Manutacturing Warke

inside the contract manufacturing industry

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Top 50 Surpasses \$250 Billion

MMI's annual list of the 50 largest EMS providers worldwide has reached another milestone. In 2013, combined sales of the MMI Top 50TM EMS providers broke through the \$250-billion barrier with a revenue total of \$254.3 billion. While not all of this revenue is pure EMS – there is some ODM and other non-EMS business mixed in among the largest companies - the lion's share of it is EMS, offering a clear indication of how much OEMs now depend on the EMS industry.

With the results of *MMI's* Top 50 survey now in, it can be said that 2013 was a meager growth year for the Top 50 as a whole. The group's 2013 sales increased 1.9% from the previous year. This result should not be surprising given less-than-expected growth in world markets and caution among OEMs.

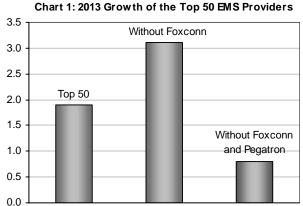
In recent years, Top 50 growth has received a boost from EMS giant Hon Hai Precision Industry because of its size and history of above-average growth. But not in 2013. Last year, Hon Hai generated consolidated sales of \$133.2 billion, which represented a growth rate of just 1%. When Hon Hai's contribution to the Top 50 is excluded, the growth rate for the rest of the group rises to 3.1%. So in 2013 Hon Hai exerted a 1.2-percentage point drag on Top 50 growth.

Hon Hai is known for assembling iPhones and iPads for Apple, Hon

Hai's largest customer. But in recent years Apple has brought on **Pegatron** as a second source of assembly, and as a result Apple has become Pegatron's biggest customer as well. With Pegatron's EMS business having grown by leaps and bounds from the company's Apple relationship and other programs, does it make sense to add Pegatron to the Top 50? The answer is

yes. A Pegatron representative recently informed MMI that over 50% of Pegatron's total sales in 2013 and 2012 came from EMS. That means EMS made up an even higher percentage of the company's core DMS sales, which MMI believes is the proper figure to use for Top 50 ranking. Pegatron's DMS sales in 2013 amounted to \$28.9 billion in 2013, good enough for second position in the Top 50. DMS sales grew 11% in 2013.

What effect did these two Apple-



influenced providers have on Top 50 growth? Their combined effect was slightly positive because when the two companies are excluded from the group, its growth falls by 1.1 percentage points to 0.8% (Chart 1).

A higher cutoff

On pages 2-4, the MMI Top 50 providers for 2013 are ranked in order of calendar 2013 sales. As one can see from last place on the list (page 4), it continued on p. 4

