Manufacturing Market

inside the contract manufacturing industry

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M&A on the Upswing

After enduring a 14-year low in 2009, M&A activity in the EMS industry is picking up. *MMI* has counted 14 deals closed in the first half of 2010 compared with an updated figure of seven transactions completed in the same period last year. That's an increase of 100%, a sure sign that the ranks of buyers and sellers are growing once again (Chart 1).

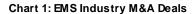
MMI believes that the cash hoarding and market uncertainty which kept buyers on the sidelines in 2009 have given way to more favorable conditions for deal making in 2010. With more cash on balance sheets and the EMS industry's return to growth, more providers are now in an acquiring mood. These companies feel that if they're going to invest in the growth of their business, now is the time to do it. Since economic conditions have improved, buyers can be more confident about the growth prospects of businesses they target for acquisition.

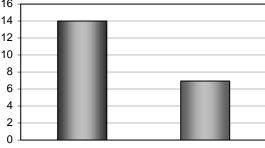
The current environment also provides motivation for sellers. Trying to sell a business last year would have resulted in rock-bottom valuations had there been buyers willing to bid. This year is a different story, as increasing revenue from market demand puts a business in a more favorable light for valuation. In addition, last year's harsh realities have likely convinced some business owners to let another party assume responsibility for operations.

Not only did deal making in general

increase, but there were as many 16 consolidation deals in the first 14 half of 2010 as occurred during 12 all of 2009. In a transaction of this type, one EMS provider acquires another, resulting in the loss of a competitor. Five consolidation deals took place in the first half, compared with none in the year-earlier period. As reflected by these deals, industry consolidation is a long-term trend dating back to the 1990s. The conditions of 2009 suppressed this trend, but industry consolidation has returned this year.

Although consolidation deals typically do not appeal to the largest providers, for whom the acquisition of a competitor, especially a smaller one, usually presents little or no advantage, there was one exception in the first half – **Sanmina-SCI's** acquisition of **BreconRidge**. But this deal was about adding high-end capabilities (May, p. 7). In addition, four players from the





6 mos. 2010

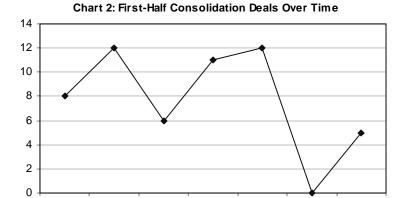
6 mos. 2009

industry's lower tiers – Alta Manufacturing (U.S.), MC Assembly (U.S. – see also p. 6), Kitron (Norway) and Season Group (Hong Kong) – each bought an EMS provider. While such deals obviously add revenue and capacity, they may also extend geographic reach, as in the cases of MC Assembly, Kitron and Season Group. Other incentives for making such deals include market segment or customer diversification and, as Sanmina-SCI showed, the addition of new capabilities.

While five consolidation deals in

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6 mos.

2007

6 mos.

2008

the first half represent a dramatic increase over what occurred in the yearearlier period, this number is still below a long-term average. For the first six months of the years 2004 through 2010, the average consolidation total is 7.7. The 2010 total is below the consolidation count for every year tracked except 2009 (Chart 2). By this measure, the consolidation trend still has some way to go before being fully restored.

6 mos.

2004

6 mos.

2005

6 mos.

2006

Consolidation deals form a subset of a more general deal category where an EMS provider buys an operation from a competitor. The operation could be an entire business or less than that, perhaps just one facility out of a network of plants. For example, when restructuring, an EMS company may sell off a facility to another provider. But in the first half, there were no cases of one provider buying a divested facility from another. This makes sense since restructuring in the EMS industry is largely complete.

MMI normally uses four categories for classifying M&A transactions in the EMS space. The aforementioned acquisition of a competitor's operation is one. But it was not the most common type of deal in the first half. That distinction went to what MMI calls the service or supply chain extension. Here, an EMS provider makes an acquisition to augment its service offering horizontally or expand its

capabilities for vertical integration. In the first half of 2010, six such deals took place, compared with four in the year-ago period (Chart 3).

6 mos.

2009

6 mos.

