Revises Tin Whisker Guidance

Herndon, VA – A group of technology experts has issued new recommendations for testing assemblies for tin whiskers and evaluating devices with tin finishes. The recommendations by the National Electronics Manufacturing Initiative's Tin Whisker User Group update previous guidance released in May.

The new guidelines ([nemi.org/projects/ese/tin\\_whisker\\_activities.html](http://nemi.org/projects/ese/tin_whisker_activities.html)), which include input from suppliers not found in the May version, have been submitted to IPC and JEDEC to consider for standardization.

Among the updates:

- Changed significantly the "qualification by similarity" matrix, dramatically reducing the number of tests (and associated cost) required by an individual supplier.
- Eliminated the annual requalification requirement, replacing it with a simpler, supplier-defined, whisker-monitoring requirement.
- Eliminated requirements for control samples that produce whiskers.
- Provided options in the specification if tin-lead reference samples are not used or available for baseline whisker length comparisons.
- Provided guidelines for optical inspection qualification as a possible alternative to SEM (scanning electron microscopy).
- Eliminated preconditioning requirements for components with nickel underplating, which cuts sample sizes for components using nickel as a mitigation practice and also reduces the test time required for these components.
- Allowed an option for bias testing (when required) to be conducted in sockets.

Joe Smetana, principle engineer, advanced technology for Alcatel and group chairman, said, "[T]here are a number of options for reducing the risk of tin whiskers, and we recognized the need for supplier feedback on the practicality of implementing the various approaches. Our goal was to ... [limit] testing requirements in an effort to save time and money but [while] still reducing the risk of tin whisker failures."

Not everyone agrees that new efforts are needed, however. Several solutions were devised in Japan as much as 20 years ago; for details, see Jan Vardaman's column in *Circuits Assembly* (September 2004, pg. 22).

The user group is comprised of 11 large manufacturers of electronics assemblies that agree that pure tin finishes (and other high-tin content lead-free alloy finishes) present a risk of tin whisker-related failures in electronics, particularly those demanding high reliability.

## Stencil Us In: Speedline Inks Japanese Sales Deal

Franklin, MA – Speedline Technologies Inc. ([speedlinetech.com](http://speedlinetech.com)) has signed an agreement covering sales and marketing of its screen printers in Japan.

Tamura FA System Corp. will market Speedline's Accuflex and AP Excel stencil printers under the MPM/Tamura brand, and provide service and support to Japanese customers.

Tamura will also translate software and manuals into Japanese and develop additional features specifically for its Japanese customers.

## IMI Begins LCD Shipments for Seiko

Laguna, Philippines – IMI ([imiphil.com](http://imiphil.com)) has begun shipping liquid LCD modules for cellphones for Seiko Epson Corp. Volume is expected to ramp to 750,000 modules per month by the first quarter of 2005.

The EMS provider assembles thin-film diode LCD modules for Seiko. It marks the first outsourcing venture for Seiko Epson's Philippines plant, according to plant president Isomu Koike.

## People

Three-Five Systems promoted **David A. Prunier** to senior director and general manager of new product introduction and the firm's medical manufacturing facility. Prunier was senior director for medical products and also held management posts at Plexus, SCI Systems and other, smaller manufacturers.

**Michael O'Donoghue** has been named executive director of IMAPS effective Sept. 1, replacing **Richard M. Breck**.

Machine Vision Products appointed **Debra Waltemyer** East Coast sales engineer. She previously worked at Agere Systems Inc. for five years in opto-electronic components.



**Gregg Schoenrade** joined Siemens Dematic Electronic Assembly Systems as senior sales engineer for the south central U.S. including Texas, Arkansas and Oklahoma.



Feinfocus appointed **Dr. Frank Gitmans** as managing director of the company's global headquarters in Garbsen, Germany. Most recently, Dr. Gitmans was managing director of Peter

Wolters Surface Technologies GmbH, a German machine tool company serving the semiconductor market.

**David L. White** has been named executive vice president of finance and chief financial officer of Sanmina-SCI Corp., replacing acting chief financial officer **Mark Lustig**, the company controller who had been serving as interim CFO since **Rick Ackel** quit the position in January. White was senior vice president and CFO of Asyst Technologies and has 20 years of experience in technology manufacturing.

FlexLink Systems Inc. named **Nino DiPietro** to the position of vice president, finance. DiPietro joins FlexLink after eight years as corporate controller for Southco Inc.



