

# Manufacturing Market

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### Top 50 Down by 4.4% in 2002

Reflecting an anemic EMS market, the *MMI* Top 50™ EMS providers in 2002 showed an overall sales decline of 4.4% for the year. Although this is the second year of slippage for the Top 50, the dip could have been worse. As reported here last month, ten large providers, all publicly listed in the US, combined for an 11% sales drop in 2002. Not only that, 25 companies out of the Top 50 exhibited either no growth or a decline last year. Still, 13 Top 50 companies enjoyed growth over 20%, and these, including seven Asia-based providers, helped to bring the overall shrinkage below 5%.

Together, the Top 50 providers accounted for sales for \$73.5 billion, a figure based on real data from 48 companies plus two estimates. This total accounts for a large share of the EMS market. By averaging estimates from three market research firms, one can arrive at a figure of about \$93 billion for the 2002 EMS market (Dec. '02, p. 2). Based on a \$93-billion market, the Top 50 claimed a 79% share. Clearly, the Top 50 can be viewed as a proxy for the market.

In 2002, **Flextronics** took over from **Solectron** as the Top 50's number-one ranked provider based on sales (see tables, p. 2-4). In the process, **Solectron** moved to second position. **Sammina-SCI** and **Celestica** held their third and fourth spots respectively from the previous year. With an

estimated 65% increase in sales, **Foxconn** slipped into fifth position. This stealthy giant from Asia, whose official name is **Hon Hai Precision Industry Co.**, was added to the Top 50 for 2001. Although **Foxconn** also sells cables, connectors and chassis directly to nonEMS customers, these businesses, which could be not segregated this year, will not affect **Foxconn**'s rank as an EMS provider. Of course, the number-six provider, **Jabil Circuit**, still deserves a place within the top tier.

Within the top 10, Singapore's **Venture** made the biggest move, rising from 14th in 2001 to 9th in 2002. To make the top 10 in 2002, it took sales of \$920 million, compared with \$1.2 billion in 2001 and an even larger \$1.7 billion in 2000. Here's another way to look at it. In 2001, there were 12 billion-dollar companies; last year the number shrank to nine.

In 2002, it was a little harder to qualify for the Top 50. The minimum sales level rose to \$130 million in

2002 versus \$119 million in 2001.

Eight new members joined the 2002 *MMI* Top 50. Four of them — **EPIQ**, **Scanfil**, **Simclar Group** and **Zollner Group** — come from Europe. Asia produced two new members, **COB Technology** and **Surface Mount Technology (Holdings) Ltd.** The final two additions, **BreconRidge Manufacturing Solutions** and the **Electronics Group of Sypris Solutions**, are based in North America.

Of the eight companies that came off the list, four missed the cut, two went out of business, one repositioned itself outside of EMS, and one was unable to respond in time.

Using data from the Top 50 listings, one can compute efficiency ratios. From the 45 companies that reported the total square footage of their facilities, *MMI* calculated an average revenue per square foot of \$525. With many providers operating well below efficient utilization of their

