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Foxconn Again Finds Fault Inside Internship Program

For the second time in 12 months, **Foxconn Technology Group** has reported finding labor violations within the internship program at its Yantai, China, campus. Following reports in Chinese media, Foxconn has admitted that some interns at the Yantai complex had worked overtime and night shifts, which is against company policy.

“In the case of recent allegations regarding the internship program at our Yantai campus, we have conducted an internal investigation and have determined that there have been a few instances where our policies pertaining to overtime and night shift work were not enforced. Immediate actions have been taken to bring that campus into full compliance with our code and policies,” Foxconn stated.

According to at least two reports published in China, interns in some cases had to work 11 hours a day. Students interviewed for these reports said they were working on **Sony** PlayStation lines.

About 1,000 engineering students from Xi’an Technological University worked as interns at the Foxconn site. They were sent from Xi’an, a city in Shaanxi province of central China to Yantai, Shandong province, about 850 miles to the east. Several reports said the students were told they would not graduate unless they participated in the internship program.

Foxconn pointed out that schools taking part in its internship program are required to follow specific policies established by Foxconn for this program including assurances that participation is voluntary, and interns are free to terminate their internship at any time they choose.

The company said its internship program provides students with the opportunity to gain practical work experience and on-the-job training, while they also gain relevant industry experience. Still, the Yantai internships raise the question of how suitable assembly line work is for engineering students.

Shaanxi province’s education department has mandated that the university change its agreement with Foxconn to give students more protection, *China Daily* reported. According to the newspaper, the university has opted to suspend its agreement with Foxconn and to bring the students back to the university.

Last year at about this time, Fox-

conn confirmed media reports that some interns working at its Yantai campus were under the legal working age of 16. An investigation by Foxconn found that interns ranging in age from 14 to 16 had worked at the campus for about three weeks (Oct. 2012, p. 8).

After the **Fair Labor Association’s** 2012 investigation of three Foxconn facilities that manufacture **Apple** products, Foxconn agreed to reform its internship program. “When we finished our initial investigation in March, Foxconn promised to address concerns with its internship program by ensuring that student interns do not work overtime, their work has a more direct connection to their field of study, and they understand that they are free to terminate the internship if and when they wish,” said FLA president and CEO Aurret van Heerden in an August 2012 statement. A May 2013 status report on corrective actions taken by Foxconn said the com-

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pany had completed all but one of the planned actions regarding its internship program.

Foxconn has reduced the number of students in its internship program by more than 50% over the last 12 months, *Financial Times* reported.

Still, there are concerns that inland labor shortages will tempt other outsourcing providers to increase their reliance on interns. *Digitimes* reported that more than 80% of notebook ODM workers in Chongqing, China, are students from local vocational schools.

Some Quarterly Results

Benchmark Electronics. Q3 revenue of \$600 million landed within guidance and was down 1% sequentially and 2% year over year. Non-GAAP EPS of \$0.31, which was one cent below the high end of guidance, remained changed from both the prior quarter and the year-earlier period.

For Q3, the company earned net income of \$23.7 million, or \$0.43 a share, compared with \$8.5 million, or \$0.16 a share, in the previous quarter, and \$19.3 million, or \$0.34 a share, a year earlier. Q3 results include \$9.9 million of Thailand insurance recoveries and \$1.2 million in restructuring charges and integration and acquisition-related costs. Non-GAAP net income equaled \$16.9 million versus \$16.8 million in Q2 and \$17.5 million in Q3 2012.

Non-GAAP operating margin came in at 3.5%, unchanged from the prior quarter and down 20 basis points from the same period a year ago. Benchmark said it maintained the operating margin at 3.5% despite late-quarter order reductions in its computing sector and headwinds associated with new product ramps. The company expects to achieve its non-GAAP operating margin target of 4% in the second half of 2014.