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Organization	Head- quarters	Sales calendar 2013 (millions)	by 2013		calendar	Growth '12-'13 in US\$ (%)	No. of people		Total facility sq. ft.	Percent space in low-cost regions	SMT	No. of customers and notable customers
Hon Hai Pre- cision Industry (Foxconn)	New Taipei, Taiwan	\$133,226	1	1	\$132,263	1	~1,100,000 estimated	not avail.	not avail.	not avail.	not avail.	Apple, Dell, HP, Cisco, Sony, Amazon, Nintendo, BlackBer
Pegatron	Taipei, Taiwan	\$28,935 ¹	2	new	\$25,961 ¹	11	not avail.	not avail.	not avail.	not avail.	not avail.	Apple, Sony
Flextronics International	Singapore	\$24,680	3	2	\$24,644	~0	149,000°	not avail.	27.6 M²	not avail.	not avail.	Alcatel-Lucent, Cisco, Ericsson, Ford, HP, Huawei, Lenovo, Microsoft
Jabil Circuit	St. Peters- burg, FL	\$18,311 ³	4	3	\$17,462 ³	5	~177,000	60+	42.7 M	~80	not avail.	200+: Apple, Cisco, EchoSta Ericsson, GE, HP, Ingenico, IBM, NetApp
New Kinpo Group	New Taipei, Taiwan	\$6,645 4	5	4	\$6,6344	0	36,967	31	11.51 M	80	274	>30: HP, Seagate, Western Digital, Panasonic, Toshiba, Hitachi, TI, Casio, Pace, Niko Pioneer, GE, Lenovo, Asus, ASRock, Gigabyte, Sony, Buffalo, Epson, Samsung
Sanmina	San Jose, CA	\$5,870	6	6	\$6,086	-4	40,909 5	~75	11.886 M ⁵	~625	not avail.	Ciena, Diebold
Celestica	Toronto, Canada	\$5,796	7	5	\$6,507	-11	~27,000	>20	~6 M	~75	not avail.	>100: Alcatel-Lucent, Cisco, EMC, HP, Hitachi, Honeywell IBM, Juniper, NEC, Oracle, Applied Materials
Benchmark Electronics	Angleton, TX	\$2,506	8	8	\$2,468	2	~11,000	25	3.802 M	~56	157	~100: Emerson, IBM, Applied Materials
Shenzhen Kaifa Technology	Shenzhen, China	\$2,430	9	7	\$2,580	-6	18,000	4	3.2 M	100	>100	>60: Seagate, Western Digit Hitachi, Kingston, Samsung, ZTE, Huawei, Epson, ResMe Siemens, ENEL, Reliance
Universal Scientific Industrial (USI)	Shanghai, China	\$2,303	10	10	\$2,110	9	>12,000	6	2.742 M	81	110	>100 (EMS)
Plexus	Neenah, WI	\$2,228	11	9	\$2,308	-3	9,211	18	4.1 M	59	90	~140: GE, Coca-Cola, Inovoics, Honeywell Aerospace
Venture	Singapore	\$1,865	12	11	\$1,908	-2	12,000	not avail.	not avail.	not avail.	not avail.	>180: Agilent, IBM, ABB, HP, Micros, NCR, Oclaro, Waters Toshiba-TEC, Honeywell, QLogic, Hypercom/Verifone, Talaris/Glory
UMC Electronics	Saitama, Japan	\$1,293	13	14	\$1,081	20	11,464	8	1.422 M	91	131	
SIIX	Osaka, Japan	\$1,240	14	12	\$1,374	-10	8,014	76		not avail.		~200
Zollner Elektronik Group	Zandt, Germany	\$1,180 preliminary	15	13	\$1,108	7	8,200	17	2.928 M	60	48	>500
Sumitronics	Tokyo, Japan	\$841	16	15	\$906	-7	~3,700	25 ⁷		not avail.	not avail.	
Beyonics Technology	Singapore	\$810	17	17	\$960	-16	6,185	8	1.356 M	92	72	~60
Asteelflash	Neuilly Plaisance, France	\$784	18	19	\$629	25	5,400	23	1.761 M	not avail.	46	265

⁶ Does not include six plants operated by affiliates. ⁷ Includes partner plants.

