Manufacturing Market

inside the contract manufacturing industry

Vol. 21, No. 1 January 2011

2011: A Solid Outlook

To expect another growth year as strong as 2010 may be asking too much. After all, 2010's results were measured against the recession-wracked levels of 2009. This year, comparisons will be made versus the recovery levels of 2010, a much higher bar to clear.

Nevertheless, 2010 should be a solid growth year for the EMS industry, if a blending of three EMS forecasts proves accurate. Estimates of EMS revenue for 2011 were averaged for forecasts by **IDC**, **InForum** and **New Venture Research**. The mean estimate for 2011 is \$179.0 billion, which is 10.6% above the comparable EMS figure for 2010 (Dec. 2010, p. 5-6). EMS industry growth of around 10% in 2011 would enable providers to leverage SG&A and brick and mortar while allowing for positive cash flow – all in all, not a bad prospect.

When ODM sales were added in, the blended growth estimate for contract manufacturing revenue in 2011 amounted to 9.6%, one percentage point below the EMS estimate. This blended estimate did not include **IHS iSuppli**, which released a new forecast this month (see article on p. 5). When IHS iSuppli estimates are factored in, this year's blended growth rate for contract manufacturing revenue dips slightly to 9.3%.

Another way to come up with a 2011 forecast is to look at semiconductor revenue projections, which can

serve as a proxy for the overall growth of OEM system COGS (cost of goods), combining in-house and outsourced production. Gartner is predicting that semiconductor revenue will increase by 4.6% this year. EDN reports that IHS iSuppli is expecting semiconductor industry growth of 5% in 2011. The Semiconductor Industry Association's forecast calls for semiconductor sales to grow by 6.0% in 2011. Take this range of 4.6% to 6.0% and tack on several percentage points for new outsourcing business, and you can arrive at a contract manufacturing growth figure that approaches or equals the 9.3% blended growth estimate for contract manufacturing sales. So there is some measure of agreement between that blended forecast and what these semiconductor industry prognosticators are saying.

However, on the semiconductor side not everyone agrees with a single-digit forecast for 2011 sales growth. According to *EE Times*, **IC Insights** is

predicting that IC revenue will increase by 10+% this year. Add several percentage points for new outsourcing business, and you end up with a contract manufacturing forecast well into double-digit territory, somewhat higher than the blended forecast.

Although the blended contract manufacturing forecast is to some degree consistent with three semiconductor industry projections, there is still room for skepticism. That's because forecasts a year ago failed to anticipate how rapidly sales in both the EMS/ ODM and semiconductor sectors would recover in 2010. MMI was caught by surprise as well, since recovery from the previous downturn essentially took two years. But history did not repeat itself in the EMS industry's recovery from the Great Recession. Could 2011 also defy expectations? Of course. But the chances of a major miss by the forecasts dwindle as markets return to more normalized conditions. Still, there is no guarantee

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of normalized conditions in 2011, as the debt crisis in Europe presents one source of uncertainty for the coming year.

Amid expectations for solid, if unspectacular, growth this year, *MMI* has identified nine industry trends worth watching in 2011. Here they are in no particular order.

Rising costs in China will compel more OEMs to reevaluate their supply chain strategies.

While labor costs usually represent a small percentage of product cost, they do matter as they also affect costs of locally sourced materials and services. Labor cost increases can be an indicator of a country's inflation, which increases the cost of doing business in that country. With labor costs continuing to rise in China, OEMs will be more and more interested in understanding how fast labor costs will increase in other parts of the world. Predicting labor cost increases gets into the less-than-precise realm of economic forecasting, which extrapolates current trends into the future. It is likely that labor cost projections will factor into at least some 2011 decisions as to where an OEM should have its products manufactured.

Increasing costs in China will narrow the range of products that make sense for a China-only manufacturing strategy. This bodes well for EMS operations in Mexico and Eastern Europe.

MMI believes that the cost of oil will also assume a more prominent role this year in supply chain decisions. It appears that demand from China and other parts of the world will keep the cost per barrel from falling.

Manufacturing OEM products for emerging markets will emerge as a greater theme this year.