On a sequential basis, Q3 revenue was up in three of the company's five

sectors. Computing sales, though lower than anticipated, increased 3% from the prior quarter and benefited from new program ramps despite late-quarter softness in demand for some products among top customers. Industrial control revenue rose 3%, as demand levels were stable overall. Test and instrumentation sales grew 8%, with program wins and continued improvements in the semiconductor capital equipment space. Medical business fell 6% sequentially, reflecting the timing of new programs. Telecom revenue dropped 13%, a result that was directly related to a new program for which the company positioned inventory for an early Q4 launch.

During the quarter, Benchmark booked 29 new programs, of which seven are engineering projects, with an estimated annual run rate of between \$145 million and \$170 million.

Q4 guidance calls for revenue of \$685 million to \$715 million and non-GAAP EPS of \$0.34 to \$0.38. The company's October acquisition of **CTS's** EMS operations will contribute Q4 revenue somewhere in the \$50-million range (see News on p. 4-5). Guidance reflects a non-GAAP operating margin of about 3.7% at the midpoint, an improvement over Q3. Benchmark expects growth in all of its industry sectors in Q4.

The company also expects to return to year-over-year growth in 2014.

Celestica. Q3 sales totaled \$1.49 billion, essentially flat versus the prior quarter and down 5% from the year-ago period. The decline primarily resulted from the company's **BlackBerry** disengagement. After excluding Q3 2012 revenue from BlackBerry, sales grew 5% year over year. Non-IFRS EPS amounted to \$0.22, up from \$0.21 in Q2 but down from \$0.26 a year earlier. Both sales and non-IFRS EPS came in above the midpoint of Celestica's guidance for each, driven by stronger than expected demand in the provider's communications and

storage end markets.

In Q3, Celestica produced IFRS net earnings of \$57.4 million, 31% higher than a year earlier mainly due to \$24 million in recoveries from legal settlements and lower restructuring charges partly offset by lower income tax recoveries in the quarter. IFRS EPS was \$0.31 versus \$0.21 in the same period a year ago. Non-IFRS net earnings came to \$41.5 million, down 24% year over year.

Non-IFRS gross margin was 7.1%, up 50 basis points sequentially, primarily due to mix and a focus on cost productivity, but down 10 basis points from a year earlier. Non-IFRS operating margin of 3.2% increased 30 basis points from Q2, but it declined 10 basis points year over year mainly as a result of lower revenue partly offset by reduced spending in Q3 2013. The company said its semiconductor business continues to have a negative impact on its operating margins.

Representing 26% of total sales, revenue from the company's diversified end market grew 6% sequentially and 16% year on year. With respect to the year-on-year increase, Celestica saw double-digit growth in its industrial and aerospace and defense subsegments, driven primarily by new programs.

Contributing 45% of company sales, communications business rose 7% from the prior quarter and 16% from a year earlier, with the latter growth mainly from new programs and higher demand across some customers.

At 14% of sales, storage revenue grew 10% sequentially, driven by higher demand across a number of customers, and increased 6% year over year primarily due to demand improvements and new programs.

Revenue from the servers segment, which comprised 9% of sales, dropped 33% sequentially and 38% from the year-ago quarter. The majority of the decline in both cases resulted from weaker demand and the previously

disclosed insourcing of a lower-margin assembly program.

Accounting for 6% of sales, the company's consumer end market decreased 16% from Q2, as expected, due to program transitions as Celestica de-emphasized parts of its consumer business. Consumer revenue fell 64% year over year primarily as a result of the BlackBerry disengagement.

For Q4, the company expects revenue of \$1.4 billion to \$1.5 billion and non-IFRS EPS of \$0.20 to \$0.26. At the midpoint of revenue guidance, sales would be down about 3% sequentially, and Celestica is projecting non-IFRS operating margin of 3.3% at the midpoint. On a sequential basis, Celestica expects a mid to high single-digit decline in Q4 for communications, a slight decline for the diversified end market, mid to high single-digit growth for servers revenue, and low to mid double-digit growth for storage business. Compared with a year earlier, the Q4 outlook calls for low double-digit growth in the communications and diversified markets and low to mid double-digit growth in the storage segment.