Kemet Corp. promoted **Dr. Philip Lessner** to vice president, tantalum technology and technical marketing, responsible for product direction and new product and process execution. Dr. Lessner, who has been with Kemet for eight years, was director of technical marketing services.

## electronica Expos to Hit Munich, Hong Kong

Hong Kong – A pair of major components shows are set this fall in opposing corners of the globe.

This month in Hong Kong is electronicaAsia, an exhibition for components, assemblies, production and display technology. The Oct. 13-16 show will be held concurrently with the Hong Kong Electronics Fair.

electronicaAsia is the largest electronics manufacturing show in Asia. According to show producers Messe Munchen, last year's electronicaAsia had more than 28,000 trade visitors, up 75% from 2002, and 552 exhibitors.

Automotive electronics will take top billing at electronica 2004 in November in Munich. Automotive accounts for 17% of the overall semiconductor market in Europe, 30% in Germany, thanks to demand for engine-control units, electronic-dashboard instrument clusters, remote keyless-entry systems and airbags.

electronica 2004 will be held Nov. 9-12.

## SMTA News

### Lehigh Student Nabs Hutchins Grant

Minneapolis – A Lehigh University student who is researching cure kinetics of developmental epoxy systems is the latest recipient of the SMTA Charles Hutchins Educational Grant ([smta.org/hutchins](http://smta.org/hutchins)). Brian McAdams, a graduate student in materials science and engineering, last month received the award for his project, "Sub-critical Initiation of Delaminations at the Underfill/Passivation Interface in Flip Chip Assemblies."

In his study, McAdams examined the mechanics of adhesion for the initiation and propagation of cracks at the underfill/passivation interface in flip-chip packaging and looked at the role of deformation mechanisms in determining interfacial adhesion and the potential correlation to chemical interactions across the interface.

The award included \$5,000 and travel expenses to SMTA International.

Co-sponsored by SMTA and *Circuits Assembly*, the grant was established in memory of past SMTA president and industry colleague Charles Hutchins. *Circuits Assembly* donated \$5,000 to the fund in February through the proceeds of the Service Excellence Awards.

### Flextronics' Yi to Receive SMTA Founder's Award

Minneapolis – Sammy Yi, vice president of manufacturing at Flextronics ([flextronics.com](http://flextronics.com)) and a leading assembly technology expert, was recognized last month for his contributions to the SMTA ([smta.org](http://smta.org)) and the industry.

In a Sept. 29 ceremony at SMTA International, in Rosemont, IL, Yi received the Founder's Award, SMTA's highest form of recognition.

Yi has been an SMTA member since 1997 and was a director from 2000 to 2003. He is a former chair of the Chapter Leadership Committee and an active member of the Technical, Awards, Membership and Certification committees.

In a press release, the SMTA said Yi's greatest accomplishment may be his role in international development. Yi has been the SMTA's liaison for activities in China, including a chapter in Hong Kong, an office in Shenzhen, and four technical conferences.

Other award recipients:

- Jeffrey Forster of Universal Instruments, a 14-year member of SMTA and a founder and officer of the Oregon Chapter, will receive the Member of Distinction Award.

- Randy Cherry of Tellabs received the Excellence in Leadership Award. Cherry, a member since 1987, has been heavily involved in the association's Chicago chapter, and served on the SMTA Membership Committee.

- Kester Corp. received the SMTA+ Corporate Partnership Award. A corporate member since 1985, Kester has institutionally supported SMTA's educational and other programs.

- Abby Tsoi received the International Leadership Award, a new award. He has been president of the Hong Kong Chapter since 2001, and gained support from the City University of Hong Kong to provide a low-cost office and free venue for chapter activities.

## ICs Turn Down

Trends in the U.S. electronics equipment market (shipments only).

	% Change			
	May	June	July*	YTD
Computers and electronics products	-1.6	0.2	1.8	14.2
Computers	-15.9	-3.3	5.4	18.1
Storage devices	3.4	26.0	0.3	12.0
Other peripheral equipment	3.8	-7.2	6.8	5.9
Nondefense communications equipment	-1.9	-2.8	1.5	12.1
Defense communications equipment	2.9	5.7	-6.4	22.1
AV equipment	-5.1	0.7	2.4	-2.2
Semiconductors	3.2	-1.9	4.3	22.8
Components <sup>1</sup>	-0.2	2.4	0.8	8.9
Nondefense search and navigation equipment	3.2	-1.1	-14.1	7.2
Defense search and navigation equipment	5.8	-6.1	6.5	8.9
Medical, measurement and control	1.5	7.2	-2.4	15.6

\* Preliminary. <sup>1</sup> Includes semiconductors. Seasonally adjusted. Source: U.S. Department of Commerce Census Bureau, September 2004.