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# MMI Top 50

The MMI Top 50 List of the Largest EMS Providers in 2002

Organization	Headquarters	Sales calendar 2002 (millions)	Rank by sales	Sales calendar 2001 (millions)	Sales '01-'02 growth (%)	Box build %	No. of people	No. of plants	Total facility sq. ft.	Percent low-cost regions	No. SMT lines	No. of customers/ notable customers
Flextronics	Singapore	\$13,615.4	1	\$12,922.9	5	not avail.	~95,000	~90	17.9 M	not avail.	~300	Alcatel, Ericsson, HP, Microsoft, Motorola, Nokia, Palm, Philips, Siemens, Sony Ericsson, Xerox
Soletron	Milpitas, CA	\$12,260.6 (12/01-11/02)	2	\$16,149.0	-24	~35 FY	~75,400	>130	~14.5 M	~50	616	>200: HP/Compaq, Cisco, Nortel, Ericsson, Sun, IBM, Apple, Sony, Wavecom
Sanmina-SCI	San Jose, CA	\$10,168.1	3	\$10,811.6	-6	not avail.	46,030*	~100*	~21.0 M**	not avail.	not avail.	IBM, HP, Alcatel, Dell, EchoStar, Ericsson, McData, Nokia, Nortel, StorageTek
Celestica	Toronto, Canada	\$8,271.6	4	\$10,004.4	-17	35	>40,000	>40	~9.0 M	~55	not avail.	>100: Avaya, Cisco, Dell, EMC, HP, IBM, Lucent, Motorola, NEC, Sun
Foxconn (Hon Hai)	Taiwan	\$6,900 (estim.)	5	\$4,173	65 (est.)	not avail.	not avail.	9 at least	not avail.	not avail.	not avail.	Apple, Cisco, Compaq/HP, Dell, Nokia
Jabil Circuit	St. Petersburg, FL	\$3,729.1 (12/01-11/02)	6	\$4,086.4	-9	not avail.	~26,000	34	~10.8 M	58	not avail.	~40: Cisco, Philips, HP, Alcatel, Lucent, Quantum, Valeo
Elcoteq Network	Espoo, Finland	\$1,749	7	\$1,672	5	not avail.	10,176	15	>2.0 M	83	not avail.	ABB, Allgon, Andrew, Ascom, Ericsson, Kone, LGP, Nokia, Philips, Sony Ericsson, Wavecom
Benchmark Electronics	Angleton, TX	\$1,630.0	8	\$1,277.0	28	~75	~6400	13	~2.0 M	~25	~100	Sun, EMC, Medtronic, Emerson
Ventura	Singapore	\$1,370	9	\$800	71	>50	10,000	23	2.6 M	72	not avail.	60: HP, Agilent, Cisco, IBM, Iomega, Motorola, Seagate, Xerox
Universal Scientific Industrial Co.	Nan-Tou, Taiwan	\$920	10	\$1,017	-10	not avail.	4400	8	1754 K	37	40 d	>40: IBM, Dell, Symbol, Toshiba, Sony
Plexus	Neenah, WI	\$888.8	11	\$990.5	-10	~30	5500	15	2.4 M (1.7 M mfg.)	23	74 s	>150: Siemens, GE, Juniper, Extreme, Motorola, NMS, ABB, Micron, Honeywell, Patientline
Viasystems Group	St. Louis, MO	\$864	12	\$1,206.5	-28	not avail.	19,000	18	5.2 M	85	not avail.	~250: Alcatel, Bosch, Delco, EMC, Frigidaire, GE, Huawei, Intel, Sun, Lucent, Marconi, Maytag, Nokia, Nortel, Otis, Rockwell, Siemens
MSL	Concord, MA	\$853.7	13	\$1,522.0	-44	43	4217	11	1.8 M	24	38 s	40+: IBM, HP, Lexmark, Rockwell, Honeywell, Emulex
Cal-Comp Electronics	Bangkok, Thailand	\$750	14	\$730	3	not avail.	6345	6	2099 K	100	34	>10
PEMSTAR	Rochester, MN	\$647.0	15	\$696.2	-7	55	3600	17	1.3 M	40	50 s	100+: IBM, Motorola, Ciena, Proxim, Qlogic, Siemens, US Army, Logitech, Fluke, Honeywell, MTS, Cordis, Medtronic, Seagate
Finmek	Padova, Italy	\$578	16	\$444	30	75	2706	11	1.87 M	6	54	62: Enel, Marconi, Alcatel, Ericsson, Telit, Esaote, ABB, Planmeca
SMTC	Markham, Canada	\$569.5	17	\$599.3	-5	20	1600	8	1 M	25	40 s	70: Alcatel, IBM
Kimball Electronics Group	Jasper, IN	\$464	18	\$392	18	85	2580	7	764 K	54	29 d	21
VOGT electronic	Obernzell, Germany	\$385	19	\$465	-17	52	3300	12	1722 K	10	23	260: Siemens, DeTeWe, Thomson, Volkswagen
SYNNEX Information Technologies	Fremont, CA	\$373	20	\$758	-51	100	<200	4	not avail.	0	0	<20
Suntron	Phoenix, AZ	\$371	21	\$569	-35	34	1928	8	1 M	3	21	~200: AMAT, Honeywell, Emulex, Input/Output, LSI, LAM, GE, Emerson

Note: Unless otherwise indicated, data represents 2002 year end. Doubled-sided lines are indicated by "d"; single-sided lines are indicated by "s". \*As of 9/28/02. \*\*As of 11/1/02.