Due to the slow recovery of the U.S. economy and the financial crisis in Europe, OEMs will look toward emerging markets for strong growth. This trend will be increasingly impor-

tant in such markets as communications infrastructure, industrial and healthcare.

The large global EMS companies will appeal to OEMs looking to reach China, India, South America, and other emerging economies. But if China is the main target, there will be more competition for this business as a number of players below the top tier offer manufacturing in China.

Indonesia could be the next emerging economy that OEMs will want a piece of. There's a move afoot to add the country to the BRIC group of developing economies. Indonesia possesses the world's fourth largest population and Southeast Asia's largest economy. The country's gross domestic product has grown steadily in recent years including 2009, and the IMF estimates 6% GDP growth for 2010. Indonesia is also attracting foreign direct investment.

At least one EMS provider, Japan's SIIX, has taken notice of the Indonesian economy and the country's gradually increasing demand for consumer products such as automobiles, motorcycles and home electrical appliances. SIIX has decided to establish a factory near Jakarta, where many electronicsrelated and automotive-related units of its main customers are gathering. Scheduled to start operating in June with a first-phase footprint of 12,000 m², the new plant in Java will aim to grow its EMS business with customers in Indonesia. In contrast, SIIX already has a manufacturing unit in Batam, Indonesia, which is handling business mainly with customers outside Indone-

Competition for high-mix business will increase as larger players seek to increase market share in this

A prime example of this trend is **Jabil Circuit**, which intends to obtain 50% of its revenue in three to five years from a group of sectors it calls Diversified Manufacturing Services.

Included in this group are a number of high-mix sectors that are the lifeblood of many mid-tier and smaller providers. The company has said it will aggressively pursue market share in this area (Oct. 2010, p. 4-5). Most, if not all, of the large providers are involved in high-mix business in some way.

In the EMS industry, it is by now a well-known principle that nontraditional high-mix markets are less penetrated and thus have higher growth prospects than the more heavily outsourced communications and IT sectors. High-mix business is also desirable because of the margins it can command. Not only will this principle bring more providers of all sizes into various high-mix markets, it will also foster more high-mix competition among large providers. Although this trend has been underway for several years, 2011 should be the year in which large players will answer the question of whether or not they can win more than their share of high-mix business.

The pursuit of high-mix business will underscore the classic competition of mid-tier and smaller providers offering local service with perhaps some low-cost manufacturing versus large providers offering a global footprint. *MMI* believes that the large-versus-small competition will be more about capabilities and service and less about price, especially in markets such as healthcare and industrial. It is likely that large providers will not want to depress their high-mix margins much, if at all, in order to win business.

For the largest providers, high-mix business also serves as a way to participate in growth segments where they can avoid competition from **Hon Hai Precision Industry (Foxconn)** and the ODMs. Neither Hon Hai nor the ODMs seem to have established a visible presence in the nontraditional highmix markets.

Hon Hai's expansion into inland China will have a greater effect on

the ODM group than on the EMS industry this year.

Hon Hai is pursuing a strategy such that most of its manufacturing will remain in China. As the company continues to grow on a massive scale, it needs to add large amounts of capacity in China. In order to satisfy this need, the company embarked on a program to expand inland where labor is more abundant and less expensive than in coastal China. Following last year's highly publicized series of Shenzhen employee suicides, Hon Hai picked up the pace and enlarged the scope of its inland expansion program. Combined with a shift of some production from Shenzhen, the inland expansion program will enable the company to achieve its aim of becoming less dependent on migrant labor (Aug. 2010, p. 1-2).

Inland provinces are keen to attract Hon Hai. It has been reported that their incentive packages now include providing worker housing. In the wake of the suicides, Hon Hai no longer wants responsibility for workers' living quarters.

A number of ODMs have followed Hon Hai into inland China. After Hon Hai chose the southwestern city of Chongqing for a notebook manufacturing facility, notebook ODMs Inventec and Quanta Computer decided to invest there (April 2010, p. 1). All three are suppliers to HP, which preceded them in Chongqing. Another PC OEM, Acer, has settled on the city, and Digitimes reported Chongqing's mayor as saying that Compal Electronics, Wistron and Pegatron are headed there. (Chongqing is surrounded by but is independent from Sichuan province.)