## August Manufacturing Growth Slower

Tempe, AZ – The rate of growth in the manufacturing sector slowed in August but new orders and production remained strong. Manufacturing grew for the 15th consecutive month, said the Institute for Supply Management ([ism.ws](http://ism.ws)), based on its monthly poll of the supply chain.

The PMI, a leading measure of economic activity, was 59%, down 3 points and breaking a string of nine straight months above the 60% level. Still, the PMI was above the benchmark 50% level for the 15th straight month. New orders fell 3.5 points and production dropped 6.6 points.

Respondents focused on energy costs, price inflation in basic materials and slowing sales growth. "While the near-term outlook remains positive, both the inventories and customers' inventories indexes show signs of inventory building," ISM

	April	May	June	July	August
PMI	62.4	62.8	61.1	62.0	59.0
New orders	65.0	62.8	60.0	64.7	61.2
Production	67.0	64.8	63.2	66.1	59.5
Inventories	44.8	49.3	51.1	49.9	51.7
Customer inventories	40.5	37.0	39.0	37.5	45.5
Backlogs	66.5	63.0	58.5	58.0	55.0

Source: Institute for Supply Management, September 2004

chairman Norbert Ore said. "Such a build may be justified if it is to meet additional sales demand, and if new orders and production remain strong."

Prices manufacturers pay were higher, driven by customer demand and energy costs. Customer inventories remain "too low," ISM said, although the rate of decline decelerated significantly during August. Backlogs fell, as did new export orders and imports.

Electronic Components and Equipment, and Industrial and Commercial Equipment and Computers were among the sectors reporting growth.

## Industry Market Snapshot

Book-to-bills of various components/equipment.

	April	May	June	July
Semiconductor equipment <sup>1</sup>	1.13	1.10	1.08	1.05
Semiconductors <sup>2</sup>	36.6%	36.9%	40.3%	1.0%
Rigid PCBs <sup>3</sup> (North America)	1.01	0.95	0.95	0.99
Flexible PCBs <sup>3</sup> (North America)	1.63	1.87	1.57	1.57

Sources: <sup>1</sup>SEMI, <sup>2</sup>SIA (3-month moving average growth), <sup>3</sup>IPC

## Server Shipments Up 25% Over 2003, Report Says

Stamford, CT – Worldwide server revenue rose 7.7% in the second quarter, topping \$11.5 billion, reported tech research firm Gartner Inc. Shipments were up 24.5% over last year, to 1.6 million units.

Based on server revenues, IBM ([ibm.com](http://ibm.com)) remained the top vendor, with sales up 10.8% to \$3.5 billion, good for a 30.7% share. Dell's ([dell.com](http://dell.com)) revenue rose 20.1% to \$1.1 billion, making it the fastest-growing OEM among top-tier vendors.

H-P ([hp.com](http://hp.com)) led the way in shipments, with 463,489 units. Sun Microsystems ([sun.com](http://sun.com)) showed the highest growth rate, with shipments up 38.4%, to 90,487 units.

## Gartner Boosts Chip Revenue Outlook

Frankfurt – Dismissing fears of an impending downturn, Gartner Dataquest in late August inched up its 2004 forecast for global semiconductor sales. The research firm predicts revenues will grow 27% this year, to \$226 billion. Gartner previously forecast growth of "more than 25%."

The report followed on the heels of an improved outlook for semiconductor tools from the trade group SEMI ([semi.org](http://semi.org)). It is not clear, however, whether Gartner's report takes into account a recent announcement that Intel ([intel.com](http://intel.com)) will slash pricing by up to 35%.

In a statement, Gartner said concerns about rising inventories in the supply chain were overstated. "Had the increased inventory been accompanied by a flat or even falling semiconductor market, it would have been of grave concern. In a rising market, increasing inventory levels are normal."

Gartner's research vice president Richard Gordon acknowledged the industry still harbors jitters from the last downturn. "Despite the improving market conditions that semiconductor vendors have enjoyed over the past several quarters and the expectation that revenue growth this year will be close to 30%, this industry upcycle is notable in that few in the industry have felt able to acknowledge it as a boom."