**The MMI Top 50 List of the Largest EMS Providers in 2002**

Organization	Head-quarters	Sales calendar 2002 (millions)	Rank by sales	Sales calendar 2001 (millions)	Sales '01-'02 growth (%)	Box build %	No. of people	No. of plants	Total facility sq. ft.	Percent low-cost regions	No. SMT lines	No. of customers/ notable customers
Elite Industrial Group	Hong Kong	\$350	22	\$350	flat	97	7500	2	1 M	80	17	18: Frigidaire, Sharp, Sunbeam, Philips, Omron, Siemens, Bosch Hitachi, Avaya, Alcatel, AT&T, Matsushita, Motorola, NEC, Sanyo
WKK Technology	Hong Kong	\$348	23	\$327	6	not avail.	3500	1	2.35 M	100	21	22: Alcatel, ECCO, Oki, NEC
Zollner Group	Zandt, Germany	\$327.3	24	\$293.4	12	30	5253	11	1689 K	62	21	747
Teradyne Connection Systems	Nashua, NH	\$293	25	\$368	-20	60	400	7	364 K	50	12	63: Cisco, EMC, Lucent, Ericsson, Motorola
Beyonics Technology	Singapore	\$290	26-27	\$170	71	20	2000	9	1.3 M	82	16	50: Seagate, HP, Quantum, Saxter
VIDEOTON Holding	Szekesfehervar, Hungary	\$290	26-27	\$255	14	-30	10,500	9	5.8 M	100	32	50+: Sony, Philips, Matsushita, Valeo, Visteon, Denso, AFL, GLL, IBM, Ascom, HP, Brother, GE, Sanyo, Electrolux, Texas
GES International	Singapore	\$271.4 (7/01-6/02)	28	\$255.1	6	-60	1500	6	668 K	84	20 d	20+ major customers
Ionics-EMS	Laguna, Philippines	\$245 (estim.)	29	\$257.5	-5	not avail.	~5000	5	603 K	100	49	12
Flairis Technology	Singapore	\$242.9	30	\$170.7	42	80	4500	10	500 K	95	85 s	>50
Nam Tai Electronics	Hong Kong	\$236.0	31	\$234.0	1	40	4274	4	624 K	100	16 d	>20: Epson Precision, Sony Ericsson, TI, Optrex, Canon, Sharp, Seiko Instruments
Alco Electronics	Hong Kong	\$231	32-33	\$253.5	-9	95	7850	7	2.7 M	100	86	12: Toshiba, Pioneer, Teac, Aiwa, Casio, Grundig
Fabrinet	San Francisco, CA	\$231	32-33	\$186	24	16	2200	1	225 K	100	4 d, 7 s	7: Seagate, JDS Uniphase, Finisar, Agilent
Scanfil	Sievi, Finland	\$224	34	\$230	-3	not avail.	1300	10	1119 K	24	not avail.	Nokia, Kone, ABB, Vaisala, Motorola
Mid-South Industries	Gadsden, AL	~\$200	35	~\$200	flat	80	~1800	6	1 M+	~8	6 s	~10: Xerox, Motorola, AFL, GE, Electrolux, Cooper, Marconi
Varian Inc. Electronics Manufacturing	Tempe, AZ	\$192	36	\$197	-3	45	989	3	350 K	0	14	39
CTS Interconnect Systems	Glasgow, Scotland	\$186.9	37	\$211.6	-12	not avail.	not avail.	3	425 K	49	15+	30+: HP
EPIQ	Diepenbeek, Belgium	\$180	38	\$125	44	not avail.	not avail.	~17	not avail.	not avail.	not avail.	not avail.
Surface Mount Technology (Holdings) Ltd.	Hong Kong	\$176.0 (10/01-9/02)	39	\$104.7	68	20*	6179*	one campus*	360 K*	100	52*	~50: Sony, Clarion, Daikin, Samsung, LG
Flash Electronics	Fremont, CA	\$165	40	\$126	32	10	710	5	575 K	71	20 (5 d)	35
Orient Semiconductor Electronics	Kaohsiung, Taiwan	\$163	41	\$152	7	25	1800	3	346 K	0	39 s	25: Infineon, Tyan Computer, ActionTec
Simclar Group	Dunfermline, Scotland	\$161.8	42	\$104.4	55	9	1800	10	990 K	18	6 d	10
KeyTronic-EMS	Spokane, WA	\$155.0	43	\$145.2	7	22	2052	5	714 K	61	5 d	59

