
GLOBAL ELECTRONICS INFORMATION NEWSLETTER

Issue No. 17

December, 1981

SRI LANKA

Harris Corp. is the second U.S. semiconductor firm to win approval for operations in Sri Lanka's Katunayake Free Trade Zone, located near the Colombo airport. However, no contract has been signed. Motorola, the first U.S. electronics investor, plans to employ 2500 in 1983. (*Electronics News*, November 123, 1981)

As of July 31, the Greater Colombo Economic Commission had approved 146 firms for Katunayake, 67 of which had signed agreements. Thirty-six, employing 15,700 workers, are already in production. When the other 31 start work, employment should rise to 38,600.

Officials report that only 25% of the zone's export earnings actually remained in Sri Lanka as net foreign exchange earnings. The *Far Eastern Economic Review* (October 16, 1981) adds, "There are those who feel that 25% is an overestimate."

Thus far, the major employers in the zone are "quota refugees" from Hong Kong, who set up production in Sri Lanka to evade the import restrictions of industrialized countries.

KRYPTON-85

An explosion this October at Harris Semiconductor's assembly plant at Ulu Klang, Selangor, Malaysia injured four workers and released Krypton-85, a radioactive but chemically inert gas into the atmosphere. Krypton-85 is used to test for flaws integrated circuits. The company had not notified the proper Malaysian officials that it was using Krypton-85 at its plant.

Similar leaks occur occasionally at U.S. semiconductor plants. The *Peninsula Times Tribune* reported that Intel vented some of the gas from its Silicon Valley plant in April, 1981, and that Signetics was cited by the Nuclear Regulatory Commission for a 1979 release in Orem, Utah.

Officials in both countries assert that the releases of Krypton-85 posed no harm to either workers or the public. **IF ANY READER CAN CONFIRM OR CHALLENGE THE CONTENTION THAT KRYPTON-85 IS SAFE TO USE IN SEMICONDUCTOR PRODUCTION, PLEASE NOTIFY P.S.C. AS SOON AS POSSIBLE.**

GOULD BAGS A.M.I.

Gould, an Illinois-based electrical equipment manufacturer, has finally reached an agreement to acquire a major semiconductor producer. At the end of November Gould and American Microsystems (AMI), a Silicon Valley-based producer of custom integrated circuits, announced plans to merge. Should the merger be approved by stockholders and regulatory agencies, Gould chairman William Ylvisaker will achieve his goal of turning Gould, originally a battery-maker, into a diversified electronics company.

In 1980 Gould's sales were \$2.2 billion, while AMI grossed \$129 million. Electronics, before the merger, made up slightly less than half of Gould's sales but more than 60% of its pre-tax profits. Gould employs 29,000 worldwide, while AMI has 3,500 on payroll in Silicon Valley, Idaho, South Korea, and the Philippines.

Gould will exchange 1.78 shares of its stock for each of AMI's shares. At pre-announcement values, the total should be about \$220 million. In addition, since AMI's price per share was only slightly higher than Gould's (\$27 compared to \$25), the exchange ratio will greatly benefit AMI's shareholders. AMI's largest shareholders are the German firm Bosch's North American subsidiary and Borg-Warner, which together hold 23% of AMI stock.

Gould is purchasing AMI not only because it believes the custom semiconductor business will be increasingly profitable, but because Gould - like most other manufacturers of electrical equipment - needs state-of-the-art semiconductor technology. Though AMI will continue as an autonomous operation, it is likely to gain new markets and access to capital as a result of the merger. AMI will take over Gould Systems, Gould's tiny (50-employee) in-house custom IC operation in Silicon Valley. Both firms' microprocessor instrument sub-

sidaries in Silicon Valley - Gould's Biomation and AMI's Millenium Systems - may benefit from merger-induced cooperation.

This is actually Gould's third attempt to purchase a major semiconductor manufacturer. Its "unfriendly" offers to Fairchild and Mostek were rejected in 1979. While Ylvisaker's task-master reputation is generally credited (or blamed) for those failures, Gould simply contends that it could not offer as much as the successful suitors, Schlumberger and United Technologies. Ironically, Gould's inability to buy Fairchild or Mostek was a blessing in disguise. Both firms, producers for the mass production segment of the semiconductor market, are doing poorly, while custom-producer AMI continues to prosper. (Electronics News, December 7, 1981; Peninsula Times Tribune, November 30 & December 1, 1981; San Jose Mercury, December 1, 1981; New York Times, December 6, 1981)

SUBSCRIPTIONS

Are you a paid up subscriber to the **Global Electronics Information Newsletters**? We have a few complimentary and exchange subscriptions, but we rely on paid subscriptions to defray production costs.

If the address label on your copy is circled, our records show that your subscription is due. Please send a check or money order to PSC. Current rates are:

US\$5.00 in U.S.

US\$6.25 in Canada & Mexico

US\$10.00 overseas airmail

Do you have friends or colleagues who might be interested in the Newsletter? If so, please tell them about it or send us their names so we can send along samples.

