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CONTROL DATA KOREA

Workers at Control Data's Seoul, South Korean assembly plant are staging a sit-in protesting the dismissal of six local union officials. They are asking supporters outside Korea to write the company (Control Data Corporation, P.O. Box O, Minneapolis, MN, 55440) and the Minister of Labor (Ministry of Labor, 94-1 Youngdeungpo-Dong, Youngdeungpo-Ku, Seoul, Korea) to protest the firings.

According to a March 24, 1982 memo from the Church-supported Centre for the Progress of Peoples, based in Hong Kong, union officials were fired when the company broke off negotiations for contract renewal. The 1981 average monthly pay of a Control Data assembler was \$116. The union contends that the cost of living for a single woman in Seoul is \$249 per month. The company offered a 12% wage increase and refused to negotiate further.

The union also complains of hazardous working conditions, including microscope work, high production quotas, and exposure to lead-based solder in enclosed areas.

MATTEL

A correspondent from Australia Asia Worker Links recently visited the Bataan Export Processing Zone in the Philippines, where she investigated conditions at Mattel's doll-making plant. Though Mattel is not primarily an electronics firm, its international sourcing strategy is similar. (See PSC's report in Volume XI, No. 2 issue of **Pacific Research**.)

Mattel currently employs 4,000 workers at Bataan. They normally work 12 hours a day, six days a week, plus compulsory overtime! The daily wage is 18.65 pesos plus 12 pesos cost-of-living allowance for eight hours work. The company pays time-and-a-quarter for overtime, but there is no additional allowance. Since actual overtime hourly pay turns out to be less than base hourly pay, the company has a strong incentive to keep employees for long hours.

Living and working conditions are bad. The correspondent describes a woman who had nausea and headaches from the chemicals she worked with, and another who "lived in a hostel where there were 8 girls living on the one room, just large enough to fit 4 double bunks."

Finally the correspondent pointed out that Mattel, always in search of cheap, productive labor, has opened a factory in Malaysia. Three hundred workers there make model cars, and the factory has the capacity to employ 2,000.

OFFSHORE ASSEMBLY

Semiconductor International (February, 1982) has published another survey of labor costs in chip assembly. Ben Adamo, of Motorola, evaluates the various factors influencing a company's decision to manufacture in the Far East. Working against offshore expansion are the threat of high transportation costs and the cost of maintaining work-in-process inventories (as chips are shipped to and from the Far East) at current interest rates. He projects that the dual in-line package – the familiar caterpillar shape of the finished chip – may be replaced by chip carriers and automated packages for which manual labor is less important. He also notes risks in less developed countries, such as “racial antagonism, political instability, and hostility towards foreign manufacturers.”

Adamo reports, “Foreign labor rates and fringe benefits have been inflating by as much as three times the rate of U.S. wages and fringe benefits. If this trend continues, labor in a site like South Korea, which is currently experiencing a wage inflation rate of about 25%/year could cost about the same as U.S. labor by 1990.”

Adamo's linear projections are ridiculous. Merely the fact that U.S. manufacturers are worried about wage inflation in Korea will lead the Korean government to renew its crackdown on labor. His figures on 1980 average pay, however, appear to accurately portray present wage costs. Figures are in U.S. dollars per hour.

Country	Wage	Wage + Fringe
U.S.	5.92	8.06
Hong Kong	1.15	1.20
Singapore	0.79	1.25
South Korea	0.63	2.00
Taiwan	0.53	0.80
Malaysia	0.48	0.60
Philippines	0.48	0.50
Indonesia	0.19	0.35

Meanwhile, **Business Week** (March 15, 1982) reports that automation, as well as recession, are cutting into jobs in Far East assembly locations. It reports that Signetics plans to halve its Korean workforce, now numbering about 2,300, “when it completes an automation program in the next three to four years.”

Business Week also notes that automation is making it profitable for some companies to shift production to the U.S., saying “Both Motorola Inc. and Fairchild Camera & Instrument have recently moved some lines back to the U.S. where modern computer-controlled assembly of chips costs the same as using Asian labor.”