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Reptron Manufacturing Services	Tampa, FL	\$154	44	\$171.4	-10	29	1029	3	383 K	0	9 s, 2 d	34
Sypris Solutions, Electronics Group	Louisville, KY	\$150	45	\$171	-12	not avail.	not avail.	3	406 K	0	not avail.	BAE Systems, Boeing, Honeywell, Lockheed Martin, Northrop Grumman, Raytheon
Sparton	Jackson, MI	\$147.9	46	\$180.4	-18	30	1200	6	798 K	not avail.	11	US Navy
Neways Electronics International	Son, The Netherlands	\$146	47	\$181	-19	not avail.	1550	17	not avail.	not avail.	20	Philips Medical, Roche, Zuidberg Techniek, Wallace & Tieman
PartnerTech	Malmö Sweden	\$138.5	48	\$108.1	28	>60	982	7	770K	5	6 d	>200
BreconRidge Manufacturing Solutions	Kanata, Canada	\$136.2	49	\$32.1 (partial year)	326	70	640	4	315 K	20	not avail.	60: Alcatel, Mitel Networks, March Networks, Spacebridge, Xantrex
COB Technology	Singapore	\$130	50	\$75.6	72	3	1201	2	200 K	100	25	20+

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plants, it is no surprise that this ratio fell below the \$622 per square foot derived in 2001 from 47 providers. Beware that the \$525 ratio could be skewed toward the high side because facility space was listed as of the year end after some restructuring had taken

place.

Revenue per employee was down as well from the prior year. A slightly different set of 45 companies in 2002 yielded an average revenue per employee of \$141,200, compared with \$180,500 from 47 providers in 2001.

Again, year-end employee totals after some cuts were made may have inflated the ratio.

Note: Companies that did not qualify for the Top 50 will be considered for a new Top 100 database. For more information, e-mail jbt@mfgmkt.com.

## Market Trend

### Providers Build Business From Design Platforms

Need more evidence that design is becoming the new battleground in the EMS world (Jan. '03, p. 2)? MMI has found at least seven EMS providers bringing out platform products or reference designs that will form the basis of products that can be outsourced through ODM or contracted design (CDM) programs.

There is a common misconception that an ODM business increases inventory exposure. The ODM or EMS provider may need to produce some prototypes to show the customer, but there's no buildup of finished product

in advance of the customer's order. That's because the customer usually buys based on a platform that can be customized to its needs. The true gauge of who's doing what in the ODM market is to look at who is developing what platforms in which technology areas. It turns out that a number of EMS providers are working on or selling platforms on an ODM or CDM basis, and some of these designs depend on technology obtained from outside partners.

• Perhaps first and foremost is **Flextronics**, best known for its low-cost cell-phone design, PhoneOne. The provider is also working with **Qualcomm** on a low-end CDMA phone. But Flextronics' development of handheld platforms extends well beyond these two products. "We have something more like a dozen products in development in the handheld are-

na," said Michael Marks, Flextronics CEO, during the company's midquarter call. He added, "We believe that the customers that are selecting us will use several if not many of the products."

By the end of the quarter, Flextronics expects to have at least five ODM agreements in place. Those programs should yield ODM revenue of between \$250 and \$500 million a year, according to the company. Three of these are new customers, and one is a new division of an existing customer. What's more, Flextronics is lining up more agreements for next quarter. Including the five or so near-term agreements, Marks said, "We got probably eight or ten in the works."