PC OEMs **Dell** and **Lenovo** have selected another southwestern city, Chengdu in Sichuan province, for new manufacturing operations. Compal is investing in a Chengdu site as well, but Hon Hai was in Chengdu first and is already in production (Oct. 2010, p. 7).

As an example of how fast Hon Hai is expanding inland, at just one new location, Zhengzhou in Henan province of central China, the company plans to employ more than 140,000 people this year, reported *Digitimes*, citing an online news source in China. (Zhengzhou will become a Hon Hai center for production of mobile phones, reportedly including **Apple** iPhones.)

But it is unlikely that Hon Hai will lead a similar movement inland within the EMS industry this year. The ODMs are supporting major PC customers that want to sell into Western China. With a few exceptions, EMS providers have not shown an interest in expanding inland. Because they do not have Hon Hai's huge appetite for new capacity, EMS providers can wait to see if customer demand for inland production materializes. Right now, the lack of a supply base at potential inland sites such as Chongqing and Chengdu and the logistics of shipping from such locations argue against a cavalcade of EMS providers rolling inland to set up shop in 2011.

Still, as mentioned above, there are exceptions. Top 50 EMS provider Integrated Micro-Electronics, Inc. opened a plant first in Chongqing and later on in Chengdu to serve local customers (April 2010, p. 2). Flextronics recently launched a facility at Ganzhou in the southern province of Jiangxi to support its Power operations (Sept. 2010, p. 7; June 2010, p. 7). It made sense for the company to seek lower labor costs there since direct labor for a lot of its Power business accounts for about 10% of sales. In addition, Flextronics recently traveled to Henan province and declared its interest in investing there, reported Digitimes, citing a Chinese news source.

Locations such as Chongqing and Chengdu will become more attractive as their supply bases develop and transportation improves, especially rail service to Europe. Even now, PC makers aren't the only OEMs drawn to inland China. In 2009, **Cisco** agreed to help the government of Chongqing establish a telecom manufacturing base in the city, which shows the EMS industry that one of its major customers is also interested in western China. If Flextronics decides to invest in Henan province, such a move would demonstrate to other large EMS players that expanding inland is not a strategy suitable only for Hon Hai.

Hon Hai's massive inland expansion has implications for the company's development effort in Vietnam, *MMI* believes. Because the company is now installing so much capacity in inland China, Vietnam seems to have become less important to Hon Hai's capacity planning. It remains unclear whether Hon Hai will invest the full \$5 billion that it promised in 2007 for Vietnam, but certainly one would have expected Hon Hai to have invested more in the country by now.

Consolidation will continue within the EMS industry's lower tiers, while the large providers resort to "tuck-in" acquisitions for adding capabilities that cannot be easily home grown.

Look for large providers to continue taking the expeditious step of acquiring capabilities outside their domain of expertise. Some possible areas of interest include aftermarket services, life sciences and mechatronics. Capability deals can also appeal to other providers, particularly when the acquisition is a relatively small activity with a commensurate price tag.

Capabilities can also be acquired to enhance vertical integration for providers who subscribe to some form of this model. With the return of demand, vertically integrated component businesses will look more attractive in 2011, and so will the prospect of adding or augmenting a component business. Take Hon Hai. The industry giant is one of the parties in talks to acquire an interest in **Hitachi Dis-**

plays, an LCD subsidiary of Hitachi, according to an online report of the *Wall Street Journal*. If Hon Hai is successful, the company would be adding to its already extensive array of vertically integrated capabilities (see also the ninth trend on p. 4-5).

M&A activity can also reflect consolidation. In the EMS industry, consolidation has been a long-term trend that was temporarily derailed by the severe economic conditions of 2009. There's a good chance that this year's consolidation activity will at least equal what occurred in 2010. The upcoming year will likely bring out EMS sellers who will have had a full year or more to make their financials more appealing to a buyer.

Motivation for EMS buyers will remain unchanged. They will seek greater geographic reach, increased sales, more capacity, new customers in desirable markets, additional capabilities or a combination thereof.