Jabil. For its fiscal Q4 ended Aug. 31, Jabil recorded sales of \$4.81 billion, up 8% sequentially and 11% year over year. Sales exceeded guidance of \$4.45 billion to \$4.65 billion. Non-GAAP EPS amounted to \$0.56, unchanged from the prior quarter but up 4% from the year-ago period. The EPS result was within guidance of \$0.50 to \$0.58 and two cents above its midpoint.

GAAP operating income for the August quarter was \$88.4 million, down 39% year over, while GAAP operating margin came in at 1.8% compared with 3.3% for the year-earlier quarter. GAAP net income attributable to Jabil totaled \$127.0 million, up 53% year on year, and GAAP EPS was \$0.61, 56% higher than a year earlier. Included in earnings were restructuring charges of \$61 million and a

one-time tax benefit of about \$104 million associated with the company's **Nypro** acquisition.

Non-GAAP operating margin equaled 3.8%, down 20 basis points sequentially and year over year. Non-GAAP operating income was \$181.4 million, up 3% sequentially and 4% year over year.

Representing 44% of total sales, Diversified Manufacturing Services revenue rose 11% year over year, driven by strength in Specialized Services as well as the inclusion of two months of Nypro revenue. Non-GAAP operating margin for the DMS segment stood at 4.9%, down 70 basis points sequentially and 40 basis points year over year. Operating performance in the quarter was impacted by cost overruns associated with ramping programs.

At 29% of sales, Enterprise and Infrastructure business increased 3% from the year-earlier period. The E&I segment produced a non-GAAP operating margin of 3.3%, up 100 basis points from the prior quarter and 90 basis points from a year earlier. Jabil said it is well positioned to see this segment perform at or above 3% through fiscal 2014.

Accounting for 27% of sales, Jabil's High Velocity segment grew 21% year over year, driven by strength in handset volumes. The segment's non-GAAP operating margin was 2.5%, down 90 basis points sequentially as a result of higher levels of handset revenue than anticipated.

In the August quarter, Jabil generated \$404 million in cash flow from operations.

The company expects revenue in the November quarter to decline about 3% year over year to within a range of \$4.35 billion to \$4.65 billion. Guidance for the quarter also calls for, among other metrics, non-GAAP operating margin of 3.8% to 4.2%, non-GAAP EPS of \$0.50 to \$0.60, and GAAP EPS of \$0.25 to \$0.35. On a year-over-year basis, Jabil is forecast-

ing that DMS revenue will grow 7%, E&I sales will remain consistent, and High Velocity business will fall 25%. Compared with the August quarter, High Velocity sales are expected to drop by \$500 million, a decrease associated with Jabil's handset customer BlackBerry.

Jabil said it is faced with the strong possibility of disengaging with BlackBerry, its second largest customer, and reported that the two companies are discussing how to wind down their relationship. Loss of BlackBerry business will cause a reduction of \$0.28 to \$0.34 in non-GAAP EPS for fiscal 2014. As a result, Jabil has lowered its EPS outlook for fiscal 2014 to \$2.36 to \$2.60, with the midpoint at \$2.48, down from an earlier projection of \$2.77. The company expects to take restructuring charges of \$35 million to \$85 million in fiscal 2014 in connection with what Jabil described as "this probable disengagement."

BlackBerry accounted for 12% of Jabil's revenue in fiscal 2013. Signaling disappointing sales of BlackBerry's Z10 smartphone, BlackBerry had to take a pretax charge against inventory and supply commitments of about \$934 million in Q2, primarily attributable to Z10 devices.

Plexus. For its fiscal Q4 ended Sept. 28, the company recorded sales of \$568 million, above the midpoint of guidance, but down 1% sequentially and 5% year over year. EPS of \$0.71 exceeded revised guidance of \$0.66 to \$0.70, which was raised in September. While EPS benefited from discrete tax items that added \$0.04 a share, the company said the underlying result was still strong as a result of improved operating performance. The \$0.71 result with discrete tax benefit of \$0.04 improved from \$0.68 in the prior quarter, which included a discrete tax benefit of \$0.07, and from \$0.02 in the year-ago period, which included a special charge worth \$0.64. Net income amounted to \$24.5 million, up from

\$23.2 million in the previous period and \$728,000 in the year-earlier quarter.