"The program wins this quarter include not only handheld products, but a number are in unrelated product areas," he noted. For competitive rea-

## Design Platforms

sons, Marks would not provide additional information such as the types of products involved.

Earlier, Flextronics told investors of its plan to achieve \$4 billion in ODM business over the next three to five years (Oct. '02, p. 1). "We have been developing this strategy for only about nine months, and we believe that the program wins already in place suggest that a plan of that amount continues to be reasonable over the longer term," said Marks in the recent call.

This ODM business offers one obvious advantage — higher margins — and another that is just coming to light — additional EMS business.

On the midquarter call, Marks revealed that Flextronics had also won EMS business from customers that are selecting the provider for both their ODM and EMS needs. He said the EMS business attached to the new ODM programs "should be of a similar amount."

One should be aware that the language used in the design area is not always precise. For example, when Flextronics uses the term ODM for its business, the company is including both designing products on spec, the classical definition of ODM, and designing them to a customer order. The latter is often referred to as CDM (contract design manufacturing) and is used here in this sense. However, Flextronics applies the term CDM to its codevelopment work.

- Flextronics is not the only EMS company developing handsets. Finland's Elcoteq has selected Motorola's i.200 and i.250 platforms to develop advanced handsets for delivery of voice and high-speed data services. These 2G and 2.5G wireless platforms provide for GSM advanced voice and GPRS voice and data cell phones and smart phones. Elcoteq's design offerings also include new products based on the Nokia S60 and Symbian platforms.

Although Elcoteq is offering some

ODM-type services, the EMS company does not want to be known as an ODM. The company believes that customers could see Elcoteq as competition if it were labeled an ODM. And Elcoteq wants to avoid competing against its existing customers.

- **Sanmina-SCI** has introduced a line of production-ready designs and products based on InfiniBand switched fabric network technology. This technology increases the bandwidth of computer, storage and I/O clusters by offloading message processing from the system processors. Initially, Sanmina-SCI is offering host channel adapters and cables, to be followed by switches, backplanes, chassis and software, which will allow the provider to offer turnkey solutions. For the software piece, Sanmina-SCI has established a relationship with **VIEO**, which offers software for InfiniBand network infrastructure.

According to market research firm IDC of Framingham, MA, InfiniBand has been struggling to emerge as more than a niche technology. IDC is predicting that the InfiniBand market will reach between \$431 and \$718 million by 2006. The technology has recently gained renewed interest with endorsements from **Dell**, **IBM** and **Sun**, reports IDC.

Sanmina-SCI is offering the InfiniBand line of products as part of an overall series of production-ready ODM solutions.

The provider also plans to develop system solutions based on **Fujitsu's** fingerprint sensor technology for biometric authentication. This biometric capability stems from Fujitsu's fingerprint sensor ICs and associated algorithms. Potential applications include physical access, transaction terminals, personal and business computing, automotive, mobile devices, wireless systems and homeland security applications. Sanmina-SCI and **Fujitsu Microelectronics America** have formed an alliance to comarket products using

the fingerprint technology.

- Printers present another area offering ODM possibilities for EMS providers. Last year, Singapore's **Venture** launched a digital color label printer to add to its existing ODM business (Sept. '01, p. 2). Since 1995, Venture has provided ODM services, which accounted for 11% of its revenue last year. It is likely that Flextronics is also targeting printers for its ODM business since the company has been building up design capability in this area (Oct. '02, p. 2).

- **Elite Industrial Group** of Hong Kong also has a history of doing both ODM and EMS work. In a recent ODM move, the group set up a new subsidiary, **Elite Communications** (Holmdel, NJ), in Q4 2002 to provide voice-over-IP and other leading-edge product designs to Elite's customers. These product designs will go into production at Elite's **Giant Electronics** unit, which will act as contract manufacturer. Elite maintains high-volume, vertically integrated plants in China.

Last year, **Avaya** brought out an Internet Protocol (IP) telephone, the IP 4602, that Elite designed and continues to manufacture. According to John Constantine, Elite's GM of the Americas, the company kept some of the intellectual property from this voice-over-IP program to use in building an ODM business through Elite Communications.

