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Top 50 Crosses \$150-Billion Mark

Adjusted 2008 growth rate in single digits

MMI has released the 2008 results of its annual survey to find the 50 largest EMS providers worldwide. Together, MMI Top 50 providers racked up 2008 sales of \$158.5 billion, a new all-time high and an indication of growth. But how closely does growth based on Top 50 data reflect what happened last year in the industry at large? The answer is not straightforward, and it is complicated by two factors.

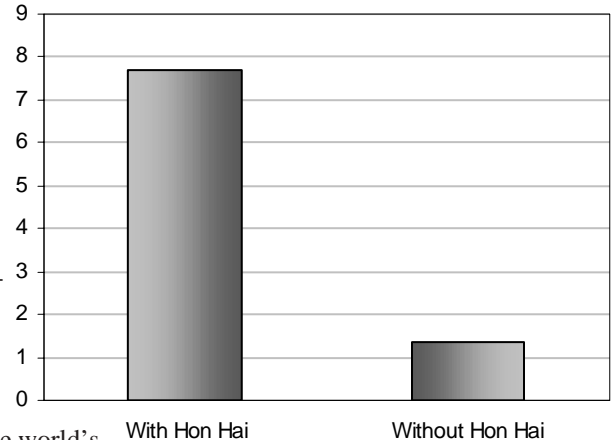
Strictly speaking, Top 50 growth last year amounted to a somewhat surprising 14.6%. With the U.S. in recession during 2008 and a global downturn underway in the fourth quarter, double-digit growth seems to defy common sense. That's the nominal growth rate you would obtain by comparing the total of the Top 50's reported sales for 2008 (\$158.5 billion) with the sum of its stated revenues for 2007 (\$138.3 billion). However, as has been written here before, reported 2007 results for **Flextronics** do not include 2007 sales of **Solectron**, which Flextronics acquired on Oct. 1, 2007. When Solectron's 2007 sales, estimated at \$8.89 billion, are added in, Top 50 growth drops to 7.7%.

Based on this adjusted 7.7% growth rate, a case could be made that the industry's growth rate for 2008 was close to that number since the Top 50 repre-

sents well over 80% of industry revenue. A growth rate of 7.7% or so supports the idea that the EMS industry can increase sales even during a recessionary period. Still, in some quarters 7.7% would seem high for a period fraught with bad economic news. Nevertheless, it's a real number as opposed to an estimate.

Top 50 growth can be sliced another way. **Hon Hai Precision Industry**, the world's largest EMS provider, dwarfs other companies in the industry. Hon Hai accounted for 39% of Top 50 sales and by virtue of its size can influence Top 50 growth via the so-called Hon Hai effect. The Hon Hai effect was in evidence last year. Excluding Hon Hai, Top 50 growth adjusted for Solectron's 2007 sales would have been 1.4% (Chart 1). Hon Hai, whose consolidated sales grew by 19% in U.S. dollars, was responsible for adding

Chart 1: Top 50 % Adjusted Growth 2008



about 6.3 percentage points to the Top 50 growth rate in 2008.

MMI compiles the Top 50 by ranking companies according to their calendar-year sales in U.S. dollars. See the tables on pages 2-4. Making the cut for the 2008 edition of the Top 50 was easier than qualifying for the 2007 group. It took a minimum of \$209 million in sales to put a provider in the 2008 Top 50. The 2007 cutoff point