Networking/Communications sales fell 10% sequentially, a result that was slightly better than anticipated. During fiscal Q4, Plexus completed inventory shipments to **Juniper**, indicating the end of that customer relationship (see also Nov. 2012, p. 1-2). Excluding Juniper, revenue in this sector rose 17% sequentially as a result of new program ramps and growth of Plexus' top customers in the sector. In the Healthcare/Life Sciences sector, sales grew 12% sequentially, which was above original expectations. Revenue from the Industrial/Commercial sector increased 4% quarter on quarter in line with expectations, and the Defense/Security/Aerospace sector was down 6%, a result that was softer than ex-

pected.

Gross margin for fiscal Q4 was a lower-than-expected 9.6%, down 10 basis points sequentially but up 10 basis points year over year. On the other hand, operating margin was above expectations at 4.7%, which was up 30 basis points sequentially and 10 basis points year over year. Operating margin benefited from a sequential reduction of \$2.5 million in SG&A costs.

During the quarter, Plexus won 34 new manufacturing programs expected to generate about \$155 million in annualized revenue when fully ramped, a result in line with the company's goal. Healthcare/Life Sciences contributed 54% of that revenue. In addition, the company landed about \$19 million in engineering business.

Guidance for Q1 fiscal 2014 (the December quarter) specifies revenue

of \$520 million to \$550 million and EPS of \$0.57 to \$0.63, excluding any restructuring charges. The midpoint of revenue guidance suggests that sales will be down 6% sequentially. Excluding a sequential headwind of \$42 million from the company's Juniper disengagement, the remaining business would grow 2% at the midpoint. Plexus expects a fiscal Q1 operating margin of 4.6% to 4.8%. On a sequential basis, the company is projecting a high teens percentage decline for Networking/Communications in fiscal Q1, flat sales for Healthcare/Life Sciences, a mid single-digit drop for Industrial/Commercial, and high single-digit growth for Defense/Security/Aerospace.

Plexus anticipates that it will achieve quarter-over-quarter growth throughout fiscal 2014.

On-Shoring Update

A new survey by **IPC – Association Connecting Electronics Industries** (Bannockburn, IL) confirms that companies have continued to locate new operations in North America and are returning some existing operations to the region. The survey also finds that more on-shoring is planned for the coming year. A representative sample of 92 companies, with combined annual sales of \$50 billion, completed the survey, whose results appear in a 2013 update to IPC's study entitled *On-Shoring in the Electronics Industry: Trends and Outlook for North America*. (The initial report was covered in the August 2012 edition of *MMI* on p. 7.)

Survey data indicate that 16% of the responding companies moved operations to North America from overseas since the beginning of 2012. These companies include OEMs, EMS providers, PCB fabricators, and suppliers of materials and equipment. Based on the value of the operations and number of jobs created, EMS

companies were responsible for the bulk of the operations returned to North America. Most of these operations were moved from China to the US, and a few moved to Mexico.

There are signs that this activity will continue in the near future. Of the companies surveyed, 14% reported that they were planning to bring existing operations back or build new operations in North America from mid-2013 through the end of 2014. The majority of these companies are OEMs, and most of the planned operations are manufacturing facilities.

More than three quarters of the companies that reported returning operations to North America since 2012 cited cost of transportation as a major driver of that decision. A somewhat smaller number – 60% – also pointed to quality control concerns, the need to be closer to customers, and management costs as major drivers. Other factors included quality of available labor, protection of intellectual property, cost of manufacturing, and ITAR (International Traffic in Arms Regulation) requirements.

The report also covers an analysis of the rationale for and deterrents to on-shoring, domestic sourcing trends and the future outlook for North American manufacturers.

For more information, visit www.ipc.org/on-shoring-2013.

News

Benchmark Buys CTS's EMS Unit

Benchmark Electronics (Angleton, TX) has acquired the EMS operations of **CTS Corporation** (Elkhart, IN) for \$75 million in cash. The price was not intended to reflect any significant amount of goodwill. Ranked in the *MMI* Top 50 for 2012, the business brought in sales of \$222 million for the last 12 months ended June 30. Benchmark expects the transaction to generate annual revenue of around \$200 million and be slightly accretive to earnings in 2014. According to Benchmark, the lower estimate primarily results from programs that wound down as facilities were closed over the

past one to two years.

