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SILICON VALLEY'S WORKFORCE REMAINS SEGREGATED

New data shows that the high-tech workforce of Silicon Valley tends to be segregated by race and gender, but the dominance of white men has slipped slightly over the past several years. White males continue to dominate top level positions, and minority women are concentrated in low-level production jobs. Asians and Asian-Americans now make up about a fifth of the high-tech workforce, compared to one tenth in 1980.

Every year the federal Equal Employment Opportunity Commission (EEOC) collects detailed employment information from large employers across the country. Normally, however, it does not publish race-and-gender-by-job-category data by industry. Consequently, regional totals for professionals include nurses and teachers as well as engineers and programmers, showing a more balanced gender employment pattern than is apparent in high tech.

In 1982, we obtained detailed 1980 cross-tabs for high-tech employment centers while preparing a report for the U.S. Commission on Civil Rights. This year we managed to receive similar data covering 1988 employment in Silicon Valley.

With additional resources, we hope to later publish a more comprehensive data set and analysis, considering the reasons behind workforce segregation. Now, however, by exclusively devoting this issue of *Global Electronics* to the workforce data, we feel we can most quickly disseminate our findings. The tables on page 2 sum EEOC-collected reports for electronics and high-tech services, including software firms, while the tables on page 3 cover electronics manufacturing alone. The page 4 table is roughly comparable to the page 2 data set. All information is for Santa Clara County, so employment in the Valley's outskirts, such as Fremont, is excluded.

This is the best available information about the make-up of the Silicon Valley workforce. However, since the EEOC data is confined to employers with 100 or more workers, plus government contractors with at least 50 workers, the totals are inaccurate. For example, the electronics sectors that reported a total of 122,000 to EEOC actually employed 195,000 in 1988.

The EEOC data confirms what many Silicon Valley observers already know. White men

constitute about two-thirds of management and 56% of the professional workforce. Still, their preponderance has slipped since 1980, when they accounted for 77% and 70% respectively. White women and Asians have made up the difference.

Among operatives—semiskilled production workers—the white share has fallen from half to 28%. Asians now dominate the production workforce, with 44% of the operatives. Surprisingly, Asian men now outnumber white women in this category, leading the growth in male operatives.

Unfortunately, the statistics do not distinguish among Asian ethnic groups. From direct observation, however, it appears that ethnic Japanese, Chinese, and Indians appear to prevail in high level positions, while Filipinos and Vietnamese make up the greatest number of Asian production workers.

White women still dominate the secretarial corp. In fact, nearly a third of all white women in the industry do office work.

The EEOC data also shows a whitening of collars. The reported totals of semiskilled workers and skilled workers (crafts) actually declined slightly within Santa Clara County—though it is likely that adding counts from small establishments and new production plants in adjacent counties would turn that into a slight increase. Meanwhile, the number of professionals jumped from 39,000 in 1980 to nearly 70,000 in 1988, and the ranks of managers and officials rose as significantly from 19,000 to 29,000.

Like most other industrial statistics, the EEOC series has its shortcomings. It relies upon employers to categorize jobs—deciding who is a technicians and who is an operative, for example. And companies also may influence the industry under which they are listed. Lockheed, the largest manufacturer in Silicon Valley, still appears to call itself a miscellaneous business service because it does research and development. And that industry, miscellaneous business services, includes more than high tech, pumping up white collar totals for the Valley. But most business services in Santa Clara County—including temporary employment agencies—do most of their work in high tech. So, our "high-tech" category includes both computer and miscellaneous business services.

SILICON VALLEY HIGH-TECH EMPLOYMENT BY RACE AND GENDER, 1988

	Total	Officials & Managers	Professional	Technicians	Sales	Office & Clerical	Craft	Operatives	Laborers	Service
All	192,665	29,312	69,645	21,257	4,472	25,335	8,290	27,555	1,528	5,271
Men	120,597	23,045	50,338	16,319	2,922	5,213	5,638	12,091	978	4,053
Women	72,068	6,267	19,307	4,938	1,550	20,122	2,652	15,464	550	1,218
White	127,554	24,562	53,557	12,450	3,905	17,286	4,641	7,797	413	2,943
Men	83,506	19,438	39,049	9,815	2,612	3,043	3,552	3,385	315	2,297
Women	44,048	5,124	14,508	2,635	1,293	14,243	1,089	4,412	98	646
Minority	65,111	4,750	16,088	8,807	567	8,049	3,649	19,758	1,115	2,328
Men	37,091	3,607	11,289	6,504	310	2,170	2,086	8,706	663	1,756
Women	28,020	1,143	4,799	2,303	257	5,879	1,563	11,052	452	572
Black	8,297	662	1,880	987	118	1,831	423	1,605	86	705
Men	4,593	463	1,193	762	70	518	255	690	70	572
Women	3,704	199	687	225	48	1,313	168	915	16	133
Hispanic	18,127	1,195	2,642	2,197	214	3,327	1,446	5,887	383	836
Men	9,041	806	1,727	1,536	101	853	927	2,284	234	573
Women	9,086	389	915	661	113	2,474	519	3,603	149	263
Asian	37,734	2,766	11,345	5,502	223	2,724	1,727	12,089	640	718
Men	22,924	2,247	8,233	4,119	134	756	866	5,659	355	555
Women	14,810	519	3,112	1,383	89	1,968	861	6,430	285	163
Amer. Indian	953	127	221	121	12	167	53	177	6	69
Men	533	91	136	87	5	43	38	73	4	56
Women	420	36	85	34	7	124	15	104	2	13