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MMI Top 50

The MMI Top 50 EMS Providers in 2008

Organization	Head-quarters	Sales calendar 2008 (millions)	Rank by 2008 sales	Sales calendar 2007 (millions)	Growth '07-'08 in US\$ (%)	No. of people	No. of plants	Total facility sq. ft.	Percent space in low-cost regions	No. SMT lines	No. of customers/ notable customers
Hon Hai Precision Industry (Foxconn)	Tucheng City, Taiwan	\$61,879	1	\$51,824	19	~600,000 (estimated)	not avail.	not avail.	not avail.	not avail.	Dell, Apple, HP, Motorola, Cisco, Sony Ericsson, Dot Hill
Flextronics	Singapore	\$33,141	2	\$24,460	35	>162,000 ¹	not avail.	~27.0 M ¹	~74% ¹	not avail.	Casio, Cisco, Dell, Ericsson, HP, Kodak, Microsoft, Motorola, Nortel, Sony Ericsson, Sun, Xerox
Jabil Circuit	St. Petersburg, FL	\$12,794 (12/07 to 11/08)	3	\$12,435	3	~61,000 as of 10/08	~55 sites	21.3 M	~75+	not avail.	>100: Cisco, HP, Nokia Siemens Networks, Day4 Energy, Zebra Technologies
Celestica	Toronto, Canada	\$7,678	4	\$8,070	-5	~38,000	>30	8.91 M	71	not avail.	>100: Alcatel-Lucent, Avaya, Cisco, EMC, HP, IBM, Microsoft, NEC, Panasonic, Sun
Sanmina-SCI	San Jose, CA	\$6,844	5	\$6,993	-2	~41,050 (estimated)	not avail.	11.18 M mfg. ²	55 ²	not avail.	Nortel, Nujira, Parata Systems, Neah Power, Ceravision, Schmid Telecom, JDSU
Elcoteq	Luxembourg	\$5,070	6	\$5,543	-9	~18,800	12	~2.37 M	100 (mfg.)	not avail.	EADS, Ericsson, Funai, Huawei, Nokia, Nokia Siemens Networks, Philips, RIM, Sony Ericsson, Thomson
New Kinpo Group ³	Taipei, Taiwan	\$4,700	7	\$3,600	31	25,000	18	not avail.	not avail.	140	HP, Thomson, Pace, Seagate, WD, Sony, Casio, Motorola, ADB
Venture	Singapore	\$2,679	8	\$2,561	5	14,000	not avail.	not avail.	not avail.	not avail.	145: Agilent, HP, IBM, Intermec, NCR
Benchmark Electronics	Angleton, TX	\$2,590	9	\$2,916	-11	10,500	16	2.91 M	~40	~130	~100: Emerson, IBM, Medtronic, Sun
Universal Scientific Industrial (USI)	Nantou, Taiwan	\$2,062	10	\$1,984	4	9,040	6	2.62 M	57	118	~100 (EMS)
Plexus	Neenah, WI	\$1,840	11	\$1,624	13	7,963	17	2.2 M	47	113	153: Juniper, GE, Ixia, Games Warehouse
Zollner Elektronik	Zandt, Germany	~\$1,050	12	\$901	17	7,171	14	2.64 M	65	39	500
SIIX	Osaka, Japan	\$897	13	\$813	10	5,762	4 ⁴	525 K ⁴	not avail.	79	200
Beyonics Technology	Singapore	\$877	14	\$463	89	not avail.	7	not avail.	90	not avail.	>30: Seagate, Panasonic
UMC Electronics	Saitama, Japan	\$776	15	\$714	9	6,800	6	864 K	not avail.	107	
Kimball Electronics Group	Jasper, IN	\$722	16	\$706	2	3,409	8	1.04 M	52	36	>20
Elite Industrial Holdings	Hong Kong	\$650	17	\$700 ⁵	-7	not avail.	not avail.	not avail.	not avail.	not avail.	
Nam Tai Electronics	Macao	\$623	18	\$781	-20	~7,100	3	1.06 M	100	37	>100: Wuxi Sharp Electronic Components, Sharp, Epson Imaging Device, GN Netcom, Sony, Sony Ericsson
AsteelFlash Group	Paris, France	\$609	19	\$587	4	4,780	29	1.3 M	43	50	212
Fabrinet	Cayman Islands	\$543	20	\$488	11	5,200	6	1.05 M	96	20	20: JDSU, Finisar, Hitachi (Opnext), Coherent, Spectra Physics, Bookham, Avanex, Sensata, Valeo, Intel, Infinera

Note: Unless otherwise indicated, data represents 2008 year end. ¹Per Form 10-K dated Mar. 31, 2008. ²As of September 2008. ³Sales and customers refer to Kinpo Electronics plus Cal-Comp Electronics. Other data correspond to the three companies in the New Kinpo Group including Acbel, a power supply company. ⁴Excludes facilities of SIIX affiliates. ⁵Original 2007 figure provided by the company was lower.