2010

In recent years, horizontal or vertical extensions have consistently ranked first or second in popularity. This type of acquisition appeals to providers of different sizes because they can often buy a smaller company with desirable capabilities at a price that won't break the bank. For instance, three of the largest EMS providers made such a horizontal or vertical capabilities deal. Cal-Comp **Electronics** bought controlling interest of a plastics company and is increasing this stake; Celestica acquired an aftermarket services provider; and Flex**tronics** added a plating company in the machining space. Among smaller

providers, Darekon (Finland) acquired sheet metal capabilities; éolane (France) added an engineering team; and Nortech Systems (U.S.) expanded its capabilities in the medical segment.

A third category used by MMI applies to deals where an OEM divests assets to an EMS provider. OEM divestitures have been generally trending downward since their peak at the turn of the century. As MMI has pointed out before, OEM assets deals have fallen out of favor for two reasons. EMS providers are reluctant to take over OEM plants, especially in highcost areas, and the number of divestiture opportunities has dwindled in the comm infrastructure and IT sectors. Just one OEM divestiture took place in the first half, matching the result from the year-earlier period. Orbit One (Sweden) acquired a **Siemens** plant in Sweden that produces parts for heating control, according to M&A information from Thomson Reuters.

In the fourth type of deal, a new EMS player emerges from the sale of a manufacturing business. One such deal closed in the first half, when a new EMS company, Contract Production (UK), bought the assets of another provider, a local newspaper reported. By comparison, two new player deals were completed in the first half of 2009. New players can also arise when EMS companies divest sites to plant

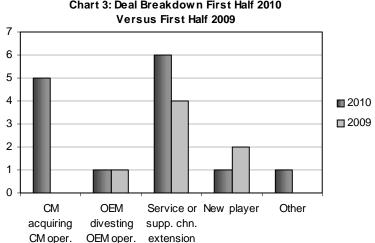
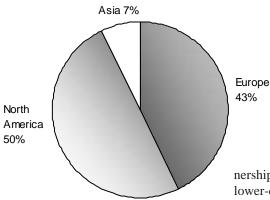


Chart 3: Deal Breakdown First Half 2010

Chart 4: Percentage of Deals by Target's Region



management or other entities during restructuring. With restructuring on the wane in 2010, this source of new player deals dried up in the first half.

One transaction did not fit into any of *MMI's* standard categories. In this case, the **Matric Group** (U.S), consisting of two EMS companies, purchased controlling interest in an OEM that develops blade pitch control sys-

tems for wind turbines.

When deals are sorted by the region in which the acquisition took place, North America accounted for the largest share of first-half transactions with 50% of the total. Europe came in second at 43%, followed by Asia, well behind with 7%, or one deal (Chart 4).

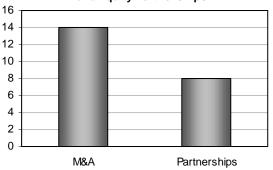
Alliances and equity part-

nerships give EMS providers a lower-cost alternative to an acquisition. Despite the cost saving aspect of these partnerships, their numbers usually fall well shy of acquisition totals. The exception was last year when the sum of these arrangements approached the acquisition total. But the first half of 2010 reverted to the norm, as there were eight alliances and equity partnerships

versus 14 acquisitions (Chart 5).

Editor's note: First-half 2010 statistics published here should be treated as preliminary. It is possible that MMI will come across additional first-half transactions after this article is published. Also be advised that this analysis excludes divestitures by EMS providers where the operations sold are not retained within the EMS industry. Private equity deals are omitted as well.

Chart 5: First-Half M&A Versus Alliances and Equity Partnerships



Forecasts

Forecast of Double-Digit Growth

At least one market research firm expects that contract electronics manufacturing will return to double-digit growth for the foreseeable future. A new report by **New Venture Research** projects two-digit compound annual growth for the contract manufacturing industry over a five-year period. According to this forecast, contract manufacturing sales derived from both the EMS and ODM sectors will increase at a CAGR of 12.2% from 2009 to 2014.

Sales will climb from \$269.7 billion in 2009 to \$478.9 billion in 2014, according to NVR (table).

NVR notes that the contract manufacturing market overall is now so large that the high

growth rates of past years cannot be sustained. But to NVR, it seems likely that revenue will resume double-digit expansion, and the firm is forecasting continued growth at healthy rates through the forecast period.

After declining by an estimated 8.3% in 2009, the contract manufacturing business will grow by 12.6% this year to \$303.6 billion, NVR predicts. The firm expects this growth trend to continue over the next four years, with year-to-year growth rates ranging from 11.2% to 12.9%. Contrast this view with the recent forecast by **IDC**, which called for a CAGR of 8% over the period 2010 to 2014

(May, p. 6).