JAPAN RAM'S FORWARD

As expected, Japanese electronics companies have taken an early lead in the open market for the incoming generation of memory chips, 64-kilobit random access memories (64-K RAM's). Japanese companies, led by Hitachi (40%) Fujitsu (20%), holds 69.5% of the growing market. U.S. firms, paced by Texas Instruments (20%) and Motorola (7%) hold only 30.5%. America's two largest captive circuit-makers, IBM and Western Electric, are producing large numbers of 64-K RAMS's for their own use, but those chips don't show up in the market statistics.

The Japanese "victory" is highlighted in stories in two of the U.S.'s leading business magazines. **Fortune** (December 14, 1981) features a Gene Bylinsky article, while **Business Week** (December 14, 1981) contains a special report on Japan's increasing sophistication in semiconductors, computers, and other high technology products. Although there are many conflicting trends in the competition between U.S. and Japanese electronics firms, some observations are useful to make now:

1. The U.S. still dominates the overall market for semiconductors, since U.S. companies lead in the design and production of microprocessors and custom logic chips.
2. The Japanese are strongest in product lines involving mass production, not innovation. This is largely the result of Japan's educational system and industrial culture. The Japanese are aware of their shortcomings in design and software production, and they are working to overcome them.
3. Japanese companies are bringing young women into the workforce as programmers. Because women are excluded from the promise of lifetime employment, firms believe they can make use of the skills of women during what are considered their most creative years.
4. An increasing number of Japanese and U.S. firms will link up to share their expertise and resources. For instance, Toshiba has already

announced a cooperative program with LSI Logic, the Silicon Valley newcomer headed by former Fairchild boss Wilfred Corrigan.

5. The small, independent firms that made Silicon Valley famous may not be equipped to compete in the market for mass-produced commodities such as the 64-K RAM. None have made a dent in the market, while Motorola and TI are still in the running.

M.M.I. CHIP THEFT

On Thanksgiving week-end, thieves lifted more than 500,000 chips valued at \$3.2 million from Monolithic Memories Inc.'s Silicon Valley warehouse. Last year someone stole \$120,000 in platinum from MMI. High technology larceny is on the rise in Silicon Valley, but only a small portion is publicly reported.

Police and company officials report that some 100 boxes were taken from a guarded cage. The theft was apparently planned carefully, and it probably involved insiders, for no physical evidence was left.

Many of the chips were products unique to MMI. That is, even if the MMI logo were removed, they could still be traced to the company.

Thus, besides being the biggest high-tech theft in Silicon Valley history, the MMI burglary indicates the existence of a sophisticated black market in electronics goods. Not only was the theft itself highly professional, but it is unlikely that anyone would pull off such a job without a ready "fence." The stolen chips could either be eased into the market through distributors that already handle MMI products, or they could be exported illegally to the Soviet Bloc. The Russians are generally willing to pay a good price to obtain state-of-the-art chips denied them by U.S. and Allied trade restrictions. (**Peninsula Times Tribune**, December 1 & 3, 1981; **Electronics News**, December 7, 1981; **San Jose Mercury**, December 11 & 14, 1981)

SINGAPORE

Singapore appears to be moving along its chosen path of upgrading the sophistication of its electronics production. **Electronics News** (December 7, 1981) reports that Digital Equipment will join Apple in computer production and that Micro Peripherals will produce disk drives. Italian SGS-ATES and Texas Instruments have announced plans to carry out the fabrication of semiconductor wafers in 1983.

One of the most interesting ventures is Tata Elxsi, which is setting up a US\$50 million factory to produce mainframe computers by 1984. The company will employ nearly 500 people. Tata Elxsi is 55%-owned by the Tata group of India, 25% by the Singapore government, and 20% by Elxsi Ltd. of Silicon Valley.

Still, Singapore remains a major assembler of semiconductors. Of its US\$2.5 billion in electronics output last year, 60% was in components production.

Despite Singapore's apparently successful drive toward industrial strength, the island nation cannot be a model for its larger neighbors. With no rural areas and close control over immigration, the government controls the size and nature of the workforce. For many years, Singapore's industry brought in workers from neighboring Malaysia and Indonesia. Now companies recruit temporary employees in Sri Lanka, Thailand, and Bangladesh. One tenth of National Semiconductor's Singapore workforce, or about 200 people, is from Sri Lanka.

Business Week (December 7, 1981) reports that the guest workers are willing to work night shifts and overtime. The government hopes that competition from foreign workers will make Singaporeans "less choosy." **Business Week** says, "Many of these new guest workers are guaranteed wages equal to those paid Singaporeans, but any similarity in status ends there. They cannot bring their families, marry Singaporeans, or take holidays during the life of their contracts." The government says the current immigration policy will last for two years or less.

**Pacific
Studies
Center**

INSTA E-MAIL PRINT

867 West Dana Street, No. 204
Mountain View, California 94041
U.S.A.
(415) 969-1545

address correction requested

BULK RATE
NON-PROFIT ORGANIZATION
U. S. POSTAGE
PAID
PERMIT NO. 155
MOUNTAIN VIEW, CA.