The MMI Top 50 EMS Providers in 2008

Organization	Head-quarters	Sales calendar 2008 (millions)	Rank by 2008 sales	Sales calendar 2007 (millions)	Rank by 2007 sales	Sales Growth '07-'08 in US\$ (%)	No. of people	No. of plants	Total facility sq. ft.	Percent space in low-cost regions	No. SMT lines	No. of customers/ notable customers
Orient Semiconductor Electronics	Kaoh-siung, Taiwan	\$538	21	26	\$424	27	4,600	5	491 K	93	66	38
Alco Electronics	Hong Kong	\$510	22	23	\$442	15	8,000	6	2.6 M	100	121	
Enics	Baden, Switzerland	\$501	23	22	\$449	12	2,600	9	715 K	35	not avail.	ABB, Atlas Copco, Bombardier, Danfoss, Gambro, Honeywell, KONE, Landis+Gyr, Leica, Roche Diagnostics, Schneider Electric, Varian Medical
3CEMS	Guangzhou, China	\$477	24	15	\$557	-14	8,441	6	1.95 M	not avail.	34	249: Dell, HP, Asustek, Nintendo, Flextronics, Pioneer, Delta, Foxconn, Canon, Sony, Honeywell, Samsung
VIDEOTON Holding	Székesfehérvár, Hungary	\$470	25	21	\$450	4	6,700	11 (9 active)	5.9 M	100	27	50+: Braun, Philips, Sagem, 3M, Bosch, Continental, Denso, Telent, Sensata, Suzuki, Valeo, Visteon, Actaris, Alstom, Amtek, Carrier, Eaton, Sensus, Siemens, GE, Hager, Delta, HP, NCR, Sanyo
TT electronics	Weybridge, UK	\$457	26	25	\$425	8	2,420	9	868 K	27	22	153
Integrated Microelectronics, Inc.	Laguna, Philippines	\$441	27	27	\$422	5	19,612	12	2 M	-99	120	>100
Wong's Electronics	Hong Kong	\$413	28	24	\$426	-3	5,169	2	775 K	100	51	34
Kitron	Billingstad, Norway	\$404*	29	42-43	\$331*	22	1,400	not avail.	not avail.	not avail.	not avail.	ABB Robotics, Danaher Motion, GE Vingmed, Kongsberg, Laerdal
CTS Electronics Manufacturing Solutions	Bloomington, IL	\$399	30	28	\$406	-2	not avail.	8	~500 K	34	not avail.	>120
Creation Technologies	Burnaby, BC, Canada	\$385	31	35	\$309	25	~2,400	11	566 K	6	29	~190
PartnerTech	Malmö, Sweden	\$380	32-34	29-30	\$391	-3	1,596	11	800 K	10	9	>200
Surface Mount Technology (Holdings) Limited	Hong Kong	\$380	32-34	29-30	\$391	-3	>8,000	4	~1.2 M	100	152	Sony, Clarion, Daikin, Murata, Konica Minolta, Stanley, Pricer, Samsung, LG, Magneti Marelli, Vasco, Mitsuba, Emerson, Bosch, Lear, Excelsys, Microheat, Zensys, Crouzet, Radioscape, PG Drive
WKK Technology	Hong Kong	\$380	32-34	32	\$380	flat	5,500	1	~1.2 M	100	32	~26
Neways Electronics International	Son, The Netherlands	\$357	35	31	\$385	-7	1,946	12	not avail.	40	19	~600: ASML, FEI, Philips
Scanfil	Sievi, Finland	\$322	36	36	\$308	5	2,068	7	1.18 M	~65	not avail.	Nokia Siemens Networks, Alcatel-Lucent, Ericsson, UTStarcom, ABB, KONE, Metso, Vacon, Vaisala, Teleste
Hana Micro-electronics	Bangkok, Thailand	\$303	37	40	\$303	flat	~6,500	3	600 K	100	~65	~125 (EMS)

Note: Unless otherwise indicated, data represents 2008 year end. *Includes microelectronics business that was not counted for 2007.