Given what NVR describes as minor differences in the EMS and ODM business models, the firm foresees little separation between the two types of suppliers with regard to customer services and revenue growth. For the ODM sector, NVR projects a five-year CAGR of 12.4%, compared with a 12.0% rate for the EMS side. The firm attributes the lower growth rate of EMS providers to the wider range of products they manufacture and their inability to achieve the economies of scale enjoyed by ODMs.

EMS revenue will grow from \$169.6 billion in 2009 to \$299.0 bil-

	NVR's Forec	ast for the C	ontract Man	ufacturing M	larket, 2009	-2014 (M US	\$)
	2009	2010	2011	2012	2013	2014	CAGR
EMS	169,560	192,246	213,248	238,963	268,775	298,975	12.0%
ODM	100,133	111,370	124,419	139,974	158,961	179,890	12.4%
Total con- tract mfg.	269,693	303,617	337,667	378,937	427,736	478,865	12.2%
Yryr. growth	-8.3%	12.6%	11.2%	12.2%	12.9%	12.0%	
Source: New Venture Research							

lion in 2014, while ODM sales will increase from \$100.1 billion to \$179.9 billion over the same period in NVR's forecast (table). The firm's 2010 estimate for EMS revenue is \$192.2 billion, up 13.4% from last year. ODM sales are expected to grow at a somewhat lower rate of 11.2% this year, based on NVR's forecast.

Contract manufacturers (EMS providers and ODMs) accounted for 32.4% of the total assembly market in 2009 and will raise their penetration rate to 36.5% by 2014, NVR projects. The firm pegs the total market at \$832.2 billion in 2009, increasing to \$1.31 trillion in 2014. That's a CAGR of 9.5%.

According to NVR, the contract manufacturing space will see the strongest growth in the medical, computer, communications and consumer market segments. NVR expects the medical segment to be the growth leader with a CAGR of 14.3%. But the firm believes that EMS providers will continue to

control this segment, particularly when the technology is very advanced and sensitive to IP theft.

The computer and communications segments will continue to represent a majority of contract manufacturing revenue with a combined share projected to reach 64.9% in 2014, up from 63.8% in 2009. NVR estimates that the consumer segment will gain just 10 basis points of share over the forecast period and end up at 20.2%. The medical segment's projected share will increase to 5.5% in 2014 from 5.0% in 2009, while the industrial segment's share will fall to 4.7% at the end of the period from 5.5% at the start. NVR is also forecasting that the automotive, commercial aviation and defense/other segments will see their thin slices of the contract manufacturing pie shrink over the forecast period.

Despite the trend in locating production near where products are sold, NVR foresees that offshore product migration will still take place, but at a more moderate pace. According to the firm's projections, North America will not lose any share of the contract manufacturing market over the forecast period, while Europe, the Middle East and Africa's share will dwindle only slightly.

Vietnam will experience the highest contract manufacturing CAGR of any country from 2009 to 2014, according to NVR.

The firm projects that large EMS companies will grow faster than medium-sized and small companies over the forecast period.

NVR's new report is entitled *The Worldwide Electronics Manufacturing Services Market*, 2010 Edition. It covers both EMS providers (which NVR defines as "CMs") and ODMs under its definition of the EMS market. NVR claims to offer the industry's longest running syndicated EMS report, which has been published for 25 years. For more information, email rsherman@newventureresearch.com.

EMS Providers Gaining Traction in Mobile PCs

EMS providers are set to make inroads into the dominant position of ODMs in the mobile PC market, with the EMS share of shipments projected to more than double from 2009 to 2014, according to market research firm iSuppli (El Segundo, CA). While ODMs are expected to continue accounting for the vast majority of mobile PC shipments in the coming years, EMS companies will experience a rapid rise in volume, with their share of worldwide shipments increasing to 8.6% in 2014, up from a mere 3.4% in 2009. Meanwhile, the share of shipments from ODMs will decline slightly lightly to 84.6% in 2014 from 86.2% in 2009 (table). ODMs will limit their share declines by continuing to take over from the in-house manufacturing operations of brands.