PERCENTAGE DISTRIBUTION

	Total	Officials & Managers	Professional	Technicians	Sales	Office & Clerical	Craft	Operatives	Laborers	Service
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	62.6	78.6	72.3	76.8	65.3	20.6	68.0	43.9	64.0	76.9
Women	37.4	21.4	27.7	23.2	34.7	79.4	32.0	56.1	36.0	23.1
White	65.2	83.8	76.9	58.6	87.3	68.2	56.0	28.3	27.0	55.8
Men	43.3	66.3	56.1	46.2	58.4	12.0	42.8	12.3	20.6	43.6
Women	22.9	17.5	20.8	12.4	28.9	56.2	13.1	16.0	6.4	12.3
Minority	33.8	16.2	23.1	41.4	12.7	31.8	44.0	71.7	73.0	44.2
Men	19.3	12.3	16.2	30.6	6.9	8.6	25.2	31.6	43.4	33.3
Women	14.5	3.9	6.9	10.8	5.7	23.2	18.9	40.1	29.6	10.9
Black	4.3	2.3	2.7	4.6	2.6	7.2	5.1	5.8	5.6	13.4
Men	2.4	1.6	1.7	3.6	1.6	2.0	3.1	2.5	4.6	10.9
Women	1.9	0.7	1.0	1.1	1.1	5.2	2.0	3.3	1.0	2.5
Hispanic	9.4	4.1	3.8	10.3	4.8	13.1	17.4	21.4	25.1	15.9
Men	4.7	2.7	2.5	7.2	2.3	3.4	11.2	8.3	15.3	10.9
Women	4.7	1.3	1.3	3.1	2.5	9.8	6.3	13.1	9.8	5.0
Asian	19.6	9.4	16.3	25.9	5.0	10.8	20.8	43.9	41.9	13.6
Men	11.9	7.7	11.8	19.4	3.0	3.0	10.4	20.5	23.2	10.5
Women	7.7	1.8	4.5	6.5	2.0	7.8	10.4	23.3	18.7	3.1
Amer. Indian	0.5	0.4	0.3	0.6	0.3	0.7	0.6	0.6	0.4	1.3
Men	0.3	0.3	0.2	0.4	0.1	0.2	0.5	0.3	0.3	1.1
Women	0.2	0.1	0.1	0.2	0.2	0.5	0.2	0.4	0.1	0.2

SILICON VALLEY ELECTRONICS EMPLOYMENT BY RACE AND GENDER, 1988

	Total	Officials & Managers	Professional	Technicians	Sales	Office & Clerical	Craft	Operatives	Laborers	Service
All	121,994	20,521	39,739	16,135	2,367	15,295	5,499	20,782	883	773
Men	74,653	16,163	28,301	12,402	1,716	3,121	3,434	8,368	505	643
Women	47,341	4,358	11,438	3,733	651	12,174	2,065	12,414	378	130
White	78,057	17,041	29,760	9,444	2,118	10,539	2,852	5,854	118	331
Men	50,359	13,543	21,267	7,521	1,555	1,829	2,041	2,248	76	279
Women	27,698	3,498	8,493	1,923	563	8,710	811	3,606	42	52
Minority	43,937	3,480	9,979	6,691	249	4,756	2,647	14,928	765	442
Men	24,294	2,620	7,034	4,881	161	1,292	1,393	6,120	429	364
Women	19,643	860	2,945	1,810	88	3,464	1,254	8,808	336	78
Black	5,004	493	1,100	721	56	965	303	1,237	48	81
Men	2,675	340	715	568	36	265	172	481	36	62
Women	2,329	153	385	153	20	700	131	756	12	19
Hispanic	12,306	891	1,559	1,717	72	2,005	1,030	4,610	187	235
Men	5,869	592	1,004	1,200	44	536	589	1,612	99	193
Women	6,437	299	555	517	28	1,469	441	2,998	88	42
Asian	26,016	1,999	7,193	4,149	115	1,683	1,280	8,953	527	117
Men	15,414	1,622	5,234	3,040	78	460	611	3,974	292	103
Women	10,602	377	1,959	1,109	37	1,223	669	4,979	235	14
Amer. Indian	611	97	127	104	6	103	34	128	3	9
Men	336	66	81	73	3	31	21	53	2	6
Women	275	31	46	31	3	72	13	75	1	3