				Т	he MMI	Top 50	EMS F	rovide	rs in 201	3		
		Sales			Sales	Growth				Percent	N	
	Head-	calendar 2013	by 2013	2012	calendar 2012	'12-'13 in US\$	No. of	No. of	lotal facility	space in low-cost		No. of customers and
Organization	quarters				(millions)	(%)	people		sq. ft.	regions		notable customers
Global Brands Manufacture (GBM)	New Taipei, Taiwan	\$733	19	16	\$783	-6	10,000	3	1.408 M	100	180	60
Kimball Electronics Group	Jasper, IN	\$732	20	18	\$651	12	3,488	6	992 K	63	37	>20: Johnson Controls, BWI Group, Grundfos, Brose Automotive, Motorola Solutions, Cosworth, Emerson, Ingersoll Rand Security, Cooper Industries
Integrated Micro-Elec- tronics, Inc.	Laguna, Philippines	\$702 ⁸	21	20	\$6168	14	18,190	14 sites	2.3 M	99	130	>300 EMS: Bosch, Japan Climate Systems
	Grand Cay- man, Cay- man Islands	\$666	22	21	\$608	10	5,635	3	1.201 M	98	17	JDSU, Oclaro
3CEMS Group	Guangzhou, China	\$635	23	22	\$566	12	12,000	7	2.274 M	100	51	188: Asus, Pansonic, Finisar, Fujifilm, Goodman, Honeywell, Sony, Tridium
Enics	Zürich, Switzerland	\$554	24	24	\$503	10	3,200	8	756 K	50	not avail.	ABB, Atlas Copco, Bombardier, Danfoss, Gambro, Getinge, Honeywell, KONE, Leica Geosystems, Roche Diagnostics, Schneider Electric, Vaisala, Varian Medical
WKK Technology	Hong Kong	\$522	25	30	\$435	20	6,533	1	1.5 M	100	38	35
Creation Technologies	Burnaby, BC, Canada	\$506	26	23	\$517	-2	~2,700	13	824 K	19	37	~230
VIDEOTON Holding	Székesfeh- érvár, Hungary	\$501	27	28	\$444	13	7,300	15	6.2 M ⁹	100	22	>50: Braun, BSH, Electrolux, 3M, Philips, Bosch, BWI, Continental, Delphi, Valeo, ABB, Alstom, GE, Barco, Carrier, Eaton, Emerson, Hager, Itron, Kopp, Kuka, Linak, Legrand, Sensus, Siemens, NCR
éolane	Le Fresne sur Loire, France	\$490	28	25	\$408	20	3,500	19	1.523 M	26	40	500
VTech Com- munications	Hong Kong	\$488	29	27	\$446	10	4,200	1	650 K	100	21	75
Wong's International Holdings Limited	Hong Kong	\$474	30	31	\$430	10	4,600	2	~1 M	100	~60	>20
V.S. Industry	Senai, Malaysia	\$430	31	32	\$397	8	8,649	12	3.373 M	100	41	76: Dyson, Keurig, Itron, Georgia Pacific, Seb/Calor Group
Ducommun Inc., Electronic Systems Group	St. Louis, MO	\$421	32	29	\$437	-4	1,857	12	665 K	0	12	175: Raytheon, Sikorsky, John Deere, Parker Aerospace, Bell Helicopter
ALL CIRCUITS	Meung- sur-Loire, France	\$390	33	new	\$312	25	1,550	3	455 K	28	20	50
OnCore Manufacturing	Fremont, CA	\$375	34	36	\$352	6	1,600	9	700 K	30	40	~100
Note: Unless otherwise indicated, data represents 2013 year-end. ⁸ Does not include IMI's sales of power semiconductor assembly and test services. ⁹ Includes 300 K sq ft of space that is not in operation.												

				The I	ММІ Тор	50 EM	IS Provid	ders in	2013			
	Head-	Sales calendar 2013	Rank by 2013	2012	calendar	Growth '12-'13 in US\$	No. of	No. of	Total facility	Percent space in low-cost		No. of customers and
Organization	quarters	(millions)		rank	(millions)	(%)	people		sq. ft.	regions		notable customers
Di-Nikko Engineering	Nikko, Japan	\$359	35	26	\$452	-21	4,100	13 ¹⁰	698 K	63	71	49: Canon
Neways Electronics International	Son, The Netherlands	\$355	36	35	\$354	~0	2,052	11	not avail.	40	17	~640: ASML, FEI, Philips, Rhein Metal, ThyssenKrupp
Hana Micro- electronics	Bangkok, Thailand	\$345	37	37	\$335	3	10,700	3	1.291 M	100	105	140: Synaptics, Avago, HID, Lumiled, Sensata, Safenet
PartnerTech	Malmö, Sweden	\$341	38	38	\$332	3	1,268	11	821 K	35	13	>200: Securitas Direct Verisure, Cavidi, CybAero
Key Tronic	Spokane Valley, WA	\$325	39	33	\$367	-11	2,584	10	1.011 M	80	8	56
Computime Limited	Hong Kong	~\$320	40	return- ee	\$300	7	~5,000	4	1.224 M	100	21	60
Nippon Manufacturing Service	Tokyo, Japan	\$303 forecasted	41	new	\$330	-8	3,13411	13	332 K	not avail.	91	360
Selcom Elettronica	Bologna, Italy	\$295	42	43	\$276	7	2,048	7	646 K	45	not avail.	83
Orient Semi- conductor Electronics	Kaohsiung, Taiwan	\$286	43	42	\$282	1	2,065	6	590 K	99	78	90
Kitron	Billingstad, Norway	\$278	44	40	\$291	-5	1,188	7	>431 K	28	15	Kongsberg, Sensys Traffic, Maquet Critical Care, Husqvarna, DiaSorin, HMS Networks
SMTC	Markham, Ontario, Canada	\$271	45	39	\$296	-9	2,000	4	500 K	87	29	32: SpiderCloud Wireless, FICOSA
SMT Technologies	Sungai Petani, Kedah, Malaysia	\$263	46	41	\$284	-7	1,805	2	219 K	100	25	26: Western Digital, Dyson, OJE, Oxylane
SVI	Bangkadi, Pathumthani, Thailand	\$261	47	45	\$249	5	2,709	3	1 M	100	20	63: ABB
Scanfil EMS	Sievi, Finland	\$251	48	47	\$234	7	1,667	5	1.238 M	78	not avail.	
LACROIX Electronics	Vern-sur- Seiche, France	\$239	49	49	\$216	11	2,050	4	414 K	50	20	ZODIAC Aerospace
Sparton	Schaumburg, IL	\$224 12	50	return- ee	\$156 ¹²	43	not avail.	6 ¹²	not avail.	not avail.	not avail.	