With this transaction, Benchmark has gained a manufacturing facility in each of five locations: Moorpark and San Jose, CA; Londonderry, NH; Bangkok, Thailand; and Matamoros, Mexico, as well as about 1,000 employees. As of Feb. 14, the acquired business operated with a total plant floor space of 378,000 ft², of which 51% was in California. The business focuses on complex, high-mix and low-volume manufacturing in the industrial, aerospace and defense, medical and communications markets.

“This acquisition supports Benchmark’s strategic commitment to expand our portfolio of leading customers in nontraditional and highly regulated markets and also allows us to strengthen the depth and scope of Benchmark’s New Product Express capabilities on the West Coast,” stated Gayla Delly, CEO and president of Benchmark. The company reported that the deal expands the Benchmark’s customer base in the industrial, aerospace and defense, and medical markets.

As for CTS, the transaction sharpens its focus on its Components and Sensors business and provides additional capital to drive growth and enhance shareholder value.

“As we looked at the whole portfolio and evaluated with the board, we came to the conclusion that the EMS business itself was a good, steady business, but it lacked some scale,” said CTS CEO Kieran O’Sullivan during a conference devoted to the transaction.

For the first six months of 2013, sales of the former CTS unit totaled \$97.6 million, down 34% year over year. The unit’s first-half operating earnings amounted to \$961,000 before corporate and shared services charges. Including those charges, the unit incurred a first-half operating loss of \$2.2 million excluding restructuring and related charges.

This is Benchmark’s second acqui-

sition this year following the company’s purchase of **Suntron** (July, p. 6-7).

Microelectronics Firm Purchases EPIC

Natel Engineering (Chatsworth, CA), a microelectronics provider, has acquired EMS provider **EPIC Technologies** (Norwalk, OH) from private equity firm **CIVC Partners** (Chicago, IL). EPIC reported 2012 sales of \$210 million, which placed 50th on last year’s *MMI* Top 50 list. The purchase price was not disclosed.

Established in 1975, Natel has grown into one of the largest privately held microelectronics manufacturers in the US. Delivering high-reliability manufacturing as a vertically integrated solution, the company serves customers in the military, aerospace, telecom and medical industries.

“We are extremely pleased with the addition of EPIC because it strengthens and expands product solutions to include higher-level full system integration capabilities, as well as additional opportunities to reduce costs for our customers through the geographical distribution of our manufacturing locations,” said Natel president and CEO Sudesh Arora. “Natel’s history of strategic acquisitions has enabled us to grow, and the acquisition of EPIC provides market diversification in the building infrastructure, lighting, transportation and energy industries.”

For Natel, manufacturing is confined to the US, as production facilities are located in Chatsworth and Carlsbad, CA, and Carson City, NV. By contrast, EPIC operates plants in Norwalk and Mason, OH; Juarez, Mexico; and Timisoara, Romania.

NBS Goes Under

Faced with mounting liabilities, **NBS Design** (Milpitas, CA), an EMS provider known by the trade name NBS, has sold its equipment and in-

ventory assets to another EMS provider, **Hunter Technology** (Santa Clara, CA); has ceased operations; and made a general assignment for the benefit of creditors. Details of the sale were not revealed.

NBS notified its customers that Hunter did not purchase any EMS contracts or open purchase orders, but that Hunter will immediately be offering seamless engineering and manufacturing services to customers served by NBS, should they choose to engage.

In 2012, NBS had sales of \$56 million, according to a company brochure. Just two months ago, the company announced that it had moved into a new manufacturing/headquarters facility of about 60,000 ft² in Milpitas with 50% more floor space for engineering and production. As of August, NBS also maintained PCB design offices in Santa Barbara, CA, and Nashua, NH, and an engineering support activity in Jakarta, Indonesia.