- Readers will recall that **PEMSTAR** has also thrown its hat into the ODM ring (April '02, p. 3). Last year, the company told *MMI* that it had created reference designs in the computer, communications and industrial automation areas. Then later in the year, PEMSTAR revealed some of what it had been working on with the introduction of an ODM development platform for mobile computing (Nov. '02, p. 8).

- Then there's the Philippine provider **Integrated Microelectronics**

Inc. (IMI), whose EAZIX design subsidiary is unveiling a range of wireless products and other designs this month at CeBIT 2003 in Hanover, Germany. EAZIX is introducing module platforms for Bluetooth and WiFi 802.11B wireless products, a wireless e-mailing terminal, a programmable logic controller, and a smart card reader and writer. EAZIX's ODM offering includes complete wireless products, embedded modules and design services for wireless connectivity from high to low data-rate solutions.

EAZIX, a joint venture of IMI and logistics provider SIIX, was started in 1998 so that IMI could offer more value-added services to its customers.

## News

### Jabil To Gain NEC Operation in Japan

A new deal with NEC will give Jabil Circuit (St. Petersburg, FL) its first production site in Japan. Jabil will lease NEC's facility in the range of 100,000 to 130,000 ft<sup>2</sup> in Gotemba, Japan, and take over the manufacture of broadcasting systems and video equipment for NEC. The provider expects to hire about 250 NEC employees and close the transaction by July. The price of this acquisition is about \$40 million.

Under the terms of a share purchase agreement, Jabil will provide full manufacturing and system assembly services to NEC's **Broadcast and Video Equipment Operations Unit**. These services apply to transmission and studio equipment used in TV and radio broadcasting as well as video cameras and systems for monitoring and multimedia applications.

According to Jabil, the agreement allows Jabil to participate in the growth of broadcast products driven by a Japanese-mandated transition from analog to digital devices. NEC is described as the world leader in TV

The evidence is adding up. More and more EMS providers want a piece of the ODM pie. But they can't claim a slice until they have a product platform to sell. That means investing in engineering resources without any promise of payback. The largest providers can absorb this expense more easily than smaller companies. But as seen above, the ODM market is attracting a variety of players from the EMS side.

In the process, providers are building capabilities for full-product design, which probably amounts to the greatest technological change to arrive in the EMS industry since the early days of SMT.

transmitters and the Japanese market leader in TV and radio transmitters, relay equipment and high-sensitivity cameras.

"The NEC Gotemba transaction will provide customer and product sector diversification while adding strong competencies in a targeted market," stated Isamu Kamata, Jabil Japan chairman and representative director. "This is a big step towards Jabil Japan's primary objective of working with top Japanese OEMs to support their design and manufacturing needs."

When it comes to outsourcing Japanese operations, NEC has been the most aggressive of the major Japanese OEMs. Jabil becomes the third top-tier provider — after Celestica and Solectron — to land an asset purchase deal from NEC (Feb., p. 2 and 4). However, at this stage of outsourcing within the Japanese market, NEC could be considered more the exception than the rule.

### Scanfil To Acquire Alcatel Plant

Scanfil (Helsinki, Finland), a global contract manufacturer and systems supplier for communication and indus-

trial electronics, will purchase Alcatel's facility in Hoboken, near Antwerp, Belgium. The deal also includes a supply agreement. All of the operation's 250 or so employees will join Scanfil, and closing is expected during Q2.

With a total area of about 30,000 m<sup>2</sup>, the Hoboken facility serves as a mechanics and integration plant for telecom and industrial electronics. Annual sales for the plant are about 60 million euros, and its largest customer is the Alcatel Group. As a result, Alcatel will become a new customer for Scanfil.

### Suntron Pursues Remanufacturing

Suntron (Phoenix, AZ) and MasterWorks International (Houston, TX), a provider of remanufactured computer products, have forged a partnership to provide remanufacturing services to Suntron's customers. The new offering will initially focus on computer products.

"Our new partnership is an excellent opportunity for Suntron to expand its capabilities," stated James Bass, Suntron president and CEO.