Consolidation will be seen more in the mature EMS markets of North America and Europe.

If 2011 produces a moderate growth environment, providers should see still more cash on their balance sheets. Improving component supplies should also benefit balance sheets.

One of the EMS industry's strengths is its ability to generate cash flow when revenue growth is moderate. If a blended forecast of 10+% for 2011 proves accurate or close to the actual result, cash should continue to flow onto providers' balance sheets.

Increasing cash positions will lead to the inevitable question of how providers intend to use their caches of cash. It will become harder to justify hoarding cash in 2011.

Continued focus on inventory turns will also improve balance sheet metrics.

Lifecycle was the new industry buzz word in 2010. In 2011, it will be incumbent on EMS providers to

show that customers want the lifecycle services that providers are touting.

But serving as a true lifecycle provider is not as simple as it sounds. To offer complete lifecycle services, providers must have a full range of aftermarket capabilities. Some providers will be faced with deciding how far to go in this area. Do they go into third-party logistics? What about asset recovery? Does field service make sense? Is recycling a desirable business to enter? Not all EMS providers will be offering the same menu of aftermarket services. Thus, the definition of lifecycle services will remain somewhat elastic across the industry.

Providers who actually land a life-cycle program may be more willing to broadcast their accomplishment than if it were a garden-variety EMS program. Disclosure would show that they are making good on the promise of lifecycle services. While challenging to pull off, lifecycle business is desirable because it's sticky and runs at higher margins than manufacturing alone.

In the lifecycle scheme, design services will often mean joint design with customers. In recent years, global providers have been setting up design centers in various regions of the world. This development raises the question of how comfortable OEM engineers will be in dealing with an EMS design team in a different part of the world. Yes, design files can be transferred back and forth electronically, and video conference calls can be arranged across time zones. But some OEM engineering groups may resist giving up face-to-face interaction and local prototyping

Now that EMS margins have improved, OEMs will likely increase pressure for cost reductions.

As EMS providers are well aware, a certain amount of unease often accompanies a customer relationship.

One might go so far as to say that a

tacit tug of war exists in such cases between providers and their customers as to how much of a product's cost the provider will represent. At the outset, OEMs exert more pull because they can play off one provider against another in order to capture as much gross margin as possible. But after that, OEMs depend on their providers to achieve cost reduction targets. With last year's gains in provider margins, an OEM customer might wonder whether its provider is making money at the customer's expense. "Maybe my cost reduction targets aren't aggressive enough," the customer might say. "Or maybe there's purchase price variance that my supplier is not giving me." EMS margin improvements of 2010 will likely put OEMs in a more demanding mood when it comes to cost reductions. There is potential for friction here especially if providers seek relief from labor and other cost increases in China. Cost reduction pressure will also increase if an OEM agreed to delay or lower cost reduction targets during the component shortages of 2010.

Savvy EMS providers will point out that the most efficacious way to achieve cost downs is to start with design, where something like 80% of a product's cost is determined. By participating as a joint design partner, an EMS provider can suggest such things as component substitutions and board layout changes that will save money. Indeed, OEMs who don't fully explore their options for joint design may be doing themselves a financial disservice.

Vertical integration in the EMS industry, which took its lumps during the Great Recession, will enjoy something of a comeback this year.

Vertically integrated component businesses have impeded margin progress at providers such as Flextronics and **Sanmina-SCI**. Expected margin improvements in component businesses should help to lift corporate margins this year.

Providers that have pursued vertical integration selectively in such areas as cables and harnesses, plastics and metal working will offer these capabilities to differentiate themselves from the competition. At least some of them will look to expand these capabilities into other geographies or markets. For example, **Benchmark Electronics** said its precision technology operations would be online in Penang, Ma-

laysia, by the end of 2010. In another case, **IEC Electronics** recently made an acquisition in California to expand IEC's wire and cable business (Dec. 2010, p. 7).