Hunter said the purchase of the NBS assets expands its portfolio of contract product design, engineering and manufacturing services. The operations resulting from this transaction are now of the size and scope necessary to attract a further diverse account base, added Hunter, which said it is positioned for rapid organic growth.

The company offers integrated RF solutions on the product level as well as an EMS capability that includes PCB fabrication in-house.

OEM to Join EMS Industry

Cemtrex (Farmingdale, NY), a publicly held instruments OEM, has entered into an agreement to acquire the **ROB Group** (Neulingen, Germany) consisting of four German companies that together offer electronics design and manufacturing services and cabling. The ROB Group, which also has a factory in Romania, lists its 2012 sales at about 48.5 million euros. In-

dustries served by the group include medical technology, renewable energy, automotive electronics, automation, and measurement and adjusting technology.

The four German companies had been forced to file for insolvency in March 2013 due to imminent illiquidity after payments worth several millions of euros from a major customer suddenly stopped as a result of liquidity problems. However, the relatively early filing made it possible to stabilize operations quickly with support from customers and suppliers without facing cutbacks in production. Insolvency administrators ended up with four firm offers to buy the companies.

“After looking at numerous potential acquisitions over the last several months, we saw this situation as the best way to expand into new markets as well as create long-term shareholder value,” said Saagar Govil, CEO of Cemtrex. The company sees significant growth potential for the long term throughout the EMS industry.

Cemtrex plans to complete the acquisition within 30 days. The purchase price was not released.

This new entrant to the EMS industry manufactures and sells instruments for emissions monitoring, process analysis, instrumentation and controls for industrial applications and environmental compliance. Cemtrex also markets process analyzers for refinery applications. Through a subsidiary, the company provides air filtration and environmental control equipment to a variety of industries. For the fiscal year ended September 2012, Cemtrex reported sales of \$12.2 million.

Flextronics to Build Desktop in Texas

Flextronics (Singapore) will begin producing a new desktop computer in Austin, TX, the *Austin American-Statesman* reported, citing a presentation that Flextronics submitted to

commissioners of Travis County, TX. Flextronics sought the commissioners’ endorsement of its application for foreign trade zone status covering the company’s Austin site and a nearby facility in Pflugerville.

According to the newspaper report, the company said in its presentation that foreign trade zone status would aid its effort to relocate assembly of a new desktop from China to Austin.

An official from the city of Austin told commissioners that if foreign trade zone status were granted, Flextronics looks “at having an additional 879 new jobs, with the peak possibility for 1,694 jobs” in total. The commissioners voted to support the application, which requires a decision at the federal level.

This news has fueled speculation that Flextronics could be getting ready to build **Apple’s** new Mac Pro desktop in Austin. Earlier this year, Apple CEO Tim Cook told a US Senate subcommittee that his company is investing \$100 million to build a line of Macs this year in Texas. Later, at a developer conference, he disclosed that the Mac Pro will be assembled in the US. Taken together, the two statements would lead one to believe that the Mac Pro will be built this year in Texas (June, p. 2).

Some new business... According to *Digitimes* reports, **Hon Hai Precision Industry** (New Taipei, Taiwan) is producing 50-in. TVs for **7-Eleven** stores and for sale through **Chunghwa Telecom** and cable TV operator **kbro**, all operating in Taiwan. Hon Hai is also said to be assembling a 7-in. tablet and a video streaming device for the 7-Eleven stores. The EMS giant is building another 7-in. tablet for Chinese smartphone maker **Xiaomi**, said *Digitimes*. The Taiwan-based news site also reported that Hon Hai has become a supplier to **Mercedes Benz** and **BMW**. Finally, Hon Hai has started manufacturing all-in-one PCs in

Russia for **HP**, *Vedomosti* reported. ...Start-up **Central Standard Timing** is working with Flextronics to achieve CST’s goal of US production for what CST describes as the world’s thinnest watch. Also, **ICEdot**, an emergency ID and notification service, has partnered with Flextronics to bring the helmet-mounted ICEdot Crash Sensor to market....**SpiderCloud Wireless** (San Jose, CA), a provider of small-cell Enterprise Radio Access Network systems for in-building cellular coverage, has chosen **SMTC** (Markham, Ontario, Canada) to supply a range of manufacturing and integrated service solutions at its San Jose, CA, facility, as SpiderCloud scales to demands from mobile operators globally.