Founded in 1992, MasterWorks performs asset recovery for the likes of HP, the former Compaq, Dell and IBM. MasterWorks' remanufactured computer products go to more than 500 customers in a variety of industries. The company remarkets its products through value-added resellers, computer servicing companies and web-based sales.

### Germany's VOGT Pairs with Calif. Provider

To step up activities in the US, VOGT electronic AG (Erlau, Germany) has formed an alliance with Silicon Valley provider Paramit Corp. (Morgan Hill, CA). Paramit will undertake product introduction and man-

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ufacture small batches and preproduction runs, with subsequent mass production taking place at VOGT plants in Mexico and China.

An *MMI* Top 50<sup>TM</sup> EMS provider, VOGT aims to expand its business potential in the US market, boost sales significantly and make way for additional services.

With 12 years in the EMS business, Paramit last year recorded sales of about \$60 million.

## Elcoteq Adds NPI Firm in US

Elcoteq Network (Espoo, Finland) has acquired NPRC (Dallas, TX), an NPI company. This acquisition extends to the Americas Elcoteq's strategy of locating NPI services close to its customers. The transaction price was not disclosed.

NPRC, renamed **Elcoteq, NPI Dallas**, is known for serving the communications market, which is also a focus for Elcoteq. The company will add NPRC's 14 employees and its facilities in the Carrollton suburb of Dallas. Gary Tanel, president and founder of NPRC, will continue to lead the NPI operation. NPRC's customer list includes several Dallas-based communications companies.

"With this acquisition, Elcoteq plans to enhance its customer service in the Americas, broaden its customer base with NPRC's current customers, and attract new American customers for Elcoteq's global manufacturing network, especially for our plant in Monterrey, Mexico," stated Doug Brenner, president of Elcoteq Americas.

**New programs...** **Solectron** (Milpitas, CA) will manufacture a lead-free product for **Olympus Technologies Singapore Pte Ltd.**, its first. The provider will handle lead-free PCB assembly, testing and volume manufacturing for a miniature optical

scan engine designed by Olympus for one of its OEM customers. This product will be made in Singapore. Also, **Solectron** will provide NPI and PCB assembly for a surgical robot from **Intuitive Surgical** (Sunnyvale, CA). The work will take place at Solectron's facility in Fremont, CA. **Nam Tai Electronics** (Hong Kong) will manufacture cell phones in semi-knocked down (SKD) form to support **JCT Wireless Technology Company Limited** (Hong Kong), which has won a contract for outsourced production of one million SKD phones. JCT is a wholly owned subsidiary of **Alpha Star Investment Limited**, in which Nam Tai holds a 25% equity stake (Jan., p. 7). **Picolight** (Boulder, CO) has selected **PEMSTAR** (Rochester, MN) to increase manufacturing capacity for Picolight's fiberoptic transceivers used in enterprise and metro/access markets. Manufacturing for multiple transceiver products has already been moved to PEMSTAR facilities in Bangkok, Thailand. **L-3 Communications Security and Detection Systems** has awarded **LaBarge** (St. Louis, MO) an additional contract, valued at \$5 million, to integrate box-level assemblies on a turnkey basis for x-ray detection systems used at airports. **OPS - OnLine Power Supply** (Centennial, CO), has selected **OEM Worldwide** (Watertown, SD) to serve as contract manufacturer for OPS's patented power supplies. **eMerge Interactive** (Sebastian, FL) has chosen **Bradshaw Manufacturing Services** (Palm Bay, FL) to manufacture the handheld version of a new meat-inspection system. **Express-Point Technology Services** (Golden Valley, MN) has signed a five-year agreement to provide supply-chain and repair services for multivendor retail technology products of **Travelers Express Company** (Minneapolis, MN), which is in the money transfer business.

**Military contracts...** A **General Dynamics** team that includes **PEMSTAR Pacific Consultants** and its parent company **PEMSTAR** has received a \$59.9-million contract to enhance the current version of the US Army's Land Warrior system. **Sparton Corp.** (Jackson, MI) has received two contracts, worth a total of \$21.4 million, to manufacture sonobuoys for the US Navy. Final assembly will take place in Sparton's DeLeon Springs, FL facility over the next 12 to 18 months. Under a \$6.2-million contract from the US Government, **Sypris Electronics** (Tampa, FL) will design a next-generation cryptographic fill device to be known as the Secure Data Transfer Device 2000 System.