Then there's Jabil, which plans to apply the materials know-how of its vertically integrated Green Point activity to the healthcare, clean tech, industrial and instrumentation sectors (Oct. 2010, p. 5). The provider originally acquired Green Point, now called the

Materials Technology Group, as a supplier of plastics, particularly for cell phones.

Perhaps the greatest argument for vertical integration lies in the phenomenal success of Hon Hai, which has pursued a vertical integration strategy from its early days. Look for Hon Hai to add vertical capabilities for new markets and/or where there are gaps in its internal supply base (see also fifth trend on p. 3-4).

Single-Digit Growth Projected for 2011

Following an estimated 33.4% increase in revenue for 2010, the global contract manufacturing industry will experience slowing growth in 2011, with sales projected to rise by only 8.5%, according to new **IHS iSuppli** research.

In the IHS iSuppli forecast, the contract manufacturing industry, consisting of the EMS and ODM segments, will finish 2011 with revenue of \$376.7 billion, up from \$347.3 billion in 2010 (table). Revenue will continue to rise at annual rates ranging from

IHS iSuppli's	Contract M	anufacturing	Revenue I	Forecast (Mil	lions of US\$)
2009	2010	2011	2012	2013	2014
\$260,451	\$347,329	\$376,716	\$409,506	\$440,295	\$472,347
Source: IHS iSuppli					

8.7% to 7.3% during the following years, reaching \$472.3 billion in 2014.

With that end point and a starting point of \$260.5 billion in 2009, one can calculate a five-year CAGR of 12.6%. However, for the period 2010 to 2014 the CAGR drops to 8%.

"The contract manufacturing industry in 2011 is grappling with reduced profit margins for certain consumeroriented products because of intensified competition for new business," said Thomas Dinges, principal analyst for outsourced electronics manufacturing at IHS. "EMS and ODM providers with exposure to these areas have been hardest hit, while others with a more balanced end-market portfolio have fared much better."

Margin improvement in 2011 is likely to be more a factor of product mix, as opposed to pure cyclical aspects such as revenue growth, according to IHS iSuppli (El Segundo, CA).

Some Quarterly Results in Brief

Jabil Circuit. For its fiscal Q1 ended Nov. 30, 2010, revenue of \$4.08 billion surpassed guidance of \$3.9 billion to \$4.0 billion, and non-GAAP EPS of \$0.61 exceeded Jabil's expectation of \$0.53 to \$0.57. Revenue rose 6% sequentially and 32% year over year. Non-GAAP operating income grew 16% sequentially and 71% year over year. Non-GAAP EPS increased 17% sequentially and 91% year over year. The company's Diversified Manufacturing Services and High Velocity Systems segments grew 11% and 14% respectively from the prior quarter, while the Enterprise & Infrastructure segment declined by 8%. The DMS

segment represented 34% of revenue for the quarter, compared with the company's three- to five-year target of 50%.

Non-GAAP operating margin for the quarter was 4.5%, up 40 basis points sequentially and 110 basis points year over year. The Enterprise & Infrastructure margin came in at the corporate average. In contrast, the DMS segment performed above the average with a non-GAAP operating margin of 6.8%, while High Velocity Systems produced a below-average margin of 2.3%. Non-GAAP EBITDA was 6.1%. Both non-GAAP EBITDA and operating margin were at their highest levels since 2006.

GAAP net income for fiscal Q1 amounted to \$106.7 million versus \$58.7 million for the prior quarter and \$28.3 million for the year-earlier period.

Guidance for fiscal Q2 calls for revenue in a range from \$3.85 billion to \$3.95 billion, non-GAAP operating margin in a range from 4.1% to 4.3%, and non-GAAP EPS in a range from \$0.49 to \$0.53.

Plexus. Revenue for its fiscal Q1, which ended Jan. 1, totaled \$566 million, up 31% year over year and 2% sequentially. EPS equaled \$0.61, up 39% from a year earlier but down 6% from the prior quarter. Gross margin was 9.7%, down 40 basis points sequentially, while operating margin stood at 4.9%, down 30 basis points sequentially. Although below the company's 10-5 model, both were consistent with expectations. Sales from the company's wireline/networking, indus-

trial/commercial and defense/security/ aerospace sectors increased by single digits sequentially; the medical sector was flat versus the prior quarter; and wireless infrastructure business declined by about 10% largely as a result of the ramp-down of the **Cisco Starent** program, which is being transferred to another EMS provider.