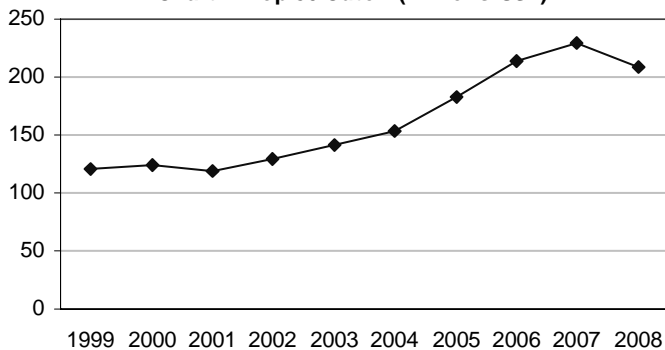
MMI Top 50

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LaBarge	St. Louis, MO	\$290	38	49	\$251	16	1,605	11	629 K	0	11	144: Owens-Illinois, Schlumberger, Raytheon, Northrop Grumman, BAE, Lockheed Martin, Smiths Medical, Cardinal Health
EPIQ	Tessenderlo, Belgium	\$288	39	44	\$265	9	3,085	5	350 K	70	22	35
EPIC Technologies	Norwalk, OH	\$283	40	42-43	\$275	3	2,375	4	295 K	68	19	23
EN ElectronicNetwork	Limburg, Germany	\$274	41	38	\$304	-10	800	6	400 K	0	11	>200
BreconRidge	Kanata, Ontario, Canada	\$270	42	46	\$250	8	1,453	3	600 K	33	14	35
VTech Communications	Hong Kong	\$268	43-44	50	\$229	17	3,500	1	450 K	100	12	65
DRS Technologies	Parsippany, NJ	\$268	43-44	45	\$261	3	1,550	5	477 K	0	3	75: Lockheed Martin, BAE, GDC4S, ITT, Boeing, SAIC, Raytheon, U.S. Government
Topscom Technology	Hong Kong	\$265	45	new	~\$185	~43	4,100	2	646 K mfg.	100	43	~128: Cisco, Sony, Siemens
NOTE	Danderyd, Sweden	\$263	46	47	\$258	2	1,201	14	~624 K	~40	26	~200: Powerwave, Ericsson Network Technologies, Dresser Wayne, Flir Systems, SWE-DISH
V.S. Industry	Senai, Malaysia	\$254	47	33	\$344	-26	3,008	8	1.15 M	100	35	53: Dyson, Actaris, Valeo Thermal Systems JPN, Panasonic, Samsung
SMTC	Markham, Ontario, Canada	\$242	48	48	\$256	-6	1,340	5	497 K	43	18	29: Harris, Ingenico, MEI, Danaher Gilbarco, EMC, Bloomberg, Topcon
Sparton	Jackson, MI	\$225	49	new	\$213	6	~1,000 (estimated)	6	not avail.	not avail.	not avail.	U.S. Navy
Connect Systems International	Kampenhout, Belgium	\$209	50	41	\$246	-15	1,850	7	560 K	43	18	600

Note: Unless otherwise indicated, data represents 2008 year end.

was \$20 million higher at \$229 million. Indeed, 2008 is the first year in which the cutoff has not increased since 2001 (Chart 2).

Chart 2: Top 50 Cutoff (Millions USD)



Six participants in the Top 50 survey did not make the cutoff. They appear in a table on page 5.

To achieve a top-10 rank, a provider needed sales of \$2.06 billion, up slightly from the previous year's minimum of \$1.98 billion. Sales of the top-10 providers totaled \$139.4 billion, or 88% of Top 50 revenue, so it is not surprising that adjusted

growth of the top 10 came to 7.9%, nearly the same as the Top 50's adjusted rate of 7.7%.