Note: Unless otherwise indicated, data represents 2013 year-end. ¹⁰ Includes six partner plants. ¹¹ As of Sept. 30, 2013. ¹² Figure represents combination of Sparton's Medical and Complex Systems segments.

took a minimum of \$224 million in sales to make the Top 50. Earning a spot on the 2013 list was more difficult than the year before when the cutoff was \$210 million. Sales growth at the bottom rungs of the Top 50 resulted in a higher cutoff. Despite an increase in the cutoff, it remains below its peak set in 2010 (Chart 2, p. 5).

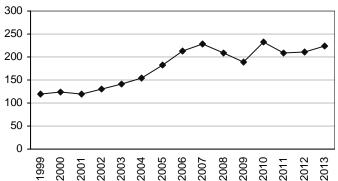
Five companies from the 2012 list dropped off the 2013 version. Two of them, **MC Assembly** and **PCI**, en-

dured sales declines that kept them off the new list. One provider, CTS's EMS unit, was sold to Benchmark Electronics last year. Another provider, EPIC Technologies, was acquired by Natel Engineering, which decided against participating in the 2013 survey. The fifth provider gone from the list, Topscom Technology, did not respond to the survey.

Five departures meant that there were five additions to the Top 50.

Three companies joining the 2013 list are based in Asia. Both Taiwan's Pegatron, mentioned earlier, and Nippon Manufacturing Service of Japan are new to the Top 50, while Hong Kongbased Computime last appeared on the list in 2006. One European provider, ALL CIRCUITS, also made the Top 50 for the first time. France-based ALL CIRCUITS consists of three EMS players under common ownership: MSL CIRCUITS, BMS CIR-





CUITS and TIS CIRCUITS. Finally, an American company, **Sparton**, returned to the list after an eight-year absence.

Counting down the top ten

The arrival of Pegatron caused something of a shake-up in the order of the top-ten providers compared with the previous year. Of course, Hon Hai with its virtually unassailable numberone position was immune to any such change. But Pegatron took second place in the order away from Flextronics, which dropped to number three. Jabil, in turn, went from third to fourth, while New Kinpo Group moved down from fourth to fifth. San**mina** retained its sixth position from the 2012 list. Celestica dropped two spots in the order to seventh, as Benchmark held onto its 2012 rank of eighth. Shenzhen Kaifa Technology saw its rank fall from seventh to ninth,

while **Universal Scientific Industrial** continued to occupy the final spot in the top 10. **Plexus** was knocked out of the top 10.

Top 10 admission required sales of at least \$2.30 billion, compared with \$2.11 billion for 2012. The top 10 minimum was 9% higher than the year before,

making it still harder to break into the top 10.

For 2013, the top 10 accounted for 90.7% of Top 50 sales, further indicating how top-heavy the EMS industry has become. The top 10's share remained unchanged from 2012. Top 10 growth came in at 1.8%. But in 2013, the top 10, despite their scale, did not enjoy a growth advantage over the bottom 40 providers in the group. Indeed, the bottom 40 together produced a 2.8% growth rate, 100 basis points higher than the top 10 result (Chart 3, below). For providers looking to benchmark themselves against a pure EMS average, bottom 40 growth may be more appealing because non-EMS business accounts for a smaller share of bottom 40 revenue than in the case of the top 10.

Upward mobility

A total of eight companies moved

up in the standings from 2012. There was less upward mobility in 2013 than in 2012 because fewer companies achieved the sort of growth necessary to advance in the standings.

WKK Technology accomplished the greatest jump in the order by moving up five places. Only one other company, OnCore Manufacturing, managed to climb more than one rung in the order.