Plexus set forth fiscal Q2 revenue guidance of \$540 million to \$570 million with non-GAAP EPS of \$0.53 to \$0.58. Q2 will see the unfavorable impact of production ramping down for Cisco Starent and **Avocent** along with a seasonal increase in operating costs, including salary adjustments.

In fiscal Q3, Plexus faces a confluence of issues including a broad-based reduction in customer forecasts and a significant delay in the provider's two **Coca-Cola** programs. As a result, Plexus expects Q3 sales to show a percentage decline in the mid-single digit range versus the midpoint of Q2 guidance. The company anticipates that Q4

sales will grow sequentially from Q3. Plexus now expects fiscal 2011 revenue growth of 10 to 13%, down from an October 2010 forecast of more than 15%.

Flextronics. For its fiscal O3 ended Dec. 31, 2010, sales of \$7.83 billion exceeded guidance of \$7.5 billion to \$7.7 billion, while non-GAAP EPS of \$0.25 came in at the high end of guidance of \$0.23 to \$0.25. Sales increased 6% sequentially and 19% year over year. Non-GAAP operating income rose 9% sequentially and 23% year over year. Non-GAAP net income went up 8% sequentially and 40% year over. Non-GAAP EPS grew 9% sequentially and 47% year over year. GAAP net income, which included a \$35-million benefit from a tax settlement, reached a new high of \$198 million, as GAAP EPS rose to a record \$0.26. At 33.6%, ROIC was also at a record level.

The company's consumer digital and mobile segments grew by 12% and

11% respectively from the prior quarter, while the infrastructure and computing segments each achieved a 5% increase. Only the industrial, automotive, medical and other segment showed a sequential decline, which amounted to 3%. On a year-over-year basis, all segments exhibited growth, with four out of five increasing by 20% or more.

Non-GAAP gross margin was 5.6%, up 20 basis points from the prior quarter and 10 basis points from a year earlier. Non-GAAP operating margin equaled 3.0%, up 10 basis points sequentially and year over year. Baked into this margin were the operating losses of Flextronics' component businesses. Flextronics said it expects these businesses to approach breakeven in the March quarter.

For the March quarter, the company expects revenue of \$7.1 billion to \$7.4 billion and non-GAAP EPS of \$0.21 to \$0.23.

News

Defense Contractor and EMS Provider Join Forces

Publicly held API Technologies (Ronkonkoma, NY), a provider of secure communications, electronic components and subsystems to the global defense and aerospace industries, just acquired SenDEC (Fairport, NY), described as a leading defense EMS company. Through an agreement with Vintage Capital Management (Orlando, FL), API acquired 100% of the equity of privately owned SenDEC, including its electronics manufacturing operations and about \$30 million in cash, in exchange for the issuance of 22 million API common shares to an affiliate of Vintage. Vintage, a private equity firm, has become a majority shareholder of the resulting company.

SenDEC generated about \$90 million in sales and about \$3.5 million in net income during its fiscal year ended July 31, 2010. In addition to the defense sector, SenDEC's EMS unit serves the commercial/industrial, energy, medical and telecom markets. The company also has its own line of digital monitoring, display and control devices.

For the past 12 months, the combined companies generated about \$200 million in sales and \$20 million in EBITDA. The transaction effectively doubles the size of API and presents a variety of immediate revenue synergies and growth opportunities in the defense sector, according to a press release issued by API.

As a condition of the agreement with Vintage, the Vintage affiliate was to acquire SenDEC before the API transaction closed. API was to assume Vintage's obligations from the first transaction including the duty to make

up to \$14 million in earn-out payments.

Brian Kahn, managing member of Vintage, has become chairman and CEO of API. SenDEC is now an operating subsidiary of API, and Ken Fiske, co-founder of SenDEC, is continuing as its CEO.