New offerings... Flextronics has expanded its portfolio of energy infrastructure solutions and services to help OEMs address regional shifts in the energy market. The company’s supply chain and technology solutions span the exploration, generation, distribution and consumption of energy. In addition, Flextronics has introduced commercial and industrial lighting solutions and services to help reduce the procurement and utility costs of operating large facilities....**Plexus** (Neenah, WI) has expanded its test development capabilities in Oradea, Romania, through a one-million dollar investment that includes a test technology design and development laboratory.

New facilities... At the Asia-Pacific Economic Cooperation Summit, Hon Hai chairman Terry Gou vowed to reporters that his company will have a plant of some sort in operation next year in Indonesia, *The Jakarta Post* reported. Last year, reports of Hon Hai’s interest in investing in Indonesia began to circulate (July 2012, p. 1), and the company has reportedly been in negotiations with government officials and local players. Hon Hai refused to comment on a report that the

company received an order for 50 million mobile phones in Indonesia. This order was covered by other media as well. Also, Hon Hai has broken ground for a new factory complex in the Gui'an New Area near Guiyang, capital of Guizhou province in southwest China, reported *Xinhua*, China's official news agency (July, p. 7). According to the news agency, the industrial park, the first phase of which is due to go online by July 2014, will turn out cell phones, tablets, TVs, electronic whiteboards, touch screens, video walls and LED products. *China Daily* reported that the park will concentrate on software, cloud networking and other such work. Finally, there are two reports that Hon Hai will invest in TV production in Jiangsu province. While acknowledging one of these reports (*Apple Daily*), Hon Hai would only say that it is following company procedures regarding its investment plans....*The Times of India* reported that Flextronics has opened an 85,000-ft² facility in Chennai, India, for the company's back-end office needs. Out of 6,100 employees in India, 3,800 work in Global Business Services, the division that performs back-end functions for Flextronics, according to data published by the newspaper....The Spitfire Controls Division of **Sigma-Tron International** (Elk Grove Village, IL) recently moved into a new engineering center in Elgin, IL. Spitfire Controls serves as SigmaTron's design arm, and this move puts Chicago area design staff within one facility.

People on the move... Chuck Kostalnick has joined **Sanmina** (San Jose, CA) as executive VP and chief business officer. An industry veteran with over 23 years of sales and marketing management experience, Kostalnick has held several executive-level positions including senior VP, Avnet Embedded for **Avnet**; president, North America Distribution for **Bell Microproducts**; and VP of sales for

Arrow's OEM Computing Solutions division....Brian Porter was recently named COO of EMS provider **Ayrshire Electronics** (Louisville, KY). In 1995, he was hired as CFO and VP of Finance for a group of companies headed by Milo Bryant. Over the course of 16 years, Porter led efforts in four acquisitions, which eventually became Ayrshire Electronics. Company founder, Milo Bryant, passed away in April of this year....Nat Mani, who has been president of EMS provider **Bestronics** (San Jose, CA) since 2012, just added CEO to his title. He succeeds James Choe, a co-founder of Bestronics, who retired this year. Mani joined Bestronics from Sanmina, where he held the position of senior VP of sales and marketing. Before that, he was executive VP of contract manufacturer **Fabrinet**....**Ducommun** (Carson, CA) has named Jerry Redondo VP of operational excellence for its electronics (EMS) and aerostructures business units. Redondo joins Ducommun from **Crane Aerospace & Electronics**, where he served as group VP of operations, global supply chain, quality and operational excellence. ...**Season Group USA** (San Antonio, TX) has appointed Alex Colquhoun GM, while Allen Bennink has joined Season Group's US unit as operations manager. Colquhoun has held senior management positions within a number of electronics companies including **OSI Electronics** and **Corlund Electronics**. Bennink gained test engineering and quality systems expertise at **IEC Electronics**, **ACT Electronics** and **CM Solutions**....**ESCATEC** (Penang, Malaysia) has hired Thomas Dekorsy, Ph.D., as GM of ESCATEC Switzerland. He replaces Gerhard Klauser who will move to a new role heading up special projects. Dekorsy, who has more than 20 years of senior management experience around the world, comes from **Carl Haas GmbH**, where he served as managing director.