Within the top 10, Hon Hai, Flextronics and Jabil Circuit remained in first, second and third place respectively. Celestica took over the fourth slot from Sanmina-SCI, which moved to fifth. Elcoteq and New Kinpo Group continued in sixth and seventh position respectively. Venture and Benchmark Electronics exchanged places, with Venture moving up to eighth, followed by Benchmark at ninth. Universal Scientific Industrial rounded out the top 10, as it did the

Other Participants in the Top 50 Survey		
Organization	Headquarters	Sales 2008 (millions)
KeyTronicEMS	Spokane Valley, WA	\$202
MC Assembly	Palm Bay, FL	\$184
EOLANE	Le Fresne sur Loire, France	\$181
ESCATEC Group	Penang, Malaysia	\$178
Simclar, (Group), Ltd.	Dunfermline, Scotland	\$166
Kong Yue Electronics & Information Industry Ltd.	Jiangmen, China	\$84

previous year.

The company that achieved the greatest advance in the standings from the previous year was **AsteelFlash Group**. The France-based company went from 34th place in the 2007 Top 50 to 19th in the 2008 list. This upward move was made possible by ASTEEL's 2008 acquisition of **Flash Electronics**.

Two providers, both Asia-based, joined the Top 50 for the first time. They are **UMC Electronics** (15th) and **Topscom Technology** (45th). In addition, U.S.-based **Sparton** (49th) returned to the Top 50 after missing the cutoff for three years.

As in past years, Top 50 data yielded two productivity ratios. Employee counts for 47 companies totaled 1.14 million people, of which Hon Hai's work force represented an estimated 53%. Revenue per employee for these 47 providers works out to \$137,200. But without the effect of Hon Hai's contribution, revenue per employee increases to \$175,000. That's 24% higher than the 2007 ratio of \$141,500, which was based on 48 companies and excluded Hon Hai.

The other ratio, revenue per square foot, was calculated from a group of 41 providers that supplied facility space data. Their facilities on average generated \$753 of revenue per square foot. This 2008 ratio is 7% above the

2007 average of \$704, which was derived from 44 providers. Note that 2008 ratios are approximate: they incorporate some data that are estimates and other figures that represent a fiscal year other than calendar 2008.

Methodology. Sales reported in currencies other than U.S. dollars were converted into U.S. dollars by using an average exchange rate for the year in question. An average exchange rate for 2008 was applied to 2008 sales, and a 2007 average rate was used for 2007 sales. In cases where the U.S. dollar weakened against other currencies in 2008, this method introduced some growth inflation for business that was not transacted in U.S. dollars. Nevertheless, this method wins on ranking accuracy and year-to-year consistency.

Where possible, sales of non-EMS businesses were excluded. In some instances where EMS providers also do ODM work, ODM sales were mixed into the reported revenue.

World Markets

A Low-Cost Location Offered by Europe-Based Providers

History tells us that it is largest EMS providers whose presence puts a low-cost manufacturing center on the map. But there is a low-cost location whose development to date has progressed without any help from the biggest EMS players. Maybe that's why Tunisia has not achieved industry-wide notoriety as a low-cost destination for outsourced products sold in Europe. Tunisia may not have the visibility of Romania within the EMS industry, but some say Tunisia offers lower labor costs than this Eastern European rival. What's more, Tunisia possesses the logistical advantage of being a ferry-ride away from the French port of Marseille.

Tunisia has become a low-cost option for clients of **Riverwood Solu-**

tions (Menlo Park, CA), a managed services provider that has evaluated EMS facilities there on behalf of OEMs and other customers. The country was somewhat of an eye-opener for Riverwood. "We were a little bit surprised that it hadn't seriously made our radar screen because for certain product types it's a really good solution especially with some of the price inflation you've seen in wages and facilities cost and everything else in Eastern Europe," says Ron Keith, COO of Riverwood Solutions.

One way to compare costs is to look at the price of hiring skilled and professional labor. Imagine you're setting up a substantial operation in or near Tunisia's largest city, Tunis. "I think you could draw good engineering talent and good operating talent for a cost that's 25 percent less than Romania and probably 50 to 60 percent less than a Hungary or a Poland," says Keith. But he points out that Tunisia's workforce of about 3.2 million is not unlimited.