New ownership... Charlesbank Capital Partners (Boston and New York), a middle-market private equity firm, has acquired OnCore Manufacturing Services (Springfield, MA), an EMS provider with four plants in the U.S. and one in Mexico. The transaction was funded with equity provided by Charlesbank and existing management as well as with third-party debt....Saugatuck Capital (Wilton, CT), a private equity firm, has sold EMS provider **PPI-Time Zero** (Paterson, NJ) to an investor group led by another private equity firm, Guardian Capital Partners (Philadelphia, PA),

which has acquired a controlling interest in the provider. PPI is an EMS provider of high-reliability aerospace, defense, medical and industrial electronics....Frank and Julia Graham, the founders of EMS provider Chemigraphic (Crawley, UK), have sold their interest in the company to a buyout group led by their sons, Paul and Neil Graham, together with the company's new CEO, Bob Adams. RJD Partners, a private equity firm, has provided funding to support the buyout and the ongoing growth of the business. Paul and Neil Graham, who have overseen day-to-day management of the business in recent years, are assuming the roles of sales director and operations director respectively. Adams brings senior-level management experience from working at various electronics businesses, both large and small, including Thales and EADS.

Divestment... NOTE (Danderyd, Sweden) has reached an agreement to sell its 50% ownership of a plant in Krakow, Poland, to Zibigniew Fidelus, who holds the other 50%. Fidelus is the principal owner of Polish EMS provider Fideltronik. An agreement for continued cooperation had been made.

Deal done... Nortech Systems (Wayzata, MN) has completed its acquisition of Winland Electronics' EMS operation in Mankato, MN (Nov. 2010, p. 6).

Some new programs... Hon Hai Precision Industry (Tucheng City, Taiwan) will build smart phones and tablets for Vizio, a supplier of LCD-TVs, reported *Digitimes*....During the fiscal quarter ended Jan. 1, 2011, Plexus (Neenah, WI) won 24 new manufacturing programs expected to generate about \$130 million in annualized revenue when fully ramped. The company's Engineering Solutions group landed new programs totaling

about \$17 million....Kaman Aerospace has awarded LaBarge (St. Louis, MO) a \$1.6-million contract to provide cockpit wiring harnesses for a model of the SEAHAWK helicopter and a \$1.3-million contract to supply cockpit wiring harnesses for a version of the BLACK HAWK helicopter. Also, LaBarge has secured a \$1.2-million contract from Raytheon Missile Systems to expand the scope of work that LaBarge performs for the Joint Standoff Weapon System to include PCB assembly.

New facilities...Last month, Hon Hai Precision Industry, entered into an agreement with the government of China's Hunan province to establish manufacturing and research centers at two cities in the province - Changsha and Hengyang, reported China's official Xinhua News Agency. The planned sites in the central province of Hunan are consistent with Hon Hai's strategy for inland expansion (see also p. 3)....Scanfil EMS (Sievi, Finland) intends to move its Suzhou, China, operations to a newly purchased 21,000-m² building early this year. ...SVI (Pakkred, Nonthaburi, Thailand) has purchased a former TCL Thomson Electronics facility in Thailand's Pathum Thani province, according to published reports from Thailand. The facility, which will give SVI four plants in Thailand, will take SVI's production space by the end of the year to almost one million ft, three times the current area, reported the Bangkok Post.

Foxconn signals interest in green cars...Wire services reported that Foxconn Technology Group, which is anchored by Hon Hai, and Zhejiang Geely Holding Group, owner of Volvo and parent of a Chinese auto maker, have been in discussions regarding joint development of clean-tech cars.

Foxconn in wireless alliance... SiBEAM (Sunnyvale, CA), provider

of millimeter wave solutions and developer of high-speed wireless communications platforms, has entered into a partnership with Foxconn Technology Group. This cooperation will enable SiBEAM to utilize Foxconn's product testing and manufacturing strength to access new customers for its technology. The two will work together to find new opportunities to seed 60GHz-based WirelessHD technology into Foxconn's existing customer base.