However, only the two largest EMS providers, **Hon Hai Precision Industry** and **Flextronics**, have ventured into the mobile PC market. No one else in

the EMS industry has shown any interest, at least in public, in taking on the ODMs at their own game. Entering the mobile PC market requires a major investment that only the largest providers are in a position to make. For example, last year Flextronics launched a notebook R&D facility in Taiwan, and iSuppli reports that Hon Hai also has mobile PC design activity there employing 1,000 engineers. Given the current lack of interest in the mobile PC market among EMS providers outside of Hon Hai and Flextronics, it remains questionable whether any providers other than those two will benefit from the mobile PC

Global Share of Mobile PC Manufacturing by Company Type, 2009-2014 (Percentage of Unit Shipments)						
	2009	2010	2011	2012	2013	2014
ODM	86.2%	84.4%	84.5%	85.1%	84.3%	84.6%
OEM In- House	10.4%	9.9%	8.2%	7.2%	7.1%	6.9%
EMS	3.4%	5.7%	7.3%	7.7%	8.6%	8.6%
Source: iSuppli						

share gains projected for the EMS industry.

Market Data

Some Q2 Results in Brief

Celestica. Q2 revenue of \$1.59 billion grew 4% sequentially and 13% year over year. The provider saw sequential growth in three out of its six segments. Non-GAAP gross margin was 7.0%, down 20 basis points from the prior quarter, while non-GAAP operating margin came in at 3.4%, the same result as in Q1. Non-GAAP EPS amounted to \$0.21, up \$0.02 sequentially. Celestica reported a Q2 GAAP

net loss of \$6.1 million.

Component supply constraints did not result in any significant revenue impacts for Q2. What's more, inventory fell by 7% sequentially.

Guidance calls for Q3 revenue of \$1.55 billion to \$1.65 billion. At the midpoint of the range, sequential growth would be 1%. The company pointed out that its consumer segment, where the company has backed away from gaming, now lacks Q3 seasonality.

Flextronics. For its fiscal Q1 ended July 2, sales totaled \$6.57 billion, which when rounded off was at the high end of guidance. Revenue rose 11% sequentially and 14% year over year. All of the company's segments produced sales growth quarter to quarter, led by industrial, automotive, medical and other at 19%. Flextronics estimated missed revenue from component shortages to be at the high end of \$150 million to \$200 million. For the third quarter in a row, non-GAAP operating margin was 2.9%. The company's component businesses remained below normalized operating profit levels. Adjusted EPS increased to \$0.19, the high end of guidance, from \$0.16.

Despite uncertainties in the macroenvironment, Flextronics is forecasting sequential growth in the upcoming quarter across all of its market segments. The midpoint of fiscal Q2 sales guidance corresponds to a sequential increase of 7%.

Jabil Circuit. For its fiscal Q3 ended May 31, Jabil posted revenue of \$3.46 billion, surpassing guidance of \$3.1 billion to \$3.3 billion. Sales grew 15% sequentially and 32% year over year. Compared with the prior quarter, five of the company's sectors contributed double-digit sales growth, with mobility at a high of 23% followed by networking at 20%.

Non-GAAP operating margin in the May quarter stood at 3.8%, up 60 basis points sequentially, as non-GAAP operating income rose 38% quarter to

quarter. Non-GAAP EPS of \$0.40 exceeded guidance of \$0.30 to \$0.36 and was also up 38% sequentially.

For the August quarter (fiscal Q4), Jabil expects revenue to increase 10% to 16% sequentially, ranging from \$3.8 billion to \$4.0 billion. Jabil expects non-GAAP EPS to improve 13% to 25% sequentially.

Plexus. For its fiscal Q3 ended July 3, Plexus reported sales of \$536 million, up 9% sequentially and 42% year over year. The company experienced sequential growth in all of its sectors except for wireless infrastructure. Gross margin was 10.4%, up 10 basis points from the prior quarter, while operating margin reached the company's target of 5.0%, a sequential improvement of 20 basis points. EPS of \$0.59 was up 16% over the prior quarter.

During fiscal Q3, Plexus won 22 new manufacturing programs expected to generate about \$141 million in annualized revenue. New engineering business amounted to \$16 million.

Plexus' guidance for the September quarter (fiscal Q4) suggests a pause in revenue growth. The company expects revenue of \$530 million to \$555 million with EPS of \$0.58 to \$0.63, excluding any restructuring charges.