In 2013, a 54% majority of the Top 50 had sales of at least \$500 million. By contrast, these providers constituted a minority in the previous two years. Although sales of \$500 million and above represented a majority, the largest number of providers resided in the \$300 million to \$499 million bracket, as in 2012 (Chart 4, below).

Three participants in the Top 50 survey reported revenue that was below the Top 50 cutoff. They are MC Assembly (\$190 million), **PRETTL Electronics** (\$180 million in EMS sales) and **TQ-Systems** (\$177 million for fiscal 2013).

Benchmarking ratios

Top 50 data yield three productivity ratios. One can start with revenue per employee. Employee counts for 47 companies totaled about 1.8 million people, of which an estimated staffing level of about 1.1 million was attributed to Hon Hai. If one were to assume 1.1 million employees for Hon Hai,

Chart 3: 2013 Growth Rates

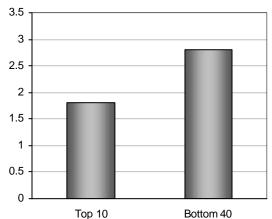
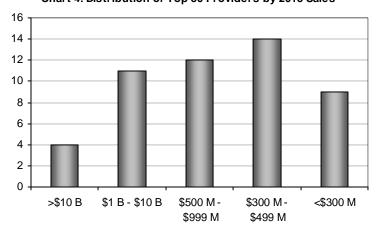


Chart 4: Distribution of Top 50 Providers by 2013 Sales



the revenue per employee for these 47 providers works out to \$126,300. But this ratio is skewed by the economics of Hon Hai's massive workforce. With Hon Hai excluded, revenue per employee increases to \$134,700, which is still below the 2012 ratio of \$150,500 based on a somewhat different group of 46 companies that also excluded Hon Hai. One factor behind the lower ratio is a significant increase in the number of employees at Jabil.

A second ratio, revenue per square foot, was derived from 44 providers that supplied facility space data. On average, their facilities generated \$556 of revenue per square foot, compared with a 2012 average of \$685, which

was computed from a somewhat different group of 44 providers. Note that these two ratios are approximate: they incorporate some data that are imprecise or correspond to different time periods.

Top 50 data can also be used to calculate revenue per SMT line. Of the 50 providers, 38 companies reported the number of SMT lines that they operate. Revenue per SMT line for these companies averaged \$13.9 million, which was up from the 2012 ratio of \$12.7 million per line computed for a somewhat different group of 39 Top 50 providers. Note that revenue per SMT line is highly variable, depending on the speed and productivity of a line,

whether it's single- or double-sided, and the amount of EMS revenue generated by box build.

Methodology. Where information was not publicly available, MMI depended on companies to provide accurate data. Companies were asked to convert sales in non-US currencies into US dollars, if necessary, by using an average annual exchange rate corresponding to the sales year. Where possible, sales of non-EMS businesses were excluded. A number of the largest providers do not break out the sales of their non-EMS businesses. Hence, the Top 50's total revenue is not purely EMS.

News

Sparton Makes Medical Deal

Sparton (Schaumburg, IL) has acquired **Aubrey Group** (Irvine, CA), an \$8-million-a-year business that provides design and manufacturing services for the medical and biotech markets. According to Sparton, this deal adds product development capabilities for the two markets in the Southern California region. The amount paid in this cash transaction was not disclosed.

Cary Wood, Sparton's president and CEO, said the acquisition "will add an innovative product development offering to our portfolio, allowing us to provide enhanced services throughout the product lifecycle."

Aubrey Group brings over 20 years of experience and expertise in a number of core platforms: medical device controllers, RF generation, and pumps and disposables.

Hunter Buys More EMS Assets

EMS provider **Hunter Technology** (Milpitas, CA) has made its second

purchase of EMS assets in the last six months. The company has completed its acquisition of the equipment and inventory assets of a Georgia-based provider, **Spectral Response**, whose plant is located in Lawrenceville. In the fall of 2013, Hunter bought the equipment and inventory assets of **NBS Design** (Milpitas, CA), which had ceased operations (Oct. 2013, p. 5).

"With the additional acquisition of Spectral Response assets, we now offer design, NPI, volume manufacturing, test, tune and integration in both California and Georgia, along with warranty, repair, upgrade and third party logistics. For OEMs who value 'Made in the USA', we have them covered from coast to coast," said Hunter Technology president Joseph O'Neil.