DRUGS & CRIME

The **Peninsula Times Tribune** (February 11, 1982) ran a banner headline for a story by Ann Gibbons, “Cocaine and Computer Circuits.” Gibbons cited numerous law enforcement officials who said Silicon Valley's have a major, and growing problem with narcotics. She reported, “Semiconductor firms are particularly vulnerable when employees use drugs. Between \$20 million and \$60 million worth of microchips and integrated circuits are stolen annually from the firms, often by employees who sell them for narcotics instead of money, said Joseph Chiaramonte, supervisor of the FBI's office in San Jose.”

Chips are indeed easy for insiders to steal, but electronics companies downplay the problem. Many employers and supervisors reportedly tolerate drug use if it does not affect the employees' job performance.

INTEL INTEGRATES

As more and more computer components are being squeezed onto a silicon chip, the differences which separated component manufacturers from systems producers are disappearing. Though some small firms may survive by filling a niche in one market or the other, the big money-makers of the future will be those companies which successfully integrate the production of chips and equipment. IBM and the major Japanese electronics companies have long been vertically integrated, and major users of chips in the U.S., such as GE, United Technologies, and Hewlett-Packard have either acquired or built their own semiconductor operations. Motorola, for years the second largest marketer of chips, is moving into data processing equipment with the acquisition of Four Phase Systems.

Intel, considered the technology leader among semiconductor firms in Silicon Valley, would be an acquisition valued by any computer or electronics firm, but Intel's top managers and stockholders intend to remain independent. Recognizing the importance of vertical integration, Intel has introduced systems products that compete with the products of some of its major customers. Intel has recently announced two systems that are essentially microcomputers designed for specific purposes: a data-base management system and a transaction processor. Last year, before these products had entered the market, specialized systems accounted for 40% of Intel's revenues.

Intel's new Puerto Rican facility is manufacturing the data-base system and the transaction processors, and both boxes will use Winchester disk drives supplied by Computer Memories Inc. Intel recently bought a 20% interest in CMI. (*Business Week*, March 22, 1981)

HONG KONG UPGRADES

Three Hong Kong companies are moving into wafer-fabrication, the capital-intensive, technology-intensive front-end of semiconductor production. RCL Semiconductors and Elcap Electronics are both operating plants in the Taipo Industrial estate, and Hua Ko Electronics is also building a facility there.

Most observers doubt that the new operations can be internationally competitive. *Electronics* (March 24, 1982) cites rumors that the People's Republic of China is behind all three ventures. Although the companies deny it, they apparently hope to tap a growing market on the Mainland. *Electronics* quotes Hugh Thomas, of the Bank of America, "The motive seems more political than financial. . . . Hong Kong won't be able to establish its own viable wafer-fabrication industry in the near future."

Although Hong Kong has long been a center for assembling consumer electronics and semiconductors, only one Hong Kong company, Eaca, is mass-producing microcomputers. Eaca sells through Recortek, a Silicon Valley firm which wholesales Eaca's machine under the PMC label.

Bernard Zau, of Micro Electronics, a leading Hong Kong electronics firm, told *Electronics*, "I've decided to leave computers to others unless I can find a good partner. . . . I can make a cheap computer, but marketing, service, and software are problems."

FAIRCHILD - JAPAN

Fairchild Semiconductor, the Silicon Valley-based subsidiary of Schlumberger, plans to build an integrated circuit factory in southwestern Japan, reportedly for the assembly of logic and linear circuits. Production should begin in August, 1983, and the workforce is planned to reach 700 in 1985, when the plant is completed. The total investment will be about US\$88 million. (*San Jose Mercury*, February 18, 1982)

SALARIES

Semiconductor International (January, 1982) has published a survey of engineering salaries in the semiconductor industry. The average 1981 base salary, for those surveyed, was \$33,000 per year, an increase of 22% over the 1979 average. The survey provides detailed breakdowns by geography, education, age, and job function. Though the survey is useful, it is a voluntary, non-scientific sample.

MOSTEK

Since United Technologies took over Mostek in 1979, the Carrollton, Texas semiconductor firm's fortunes have gone downhill. **Electronics** (February 24, 1982) reports, "Now, only little more than two years later, Mostek is losing millions of dollars, blocks of market share, and many of the executives who took it to the top of the MOS [metal oxide on silicon] business."

But **Electronics** does not blame UTC, the new parent. Most of Mostek's troubles result from the downturn in the market for semiconductor memories and from the growing competitiveness of Japanese firms. To improve its position, Mostek is relying heavily on resources from UTC, and it is re-organizing to become more responsive to the needs of customers.

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