Some financial news...Based on monthly revenue reports made to the Taiwan Stock Exchange, Hon Hai's non-consolidated revenue for 2010 totaled NT\$2.31 trillion (\$79.7 billion at current exchange rates), up 62.8% year over year in NT\$. Also, through an affiliate, Hon Hai Group has invested \$15 million in Burrage Capital Healthcare Offshore Fund II. According to Dow Jones, Hon Hai set up the fund to make healthcare and biotechnology investments....Nam Tai Electronics' board of directors has decided to resume the payment of quarterly dividends in 2011. The Shenzhen, China-based provider had stopped paying dividends in 2009 and 2010....Nortech Systems has amended its financing agreement with Wells Fargo Bank and its Business Credit operating division. This change will provide Nortech with a \$13.5 million line of credit through May 31, 2013, a new \$475,000 equipment term loan tied to equipment purchased in the acquisition of Winland Electronics' EMS operation (see first column), and a new term loan of up to \$1.0 million for fiscal 2011 capital expenditures....Suntron (Phoenix, AZ) has obtained an extension of its existing credit facility with the Asset Based Finance division of U.S. Bank. The new, multiyear credit facility is larger than the one it is replacing, and its structure is more favorable, Suntron reported.

People on the move...Jonathan Hoak will join Flextronics (Singapore) as general counsel effective Feb. 1. Hoak served as senior VP and general counsel at NCR for 13 years. Most recently, he held the position of VP and chief ethics and compliance officer at HP....Elcoteq (Luxembourg) has appointed Markus Skrabb senior VP, corporate legal affairs as of Feb. 1. He joins the company from Finland's Glaston, a maker of glass processing equipment....Kitron (Billingstad, Norway) has made Jan Liholt managing director of Kitron Inc., a wholly owned U.S. subsidiary in Johnstown, PA (Oct. 2010, p. 2-3; June, p. 7). For the past four years, he has been business development director for the Kitron Group. Also, Thomas Löfgren, managing director for Kitron Microelectronics and GM for Kitron Sweden, has assumed the additional role of managing director of Kitron's Karlskoga, Sweden, operation. The previous managing director resigned. In a third change, Kitron has named Roland Lutz managing director for its operation in Germany. His predecessor remains with the company. Recently, Kitron's board elected Asa-Matti Lyytinen, a new member, as chairman. Lyytinen is also on the board of Scanfil plc, which holds a 32.96% stake in Kitron and is the parent of another provider, Scanfil EMS.

A second new member of Kitron's board is Harri Takanen, president of Scanfil plc....Last month, PartnerTech (Vellinge, Sweden) announced that Jonas Arkestad, its CFO, will be leaving the company to take a similar position with a group of companies in the industrial construction sector....Martin Kingdon has joined ESCATEC Sdn Bhd (Penang, Malaysia) as business development director. He will be based in Heerbrugg, Switzerland. Kingdon has taken over from Robert Sawyer, now VP, business development at TES Electronic Solutions....Qual-Pro (Gardena, CA) has appointed Bob Miller as VP of sales. Most recently, he was VP of North American sales and marketing at Team Precision, a Thailand-based EMS provider, where Qual-Pro's COO, Richard Fitzgerald, at one time served as CEO. During Miller's career, he also worked for Arrow Electronics as a GM, CTS as VP of sales and marketing, and Future Electronics in various roles....At Nam Tai Electronics, chairman M.K. Koo recently resumed the position of CFO after his replacement, Joseph Li, was compelled to resign because of his wife's health.

Business closure...Assets of EMS provider **Qualcon** (Flowery Branch, GA) were scheduled to be auctioned

off last month, according to a posting on the website of auctioneer **The Branford Group**.

Plant closure...Flextronics will shutter its plant in Billingstad, Norway, local newspaper *Budstikka* reported online.

Correction...In last month's edition on page 5, column labels for outsourcing revenue in Table 1B were in error. Outsourcing revenue columns were incorrectly labeled as a series from 2008 to 2013. The labels should have ranged from 2009 to 2014.

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Manufacturing Market Insider is a monthly newsletter published by JBT Communications, 43 Summit Ridge, Burlington, VT 05401-3911. Phone (802) 651-9334. Fax (802) 651-9336. © Copyright 2011 by JBT Communications™. ISSN 1072-8651

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