EMS provider **AsteelFlash Group** (Paris, France), which operates two plants in Tunisia, at one time also had an activity in Romania. The group pulled out of Romania because labor costs and productivity favored Tunisia. In Romania's urban areas where providers must locate, there is a lot of job hopping, which drives up labor costs, says Gilles Benhamou, CEO of AsteelFlash Group. Labor rates are more stable in Tunisia, he reports. The relative stability of labor rates in Tunisia is "why now Tunisia is really competitive even with China," says Benhamou.

Of the three Europe-based providers that *MMI* has identified as having facilities in Tunisia, AsteelFlash has the largest presence and the longest history there. Together, the company's two plants in Tunisia employ 1,000 people and contain 161,000 ft² of facility space. AsteelFlash has maintained a subsidiary in Tunisia for nine

years, and Benhamou's experience there goes back 15 years through a former company he owned.

LACROIX Electronique (Vern sur Seiche, France) and **Zollner** (Zandt, Germany) also operate in Tunisia. The former offers 7,500 m² of manufacturing space in Zriba, and the latter's site in Beja contains a production area of 661 m², according to company websites.

AsteelFlash's Tunis plant does high-volume work, while the facility in Fouchana, 15 km from Tunis, specializes in low-volume, high-mix products. In Tunisia, AsteelFlash manufactures, for example, metering products, lamps including those with LEDs, equipment for aeronautics, energy products, railway products and medical PCBs.

"I think the product types that work fairly well for Tunisia are consumer products or relatively simple types of enterprise products, various other products or just populated PCBs that require either by design or by nature of their volume and mix a reasonable labor component," says Keith of Riverwood Solutions. But there are products that Riverwood would not put in Tunisia. "The much more sophisticated enterprise products and more sophisticated telecommunications types of products don't make a whole lot of sense," he says.

Tunisia's proximity to Western Europe cuts time in transit for both products and people. From a Tunisia factory, AsteelFlash will guarantee four-day delivery to customer sites in Europe, says Benhamou, and typically products will spend three days or less in transit. Tunisia is also two and half hours from Paris by air. Customer personnel can make frequent trips to Tunisia without busting budgets or killing a week. This proximity comes in handy for the customer when a process needs to be qualified or a quality issue requires attention. "Some customers send people once a month, and not

necessarily the same people," says Benhamou.

In addition, the French language spoken in Tunisia becomes an asset for customers who rely on French for their communications and documentation.

But the ideal low-cost location has yet to appear, and Tunisia is not without at least one drawback – its supply base. Still, Tunisia's supply base is improving for plastics, metal parts, cables and coiling winding as more and more suppliers come in. Note that AsteelFlash has an advantage when it comes to plastics because the provider has integrated plastic molding within its Tunisia operations.

Nevertheless, Tunisia lacks the support of a local supply base, at least for now, in two areas: PCBs and components. Benhamou explains that the Tunisia market is not big enough to justify investment in a high-end facility for PCB fabrication.

Tunisia's supply chain may well determine the extent to which Tunisia develops as a center for EMS. According to Keith, the catalyst that results in the development of a low-cost location "is always the total supply chain cost." He believes that Tunisia has the necessary prerequisites – basic infrastructure, proximity, and the capacity to produce the required talent. "In my mind, Tunisia has everything it needs. It just needs a major supply chain catalyst," says Keith.

Riverwood's CEO, Matt Ryan, doesn't see providers entering Tunisia in the short term, unless there is investment by a company that doesn't have a footprint in Central/Eastern Europe. "Maybe one of the Taiwanese guys drops in," says Ryan. But as for other big players, "in this environment there's just no way in my opinion they would go make a play there right now, based on their extensive existing infrastructure in Central and Eastern Europe," he notes. Expanding on this point, Keith adds, "Tunisia operations would in the best case be competitive

with and the worst case cannibalistic to those legacy operations."