## China Attracts EMS Cos. Below Top Tier

It's not just the tier-one providers who are putting capacity into China. Some smaller companies want to offer low-cost manufacturing in China as well. Three recent examples show that you need not be a billion-dollar provider to start production in China.

In December 2002, **Flash Electronics** (Fremont, CA) held the official opening of its 350,000-ft<sup>2</sup> facility in Suzhou, China. The provider also operates a 56,000-ft<sup>2</sup> plant in Shanghai. Similar to some of its larger competitors, Flash now has 71% of its floor space in China.

**Reptron Manufacturing Services** (Tampa, FL), a unit of **Reptron Electronics**, will have a China facility in operation within the next 90 days. Reptron is negotiating a contract to occupy 50,000 ft<sup>2</sup> inside another company's larger facility in Dongguan. The new operation will begin with one SMT line and the capability to do some level of unit build. Reptron already has an IPO in place, which will be used as a sourcing option for the new facility.

"We have current partners that

we'll begin building in China for almost immediately," said Tony Musto, VP of Reptron sales and marketing.

Finally, **SigmaTron International** (Elk Grove Village, IL) will break ground soon for a new facility in Wujiang, with production expected by the end of the summer (Dec. '02, p. 6).

**More restructuring actions...**Citing the lack of a recovery in end markets served, Solelectron plans to do more cost cutting. As a result, the company will take additional restructuring charges of about \$300 million over the next several quarters. The cuts are aimed primarily at further reducing capacity and headcount in Western Europe and North America. These actions also include consolidation of some repair facilities and the relocation of certain call centers from high-cost to low-cost regions. Solelectron will reduce its work force by about 12,000 people and remove about 3 million ft<sup>2</sup> of manufacturing floor space. The job cuts represent 16% of the 74,000 people that Solelectron employed at the end of the February quarter....**Celestica** (Toronto, Canada) will close its Oklahoma City, OK plant that it leases from **Lucent** as a result of an outsourcing deal (Aug. '01, p. 6). Some 450 workers will lose their jobs. Closure is slated for the end of October or early November....**Sanmina-SCI** (San Jose, CA) is auction-

ing equipment from its facilities in Tikkakoski, Finland, and Camberley, UK....**IEC Electronics** (Newark, NY) has sold its facility in Edinburg, TX, for a price of about \$1 million to **Olympian Holdings**, which is not in the EMS business. IEC has now completed the consolidation of operations into its 300,000-ft<sup>2</sup> plant in Newark, NY.

**People on the move...**Following the arrival of Solelectron's new CEO, Mike Cannon, the company has hired a new head of sales. David Everett has joined Solelectron as executive VP, worldwide sales and account management. With more than 20 years in high-tech sales, Everett most recently was senior VP and GM of the **Platform Enabling Division of Phoenix Technologies**, a supplier of device-enabling and management software products for PCs and other products. It is probably no coincidence that Dan Perez, executive VP, worldwide account management and marketing, has left the company. Also gone is Sandy Ro, a senior VP in **Global Operations**....**PEMSTAR** has hired medical company executive Larry Czapl to lead its new **Medical Business** unit. Previously, Czapl was GM of a business unit within the **Cardiac Surgery** division of **Medtronic**. ...**TDMS**, an EMS provider in Springfield, MA, has appointed Peter Gordon as president and CEO. Before joining

**TDMS**, Gordon served as VP and GM at **DNE Manufacturing and Service Company**, an EMS business and a division of **DNE Systems**....**Oshik Kong** has joined **Nam Tai Electronics** as sales and marketing director. Most recently, Kong was VP and GM of **LG Electronics' IT Overseas Sales Division**.

**Meeting...**The new EMSI Forum will be held April 29 in San Jose, CA. Call ECA at 703-907-8029 (Jan., p. 7).

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