News

Celestica Makes Medical Move

Celestica (Toronto, Canada) intends to expand its healthcare capabilities by acquiring Allied Panels
Entwicklungs-und Produktions
GmbH, a medical engineering and manufacturing service provider based in Austria with a core focus on diagnostic imaging products. Celestica has signed a definitive agreement to make this deal, and the transaction is expected to close in Q3. The purchase price was not disclosed.

This acquisition will broaden

Celestica's capabilities in the healthcare diagnostics and imaging market. Offering concept-to-full production solutions, Allied Panels provides services such as electromechanical design, firmware and software development, and high-level assembly for subsystems and complex medical devices. The company also brings expertise in product lifecycle management and 3D ultrasound technology.

Founded in 2000, Allied Panels serves customers that include **GE Healthcare**, **Siemens Healthcare**, **SonoSite** and **SuperSonic Imagine**.

Allied Panels recently added a new customer, Paris-based **biospace med**, which chose the provider to manufacture some parts of an orthopedic imaging system.

With annual revenue of about 40 million euros, Allied Panels employs close to 130 people. The company's main development and production center is located in Frankenburg, Austria, with an additional location in Madison, WI. This month, the company reported that it closed a sourcing office in Belarus.

"Through this acquisition, Celestica and Allied Panels will offer global healthcare customers comprehensive, end-to-end solutions that combine Celestica's scale, broad range of capabilities and financial strength with the focus, track record and specialized expertise of Allied Panels," said Sandra Ketchen, VP, Healthcare at Celestica.

The acquisition will also provide Celestica with a healthcare center of excellence in Europe to better serve its European healthcare customers.

"By joining Celestica, we can leverage their scale and global footprint to offer additional value to our customers and provide them access to new markets," said Hansjorg Weisskopf, founder and CEO of Allied Panels.

In April, Craig Muhlhauser, Celestica's president and CEO, told *Reuters* that the company planned to complete

two healthcare deals during the second half of 2010.

Sparton To Acquire Medical Business

Through a subsidiary, **Sparton** (Schaumburg, IL), whose activities include medical contract manufacturing, EMS, and defense and security work, has entered into a definitive agreement to acquire certain assets of **Delphi Medical Systems'** contract manufacturing business in Longmont, CO. Sparton is paying \$8.0 million in cash, subject to post-closing adjustments, for a business with projected annual revenue of about \$32 million.

Delphi Medical Systems primarily manufactures OEM medical devices for the therapeutic device market, including blood separation equipment, spinal surgery products and 3-D eye mapping devices. In addition, the company provides engineering and manufacturing support to an environmental sensor company.

"The addition of this business meets the criteria of our growth strategy by providing expansion into the therapeutic device market and diversifying our customer base, while also expanding our geographic reach into the western United States," said Cary Wood, Sparton's president and CEO.

Sparton anticipates that the acquisition will enhance its overall profitability and strengthen its business development efforts. Also, the company has identified opportunities for operational synergies with all of Sparton's business units. In particular, the acquisition's environmental sensor business will provide operational opportunities for Sparton's Defense and Security Systems division.

Established in 2001, Delphi Medical Systems acquired Longmont-based **Peak Industries** for \$44 million in 2004. Delphi Medical Systems is a wholly-owned subsidiary of **Delphi Automotive**.

Flextronics To Buy Bankrupt Provider

Flextronics (Singapore) has entered into an agreement to purchase assets of **Proxy Electronics**, a bankrupt EMS provider in Kalmar, Sweden.

The acquisition will further strengthen Flextronics' position in Sweden and give the company skills and market penetration in TV set-top boxes, according to a translated statement from Flextronics Special Business Solutions, which is dedicated to complex, lower-volume business.

The assets and remaining production of the Proxy business will be moved to Flextronics' existing factories in Karlskrona and Linköping, Sweden.

MC Assembly Adds Divested Unit

MC Assembly (Palm Bay, FL), a mid-tier EMS provider, has acquired the EMS assets of Chase Corporation (Bridgewater, MA), a manufacturer of protective tapes and coatings that has divested its EMS business, Chase EMS, in Winchester, MA.

Serving a number of New England companies, the acquired EMS unit focuses on both the medical and industrial sectors. In addition to performing PCB assembly, the EMS unit also provides subassembly and fully tested box build production. Over the coming months, the unit will be rebranded under the MC Assembly banner.