Still, the global downturn may prove a good thing for existing EMS operations in Tunisia. Keith says he wouldn't be surprised to see pricing pressure from customers cause providers to move some production from their Western Europe plants to their facilities in Tunisia. "The incumbent guys who are looking at incremental costs I think are going to grow their operations in Tunisia much faster than they would have if the economy stayed good," he says.

A case can be made that the current environment will also make Tunisia more attractive for new business. If you choose the right type of product consumed in Western Europe and model the total cost of sourcing it from various low-cost locations, "I think a facile analysis on a lot of products is going to show that Tunisia is pretty compelling," says Keith. "And right now when people are just getting hammered on costs," he believes some of the more thoughtful OEMs will look at possibly placing some work with the existing providers in Tunisia. Or maybe they'll just consider "whispering in the ears of their current EMS provider, 'Hey, have you guys thought about this,'" adds Keith.

Tunisia may also benefit from European OEMs looking to outsource production from their captive operations. "They may well start to consider Tunisia as being an area that can meet their cost needs and not have it as competitive for resources as it is in Central and Eastern Europe," says Ryan.

In spite of the global downturn, AsteelFlash's Q1 revenue from Tunisia should increase about 30% year over year, according to Benhamou. "That means we will have a growth this year more than 30% in Tunisia," he says.

Since Tunisia is a Muslim state in North Africa, some companies in the

West might have concerns about its stability vis-à-vis radical Islam. But Benhamou points out, "It's a very stable region...and nobody knows."

More people are likely to learn about Tunisia as its cost and logistical advantages become apparent.

News

Foxconn in Green Partnerships with IBM and HP

Foxconn Technology Group, anchored by **Hon Hai Precision Industry** (Tucheng City, Taiwan), has teamed up with **IBM** in a carbon emissions project and with **HP** for recycling in China.

IBM, Foxconn and two other partners have entered into a global agreement to jointly offer GreenCert, an enterprise content management system that can calculate and certify the amount of greenhouse gas emissions produced by a facility. Foxconn will be responsible for GreenCert customization, deployment and service in the Asia-Pacific region, according to a filing on the Taiwan Stock Exchange. This is the first time that GreenCert technology will be available in the region.

GreenCert also provides instant data analysis and test reports that allow customers to use it as a base for carbon trading.

At Kaohsiung Software Park, Foxconn will recruit several hundred software engineers to help make the GreenCert technology system meet the needs of different Asian industries.

As for the other green effort, HP and Foxconn announced this month that they have joined forces to expand HP's hardware collection and recycling program in China. This effort will draw upon Foxconn's logistics and manufacturing expertise and infrastructure. Note that the two companies worked together last year on recycling,

as five Foxconn sites participated in an extension of the HP recycling program to include consumers and small businesses in China, according to documentation obtained by *MMI*.

Foxconn to manufacture for HP in Turkey

Foxconn and HP have extended their relationship to Turkey, where Foxconn will invest about \$60 million in a new factory to be built in the country's Çorlu region. The factory will manufacture desktop computers for HP, and production is scheduled to begin in March 2010.

Meanwhile, Foxconn has started production for **Dell** desktop computers and servers at its new complex in San Jerónimo, Mexico, the *El Paso Times* reported, (see also Aug. 2008, p. 6).

Biotech and retail thrusts

Through subsidiaries, Hon Hai, the Foxconn group's anchor company, has invested a total of NT\$100 million (\$3.0 million) for an 8.6% stake in Taiwan-based **Bionet**, a cell-tissue banking and cell therapy company. Hon Hai stated that the purpose of this investment is to enter the biomedical engineering field. In addition, Hon Hai and Bionet are investing in a new joint venture aimed at next-generation health care, according to two published reports from Taiwan.

Foxconn Technology Group also made a move in China's retail space. Foxconn and Germany's **Metro Group** have signed an MOU to form a new company for the purpose of building a megastore platform for the consumer electronics market in China. This alliance with Metro will enable Foxconn to provide its "strategic partner customers" with "more complete and efficient end-to-end services," according to a Hon Hai statement filed with the Taiwan Stock Exchange. Hon Hai described the consumer electronics channel of Metro Group as the market leader in Europe.

