3.0 SOUTHWESTERN U.S. MARKET FOR DATA PROCESSING HARDWARE AND SOFTWARE

The U.S. produced $34 billion of computing hardware and software in 1982. The Southwestern United States market area produced $14 billion during the same year. California is the nation's leading computer producing state and produced $10.2 billion ($30%) of the national total in 1982. Arizona, Utah, Colorado, and Nevada, the other Southwestern U.S. states included in the study, contributed a further $3.6 billion.

The market area exported a combined total of $1.4 billion of computer products to international markets during 1982. Southern and Northern California contributed $719 million and $619 million respectively to this total. The remaining segments of the market area only contributed a very small amount. This does not mean that there are no large computer manufacturers or service companies operating in the market area outside California. International computer exports from the market area account for 10 percent of the area's total shipments. This figure is substantially below the average percentage of international exports from the area for most value added manufactured products. We believe that low international exports of computer equipment from this major producing region are indicative of the relatively high consumption of computer equipment in the Southwestern U.S. market. It is not possible to determine the value of computer products shipped to other parts of the U.S. from the market area nor is it possible to quantify the value of exports which are shipped to the Southwestern U.S. from other countries.

As previously mentioned, U.S. national consumption of computing equipment and software was $27.2 billion in 1982. Although there are no consumption figures available for the Southwestern U.S., industry sources estimate that consumption could be higher than 20 percent of the national total and could thus be estimated at $6 billion per annum. This is, in part, due to the fact that the Southwestern area, and particularly California, is the main computer producing area in the U.S. New technology is constantly being developed there and this inevitably leads to a greater awareness of computer possibilities, familiarity with usage, and increased consumption.

There is no obvious shortage in the supply of computer products in the Southwestern market but there is nevertheless a vigorous market for imported products in a wide variety of types. We found that 7.5 percent of the computer systems manufacturers we interviewed* import products in one form or another for inclusion in their systems and that approximately 13.4 percent of all products sold by hardware distributors are imported. The interviews which follow in sections 4, 5 and 6 clearly outline the possibilities. It should not be forgotten that the market is expanding at a rate of 18 percent a year which further increases prospects for exports.

The 1977 Census of Manufacturers' figures for shipments on an individual basis in the Southwestern United States are the latest figures available. Since that year, shipments have tripled in the computer industry and this fact alone renders the 1977 figures completely inoperative. Official figures are available, however, which show that in 1981, 500* computer manufacturers were operating in the market area. This represents an increase of 36 percent over 1977. The increase in the Southwestern U.S. was 6 percent higher than the national average during the same period and as can be seen from Table 3.0, the market area contained 43 percent of all hardware and software manufacturing facilities in the U.S. During the course of the study we determined that Northern California is the largest production center for software. Thirty-nine of the top U.S. seventy-five companies which produce software packages for desk top and home computers are located in the market area. Twenty-three of these companies are located in Northern California, fifteen in Southern California and only one in Colorado.

Table 3.0
Geographic Distribution of the Computer Industry in the Southwestern United States in 1981

	No. of Employees	Annual Payroll ($1000)	No. of Establishments
California	100,688	2,353,230	427
Colorado	20,000	undisclosed	25
Utah	4,000	undisclosed	19
Arizona	16,825	389,195	22
U.S. Total	360,000	undisclosed	1,200

Source: U.S. Department of Commerce "County Business Patterns"

* U.S. Dept. of Commerce, County Business Patterns 1981

3.1 COMPUTER PRODUCTION CENTERS IN THE SOUTHWESTERN U.S.

Table 3.0 clearly indicates the major computer production and technology centers in the Southwestern U.S. market. Santa Clara County, approximately forty miles south of San Francisco, is the nation's individual largest computer production area. Most major U.S. and many foreign computing producers maintain production facilities and offices in the "Silicon Valley" area. The rapid growth of Silicon Valley is a phenomenon which has been as spectacular as the growth of the computer industry itself. In 1971, an economic profile of the area listed aerospace as the main industry in the area; no mention was made of the computer industry. Since that time, over 130 computer production facilities have been established in the area, employing a workforce which is in excess of 56,000. The main reason for the substantial development of the computer industry in the

* Interviews were confined in the main to U.S. companies.