For the fiscal year ended Aug. 31, 2009, the unit generated revenue of \$16.37 million and income before taxes of \$1.72 million excluding corporate and common costs. The purchase price was not disclosed.

"We believe there is tremendous opportunity in the Northeast, and the EMS division of Chase is a great platform for us to grow. Their philosophy and culture are very complementary with ours, and the enhanced services that we can provide as an integrated organization will benefit the customers of both companies," said George Moore, CEO of MC Assembly.

"By joining up with MC Assembly's capabilities in Florida and Mexico, we will be able to offer our customers a one-stop solution for all of their EMS needs," said Ron Barilone, GM of the acquired business. "Moreover, since the transaction expands our current capabilities, we will be ideally positioned to pursue new markets and larger accounts."

As a part of MC Assembly, the acquired business will continue to operate from its leased facility in suburban Boston, and no changes in the management team are planned.

MC Assembly was selected from a number of interested buyers as being most compatible with regard to geography, market, capabilities and scale, according to a statement from Chase. The company said MC Assembly has the resources to help the divested business reach its full potential.

The unit in Winchester was the remaining piece of Chase's EMS business following the divestiture of **Sunburst EMS** (West Bridgewater, MA) in December 2003.

IMI To Buy Control of Semiconductor Assembly House

Integrated Micro-Electronics,
Inc. (Laguna, Philippines), an MMI
Top 50 EMS provider and a member
of the Ayala group, and Narra Venture Capital II have signed an agreement to acquire 67% of PSi
Technologies, a provider of power
semiconductor assembly and test services. On completion, which is expected in Q3, IMI and Narra will own 56%
and 11% of PSi respectively. The aggregate value of this transaction is
about \$30 million.

"With the growing convergence of power semiconductor assembly and test services and EMS, the impending purchase of PSi Technologies will enable the IMI group to enhance its service offering to its OEM customers," said Arthur Tan, IMI president and CEO. "The acquisition will strengthen PSi toward growing and developing its business while enhancing the prospects of offering an integrated hybrid power solution in a multichip module (MCM) that contains the advanced manufacturing technologies of IMI and PSi."

IMI and Narra will inject fresh equity into PSi, which, according to IMI, is poised for a turnaround by 2011 given a stronger capital and shareholder base and expectations of continuing growth in the power semiconductor and MCM markets.

Deals done...Through a subsidiary, Hon Hai Precision Industry (Tucheng City, Taiwan) has completed the acquisition of a 90.1% stake in Sony Slovakia, the name of Sony's LCD-TV factory in Nitra, Slovakia (April, p. 6). The purchase price was \$35.9 million euros. Also, Hon Hai acquired control of Kunshan Guann Jye Electronics, an inverter company in Kunshan, China.

Divestiture...Last month, Jabil Circuit (St. Petersburg, FL) announced that it had entered into a letter of intent to divest its remaining manufacturing operations in France and Italy. Divested operations would include four sites and about 1,500 people. The transaction is expected to close during the August quarter.

Smart grid alliance...CEI Contract Manufacturing (Singapore), a publicly-held EMS provider, is one of four companies that have formed partnerships with Singapore's Agency of Science, Technology and Research to develop smart grid and distributed energy solutions.

New business... For 2011, **Dell** has made Hon Hai its third biggest supplier of notebooks as Hon Hai has gained orders for 4 to 5 million units next year, Taiwan's Digitimes reported, citing industry sources. In addition, **Foxconn International Holdings**, Hon Hai's majority-owned handset subsidiary, will manufacture a tablet PC for **Nokia**, according to *Digitimes*. ...In the server space, a major customer of Celestica (Toronto, Canada) has made it the exclusive EMS provider for a global product portfolio. Celestica will handle activities including design support, NPI services, PCBA manufacturing, system assembly, direct order fulfillment and after-market services for the entire portfolio. This program involves transferring multiple product platforms from several competitors and launching additional new products....The Tampa, FL, facility of Kimball Electronics Group (Jasper, IN) is manufacturing the HyGreen system for Xhale Innovations, a subsidiary of Xhale (Gainesville, FL). The system consists of a network of sensors that detect and record hospital hand washing activities and patient interaction. Kimball Electronics Group is a subsidiary of publicly-held Kimball International....Raytheon Missile Systems has awarded LaBarge (St. Louis, MO) \$3 million in contracts to continue to provide complex cable harnesses for the Joint Standoff Weapon program, a family of air-to-ground weapons that employ GPS information for guidance. The Raytheon unit has also given LaBarge a \$1.2-million order to supply PCB assemblies for the Rolling Airframe Missile (RAM) launch system used to protect naval ships.