Enics Adds SWECO Unit

Enics (Baden, Switzerland) has acquired **SWECO Industry's** Industrial Electronics Service Unit in Vantaa, Finland. The unit focuses on development of hardware, software, mechanics and integrated circuit applications for industrial customers. A total of 38 professional specialists staff the unit.

A year and a half ago, Enics began an effort to enhance the competitiveness of its Finnish operations. The target is to build strong and extensive services for the pre- and post-manufacturing phases in line with the company's strategy of offering services that span the product life cycle.

"We see good opportunities in the current market. Strong know-how in highly value-added services is the key to success. We are implementing our strategy by building a strong engineering service capability in Finland," stated Reijo Itkonen, president and CEO of Enics. The company has already implemented this model in Sweden and Switzerland.

SWECO Industry is part of the SWECO Group, a consulting engineering company in the Nordic countries.

Alliance... EMS provider **Distron** (Attleboro Falls, MA) has entered into an alliance with **BNS Solutions** (Walpole, MA), a contract design firm. With this partnership, Distron can offer electronic design and PCB layout services through BNS.

Joint venture... **Genesis Plastics and Engineering** (Scottsburg, IN), a plastics and tool supplier, and **Key Electronics** (Jeffersonville, IN), an EMS provider, have formed **GenKey Group** to offer single-source solutions to OEMs. GenKey consists of three manufacturing facilities with over 240,000 ft² in Southern Indiana and combined sales of about \$50 million.

New business... Hon Hai has begun

News

producing netbooks for some Chinese brands, reported *Digitimes*, citing a Chinese-language newspaper. . . . Under a three-year contract, **CTS Electronics Manufacturing Solutions**, a unit of CTS (Elkhart, IN), will become the prime supplier of manufactured products for **Barron McCann Technology** (Letchworth, UK), which specializes in payment systems and information security. Revenues are expected to reach about \$15 million over the contract period. . . . **Tour & Andersson** has chosen **NOTE** (Danderyd, Sweden) to develop and produce an instrument for balancing waterborne heating and cooling systems. Also, NOTE will produce livestock tracking equipment for **Telespor** of Norway. . . . **Sparton** (Jackson, MI) has secured a contract to manufacture sonobuoys for the U.S. Navy. The award is valued at about \$34.1 million. . . . **CellLynx Group** (Mission Viejo, CA), a developer of technology for cell-phone signal amplification, has signed a supply chain management contract with **SiiX Logistics** (Laguna, Philippines), a subsidiary of Japan's SiiX, and a manufacturing agreement with **Pacific Spectrum Technology Solutions** (Laguna, Philippines).

Industry surveys... A March survey of senior operations and supply chain

professionals found that 50% of their companies plan to move some production to another EMS provider in the next two quarters. **Riverwood Solutions** (Menlo Park, CA), a managed services provider, conducted the survey, which covered 75 OEMs ranging from \$1 million in annual sales to over \$100 billion. Among the survey's other findings, 31% of OEMs report being very concerned that their EMS provider will be unable to meet their delivery requirements in the coming year because of financial difficulty. Another result shows that 53% of companies plan to geographically relocate at least some of their production in the next two quarters. . . . According to the results of a survey conducted by **IPC – Association Connecting Electronics Industries** (Bannockburn, IL), 42% of responding companies cited changes in their customers' sourcing patterns from Asia back to North America or Europe in the past two years. Fifty companies responded to the survey, which polled executives and marketing professionals at EMS, PCB and supplier companies during November 2008. The issue that was cited most often as the primary driver of this trend was quality concerns.

Judicial managers appointed...
Tam Chee Chong and Keoy Soo Earn,

both partners of **Deloitte & Touche**, have been appointed judicial managers of **Jurong Technologies** (Singapore) and its principal subsidiary. Jurong engages in both ODM and EMS work.

More restructuring... **Flextronics** (Singapore) expects to recognize between \$220 million and \$250 million in pretax restructuring and impairment costs in its fiscal years 2009 and 2010. About \$190 million to \$210 million of these charges are expected to be recorded in fiscal 2009 ending March 31.

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