PERCENTAGE DISTRIBUTION

	Total	Officials & Managers	Professional	Technicians	Sales	Office & Clerical	Craft	Operatives	Laborers	Service
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	61.2	78.8	71.2	76.9	72.5	20.4	62.4	40.3	57.2	83.2
Women	38.8	21.2	28.8	23.1	27.5	79.6	37.6	59.7	42.8	16.8
White	64.0	83.0	74.9	58.5	89.5	68.9	51.9	28.2	13.4	42.8
Men	41.3	66.0	53.5	46.6	65.7	12.0	37.1	10.8	8.6	36.1
Women	22.7	17.0	21.4	11.9	23.8	56.9	14.7	17.4	4.8	6.7
Minority	36.0	17.0	25.1	41.5	10.5	31.1	48.1	71.8	86.6	57.2
Men	19.9	12.8	17.7	30.3	6.8	8.4	25.3	29.4	48.6	47.1
Women	16.1	4.2	7.4	11.2	3.7	22.6	22.8	42.4	38.1	10.1
Black	4.1	2.4	2.8	4.5	2.4	6.3	5.5	6.0	5.4	10.5
Men	2.2	1.7	1.8	3.5	1.5	1.7	3.1	2.3	4.1	8.0
Women	1.9	0.7	1.0	0.9	0.8	4.6	2.4	3.6	1.4	2.5
Hispanic	10.1	4.3	3.9	10.6	3.0	13.1	18.7	22.2	21.2	30.4
Men	4.8	2.9	2.5	7.4	1.9	3.5	10.7	7.8	11.2	25.0
Women	5.3	1.5	1.4	3.2	1.2	9.6	8.0	14.4	10.0	5.4
Asian	21.3	9.7	18.1	25.7	4.9	11.0	23.3	43.1	59.7	15.1
Men	12.6	7.9	13.2	18.8	3.3	3.0	11.1	19.1	33.1	13.3
Women	8.7	1.8	4.9	6.9	1.6	8.0	12.2	24.0	26.6	1.8
Amer. Indian	0.5	0.5	0.3	0.6	0.3	0.7	0.6	0.6	0.3	1.2
Men	0.3	0.3	0.2	0.5	0.1	0.2	0.4	0.3	0.2	0.8
Women	0.2	0.2	0.1	0.2	0.1	0.5	0.2	0.4	0.1	0.4

**SILICON VALLEY HIGH-TECH EMPLOYMENT BY RACE AND GENDER, 1980
PERCENTAGE DISTRIBUTION**

	Total	Officials & Managers	Professional	Technicians	Sales	Office & Clerical	Craft	Operatives	Laborers	Service
All (Total #)	144,784	19,272	39,051	19,676	2,100	20,924	10,098	28,592	1,798	3,273
Men	60.9	85.9	82.7	75.4	68.4	19.6	62.1	31.9	42.9	84.7
Women	39.1	14.1	17.3	24.6	31.6	80.4	37.9	68.1	57.1	15.3
White	73.0	88.4	84.2	71.9	91.4	76.7	66.8	49.5	44.5	60.8
Men	47.1	76.8	70.0	55.3	64.1	13.1	45.0	15.8	22.4	50.4
Women	25.9	11.6	14.2	16.7	27.3	63.6	21.8	33.6	22.1	10.5
Minority	27.1	11.7	15.8	28.0	8.7	23.3	33.2	50.5	55.6	39.2
Women	13.3	2.6	3.1	7.9	4.4	16.8	16.1	34.4	35.0	4.9
Black	4.9	2.1	2.2	4.1	2.1	6.3	6.0	8.6	8.0	14.2
Men	2.7	1.6	1.7	3.1	1.3	2.3	3.1	3.5	3.8	12.3
Women	2.3	0.5	0.5	1.0	0.9	4.1	2.8	5.1	4.2	2.0
Hispanic	10.6	4.1	3.2	9.6	3.0	10.1	15.4	22.9	31.5	17.6
Men	4.6	2.9	2.4	6.2	1.4	2.6	8.1	6.5	10.9	15.3
Women	6.0	1.2	0.7	3.4	1.7	7.5	7.3	16.4	20.6	2.3
Asian	10.9	5.0	10.0	13.9	3.0	6.2	11.2	18.3	15.1	6.8
Men	6.2	4.2	8.3	10.5	1.4	1.5	5.4	5.9	5.5	6.4
Women	4.7	0.8	1.8	3.4	1.6	4.7	5.8	12.4	9.7	0.4
Amer. Indian	0.5	0.5	0.4	0.4	0.4	0.7	0.7	0.7	0.9	0.5
Men	0.3	0.4	0.3	0.3	0.2	0.1	0.5	0.2	0.4	0.3
Women	0.3	0.1	0.1	0.1	0.2	0.5	0.2	0.5	0.5	0.2

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