Some new offerings...Flextronics (Singapore) has launched Firedog, the company's first on-line direct-to-business and direct-to-consumer offering. A division of Flextronics Retail and Technical Services business unit, Fire-

dog specializes in technical installation and maintenance for home and office equipment. Circuit City formerly provided installation and support services to its customers under the Firedog name. Flextronics bought the Firedog brand and related assets during Circuit City's liquidation in 2009....Qual-Pro (Gardena, CA) recently introduced its Test for Success program, which allows the provider to rapidly confirm the viability of the electronic assemblies it builds. The program is centered on Qual-Pro's new Acculogic flying probe tester.

More capacity...Plexus (Neenah, WI) has decided to build a fourth facility in Penang, Malaysia, with 350,000 ft envisioned for building size. The company expects the plant to be operational in early fiscal 2012....Also, Cal-Comp Electronics (Bangkok, Thailand), a top-10 EMS provider and a member of the New Kinpo Group, is establishing an EMS subsidiary in Selangor, Malaysia, with an investment of \$10 million....EE Technologies, an EMS provider based in Reno, NV, will more than double the size of its Empalme, Mexico, production facility, which will expand from 17,227 ft to 38,628 ft. The Offshore Group provides shelter services for the facility in Mexico's Sonora state under a contract that has been extended through 2015.

Some financial news... Hon Hai is reportedly planning to shift some production from Shenzhen to other parts of China, but the company continues to put money into Shenzhen. Hon Hai just invested \$100 million in a mobile phone operation in Shenzhen....On June 25, the common stock of Top 50 EMS provider **Fabrinet** began trading on the New York Stock Exchange. The IPO consisted of 8.5 million shares at \$10.00 per share, with the company selling 2.8 million shares. Fabrinet's manufacturing is headquartered in Thailand.

Migrant Workers Take Center Stage

Before the cluster of suicides among Hon Hai's Shenzhen workers, it would have been hard to imagine how the plight of a few low-paid employees could put such a massive company on the defensive. But the suicides brought a deluge of media coverage, and reports often included criticisms of the company's management practices. In an age where companies such as **Apple** and **HP** position themselves as leaders in corporate social responsibility, OEMs want to avoid situations where negative publicity surrounding a supplier might tarnish their reputation for CSR. Hon Hai had to be concerned about how the stigma attached to the suicides would reflect on its customers. With customers looking over its shoulder, the company took a number of steps to address the situation, among them an unexpected wage increase for its Shenzhen workers (June,

One could have argued that the Hon Hai imbroglio represents a unique case in the EMS industry. Given Apple's relationship with Hon Hai and the provider's size, Hon Hai is an easy target for mainstream media. In 2006, a British newspaper article made allegations about working conditions and dormitory living at Hon Hai's Longhua site in Shenzhen. The charges prompted Ap-

ple to conduct an audit, which largely dispelled them. But the argument that the rest of the EMS industry need not worry about industry outsiders leveling charges about working conditions has been debunked. The National Labor Committee recently issued a report critical of the treatment of workers at Jabil's plant in Guangzhou, China. Jabil said it is taking the report's allegations seriously and will quickly take corrective actions if warranted.

If factories of two EMS providers in China can become the objects of scrutiny, then there is a possibility that other EMS operations there will be targeted by labor activists or others looking to make headlines. That's one reason why *MMI* believes that other providers in China should review the management practices, pay and benefits, and living conditions at their factories. It's better to conduct a review than to suffer worker complaints, strikes, or outside investigations that might reflect badly on CSR-conscious customers.

The other reason has to do with changes in China's migrant work force. Worker expectations have risen in recent years, and it will take more pay and benefits to attract and keep these migrant workers. "A fundamental shift has occurred in China, driven

by demographic and economic changes particularly in Southern China, that requires all EMS companies to invest more in their employees," **Flextronics** CEO Mike McNamara stated in a press release issued by **Riverwood Solutions**.

It's ironic that some of the industry's lowest paid workers have received so much attention lately. But as the backbone of EMS in China, migrant workers are a resource that can no longer be taken for granted.

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