The purchase price was not released.

Recent acquisitions closed in 2013...HANZA (Stocksund, Sweden), a provider of manufacturing services in mechanics, electronics, cables and box build, has acquired Davab Elektronik (Storfors, Sweden) and Arvika Industrikablage (Arvika, Sweden), two companies that belonged to the same group. The deal strengthens

HANZA's position in the electronics and cables area. HANZA plans to move the business of the two regional companies to its factory in Sweden's Värmland province. HANZA's goal is to consolidate Nordic contract manufacturers....Anuva (Morrisville, NC, and West Melbourne, FL), a design-to-distribution family of businesses, has purchased Innovative Electronic Solutions Lighting (Morrisville, NC), including its LED lighting manufacturing facility. Anuva CEO Vinu Patel said the acquisition "will dramatically increase Anuva's capability in the fast-growing LED manufacturing space within North Carolina."...Silicon Turnkey Solutions (Milpitas, CA), a semiconductor contractor, has acquired assets of Bay Area EMS (Milpitas, CA), an EMS company. Building on a core competence of product enablement services for semiconductors, STS has added contract manufacturing and board testing services to its portfolio.

Alliances...The Wall Street Journal recently reported that Google and EMS giant Hon Hai Precision Industry (New Taipei, Taiwan) have been quietly collaborating on robotics. Google started a robotics effort last year,

reportedly bolstered by eight acquisitions, while Hon Hai chairman Terry Gou has promised that his company will employ robots in large numbers....Etratech (Burlington, Ontario, Canada), which designs, develops and manufactures electronic controls and controls systems for other companies, has partnered with EMS provider Summit/ems (Logansport, IN). The alliance offers broader manufacturing opportunities and expanded international presence for both organizations.

Joint venture...Consulting and engineering firm AUSY and EMS provider LACROIX Electronics, both of which are based in France, are forming a 50:50 joint venture that will offer an end-to-end solution from design in R&D centers through volume production. This joint venture follows five years of successful collaboration between the two companies. The partners plan to operate in 11 countries in Europe plus India and the US.

Some new business...Intel has ordered 10 million educational tablets from Hon Hai, Digitimes reported, citing supply chain sources. Hon Hai is also pursuing educational tablet business through a joint venture. In January, a Hon Hai subsidiary, a subsidiary of online gaming company NetDragon Websoft, and a private equity fund agreed to form a joint venture in the field of online education and related applications. According to Digitimes, the venture will sell Hon Hai-assembled educational tablets initially in China....Redflow (Brisbane, Australia) has selected Flextronics (Singapore) as the manufacturing partner for the Redflow ZBM flow battery, described as the first flow battery to enter large-scale production. ZBM stands for zinc-bromide battery module, which is designed to be integrated into electricity storage systems. Also, Lab IX, Flextronics' hardware venture arm, has agreed to provide support to

Mantis Vision (Petah Tikva, Israel), a company that develops 3D image and motion capture hardware and software for consumer and professional applications. Under the partnership, Flextronics is working with Mantis Vision to provide first-to-market, scalable delivery of customized 3D scanning solutions. Flextronics will also provide support for the continued production of the F5, a handheld 3D scanner sold by Mantis. The Times of Israel reported that Samsung and Flextronics "are investing \$10 million" in Mantis. ... Together, **MobiTV** (Emeryville, CA) and Jabil (St. Petersburg, FL) have developed MobiTV's white-label HDMI dongle that can be branded and deployed by wireless operators to deliver an in-home TV everywhere experience. The partnership draws on Jabil's manufacturing and distribution capabilities and MobiTV's Connected Media Platform to bring the dongle to market quickly....SCI Technology (Huntsville, AL), a division of Sanmina (San Jose, CA), has received orders totaling more than 2,200 TOCNET InterCommunications System kits for a variety of US military wheeled vehicles....Cooper Safety, a division of Cooper Industries, has awarded Kimball Electronics Group (Jasper, IN) a contract that includes manufacturing of PCBAs for electronic controls used in smoke detectors that will be marketed in Europe. Kimball Electronics' operation in Poznan, Poland, was selected as a regional manufacturing site for this multiyear contract. In addition, Kimball Electronics' Mexico unit will support Motorola Solutions, **Inc.**, a long-term customer of Kimball's, with a cost competitive, quickturn, regional manufacturing solution to accommodate an increase in MSI demand. The Mexico operation is building a total of five different PCBAs for MSI under this regional production strategy....Kitron's subsidiary in Jönköping, Sweden, has signed a new frame agreement for