Last Word

What Could Hold On-Shoring Back

With all the fanfare about **Flextronics** assembling **Motorola Mobility's** Moto X smartphone in Fort Worth, Texas, it might seem that the US is now ready to take on huge amounts of EMS, especially since Motorola is not alone in putting some of its high-volume production in the US (June, p. 1). Every Moto X sold in the US will be supplied from the Flextronics plant in Fort Worth, a clear-cut example of regional manufacturing at work. Assembling a product in a region for that region is a trend gaining wide acceptance in the EMS industry. But acceptance of an idea is one thing; implementing it on a massive scale is quite another.

The US does not come close to having the parts supply ecosystem necessary for a massive increase in domestic EMS. Take the Flextronics operation in Fort Worth. Flextronics is importing subassemblies from Asia for final assembly in Texas. While some parts are made in the US, the Moto X program in Fort Worth still depends on an Asian supply base. Through Flextronics, Motorola may be able to offer reasonably short delivery times for customized smartphones in the US, but that won't happen without filling a pipeline and building up an inventory of subassemblies supplied from Asia. Although Motorola has eliminated the costs and delays of shipping finished product from Asia, it is still paying for transporting subassemblies from Asia, and it still must honor the lead times of those parts.

To afford maximum flexibility and the shortest lead times for regional manufacturing, EMS sites in the US (or Mexico) would assemble products for the US market by using components and other parts supplied strictly

Last Word

from within the US (or Mexico). But such a pervasive supply base has developed in Asia, that it is not always possible to source everything from North America. For example, many ICs come from Asian fabs, and Asia seems to have a lock on displays. If there are Asia-supplied parts in a BOM, then those parts will not be coming just in time unless you're willing to pay a hefty premium for air shipments. And if an upside causes you to run out of those parts, you can't call up your local distributor for a quick delivery.

Still, regional manufacturing is on the upswing, and supply chains will need to accommodate this trend. (See p. 4 for IPC's latest on-shoring survey.) For the near term, distribution will take on a larger and larger role supplying parts made in Asia, *MMI* believes. Distribution will be relied on increasingly to provide the necessary buffering as regional production rises in the US and Mexico. Regional manufacturing will also create more demand for such things as bare boards, plastics, sheet metal, machined parts and cables supplied by companies in North America. Ramping up production of parts such as these is fairly straight forward and can be done in relatively short order. Passive component and discrete semiconductor operations in North America will likely see the need

for more capacity as well.

But bringing IC and display fabs to North America is a different matter – a lengthy and expensive proposition that is years away, if then. IC and display suppliers are not going to abandon their billion-dollar investments in Asia. They would need to be convinced that enough demand will materialize in North America to make an investment in the region worth their while.

Yet it's not clear how fast or how far the regional manufacturing trend will go. One aspect of this trend that has received little or no attention is its effect on the cost of materials, which, as the EMS industry is well aware, drives product cost. Shipping parts from Asia will increase the cost of those parts as delivered. In addition, distributors will obviously charge for stocking parts made in Asia. And EMS providers and their customers will generally pay more for US-manufactured parts. Labor costs in the US receive lots of media attention, but material costs will likely be as important, if not more so, for OEMs who are considering North American production. The extent to which OEMs see higher material costs in North America will have much to say about how many of them will opt for a regional solution in *MMI's* opinion. Certainly, logistics costs, design iterations, engineering change orders, travel times, inventory

costs, unforeseen demand changes, product delivery times and carbon footprint all argue for a regional manufacturing solution. But if North American material costs push product costs up too far – i.e., well above the import price tags of competitors' Asia-made products – then regional production will lose its luster in such cases.

While it's unclear how many OEMs will eventually adopt regional production, it is apparent that the North American ecosystem of materials supply is not ready for a massive wave of adoption if it does come.

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