manufacturing of automated speed surveillance and traffic light systems for Sensys Traffic AB, also located in Jönköping. Kitron (Billingstad, Norway) estimates that the agreement will contribute revenue of 10 million to 30 million SEK (\$1.6 million to \$4.7 million) over two years....Under a new contract, Sparton will perform design for manufacture and pilot production for a microbial genotyping system from PathoGenetix (Woburn, MA). The automated system enables rapid bacterial strain typing for food safety testing....LACROIX Electronics (Vern-sur-Seiche, France) is producing miniaturized electronic capsules for BodyCap (Caen, France). The capsules allow measurement of an animal's core temperature for research or medical assessment. In 2014, the product will be certified for human use. When swallowed, this pill-sized device can measure a patient's body temperature and transmit it to a display.

New facilities...Hon Hai is moving closer to its goal of manufacturing in Indonesia. The company recently signed a letter of intent to establish production facilities in Jakarta. According to published reports, Hon Hai plans to invest \$1 billion or about that amount, or estimates spending at least that amount - depending on the report - over three to five years. Also, Taiwan-based media reported this month that Hon Hai has signed an agreement with local officials of Gui'an New District in China's Guizhou province to build a green data center and an R&D center, for which the company would spend up to an estimated 220 million RMB (\$35.8 million). Hon Hai acknowledged this reporting, but did not dispute it. Last year, the company broke ground for a new industrial park in the district, which is near Guiyang, capital of Guizhou province in southwest China (Oct. 2013, p. 7)....EMS provider Challenger Solutions recently announced that its new SMT facility

in South Woodham Ferrers, UK, was fully operational.

Name change...EMS provider MEC (Milwaukee, WI) has returned to its original name, Milwaukee Electronics. The name change is part of a rebranding effort designed to capitalize on the synergies found in the company's diverse operations. The company noted that the name change does not signal any changes to the management or structure of the company. Nevertheless, in 2011 the company started reorganizing to streamline operations, offer customers the ability to work seamlessly with multiple business units and enhance shared processes through a common ERP system. "During 2014, I anticipate customers will see the results of our integration efforts in terms of stronger, more efficient systems and processes," said P. Michael Stoehr, Milwaukee Electronics' president and CEO.

People on the move...Creation
Technologies (Burnaby, BC, Canada)
has appointed Bhawnesh Mathuras
president and CEO. Having spent 30
years in electronics and electronics
manufacturing, he held leadership positions at two EMS providers. In the
more recent role, Mathuras served as
CEO of EPIC Technologies, which
was sold to Natel Engineering in

2013. Earlier in his career, he worked at Sanmina-SCI (now called Sanmina) as executive VP Global Supply Chain and later as executive VP Global Logistics. Mathuras' experience also includes a stint at distributor Arrow Electronics, where his title was chief supply chain officer....Flextronics has named Michael Capellas to its board of directors. He is principal of Capellas Strategic Partners, an advisory firm focusing on technologydriven companies. His background includes serving as chairman and CEO of VCE, a joint venture between EMC and Cisco, as well as chairman and CEO of First Data, CEO and president of MCI, and chairman, CEO and president of Compaq. After Compaq merged with HP, he became president of HP....Kitron's board of directors has elected Tuomo Lähdesmäki as the EMS company's new chairman of the board. He is founding partner of Boardman Oy, a network developing active ownership and board work competencies in Finland. Over his career, Lähdesmäki held a number of the executive positions including president and CEO of defunct EMS provider Elcoteq Network. He also serves as chairman of the board of PCB fabricator **Aspocomp** and sits on the boards of several other companies. Until recently, Lähdesmäki had also been a board member at Scanfil (Sievi, Finland), which competes with Kitron but also is also linked to Kitron through investment firm **Sievi Capital**. Scanfil and Sievi Capital have the same main owners, while Sievi Capital holds a 33% interest in Kitron...**IEC Electronics** (Newark, NY) has promoted Brett Mancini to VP of business development and engineering services. Having joining IEC in 2008, he had held EMS management positions at **Solectron** (subsequently acquired by Flextronics) and **Plexus**.

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