

CAD/CAM/CAE

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Welcome to Dataquest

CAD/CAM/CAE

You are in the *CAD/CAM/CAE Europe* binder

This binder contains detailed market statistics, including market share and forecasts, of the overall European market. It also contains *Dataquest Perspectives* dedicated to the European CAD/CAM/CAE industry.

Other* CAD/CAM/CAE binders are:

Dataquest Perspective

A series of multitopic publications that provide analysis on worldwide CAD/CAM/CAE markets, companies, technologies, exhibitions, and trade shows, as well as news and views from around the industry.

Source: Dataquest

A biannually updated collection of reference and statistical documents about the worldwide CAD/CAM/CAE industry. Worldwide, regional, and industry segment market statistics, *Company Backgrounders*, and several guides such as *How to Use Dataquest*, *Dataquest Research Methodology*, and *Dataquest High-Technology Guide—Segmentation and Glossary* are contained in this binder.

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CAD/CAM/CAE

Europe

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Forecasts—Europe

Forecasting Methodology

Fundamental to the way Dataquest conducts its research is an underlying philosophy that says the best data and analyses come from a well-balanced program. This program includes balance between primary and secondary collection techniques; balance between supply-side and demand-side analysis; balance between focused, industry-specific research and coordinated, "big-picture" analysis aided by integration of data from the more than 25 separate high-technology industries Dataquest covers; and balance between the perspectives of experienced industry professionals and rigorous, disciplined techniques of seasoned market researchers.

Dataquest also analyzes trends in the macro-environment, which can have major influences on both supply-side and demand-side forecasting. In addition to demographics, analysts look at GNP growth, interest rate fluctuation, currency fluctuation, business expectations, and capital spending plans. In the geopolitical arena, the group looks at trade issues, political stability or lack thereof, tariffs, nontariff barriers, and such factors as the effect on Europe of the events of 1992.

Figure 1 is a pictorial summary of the information compendium offered by the Dataquest CAD/CAM/CAE group.

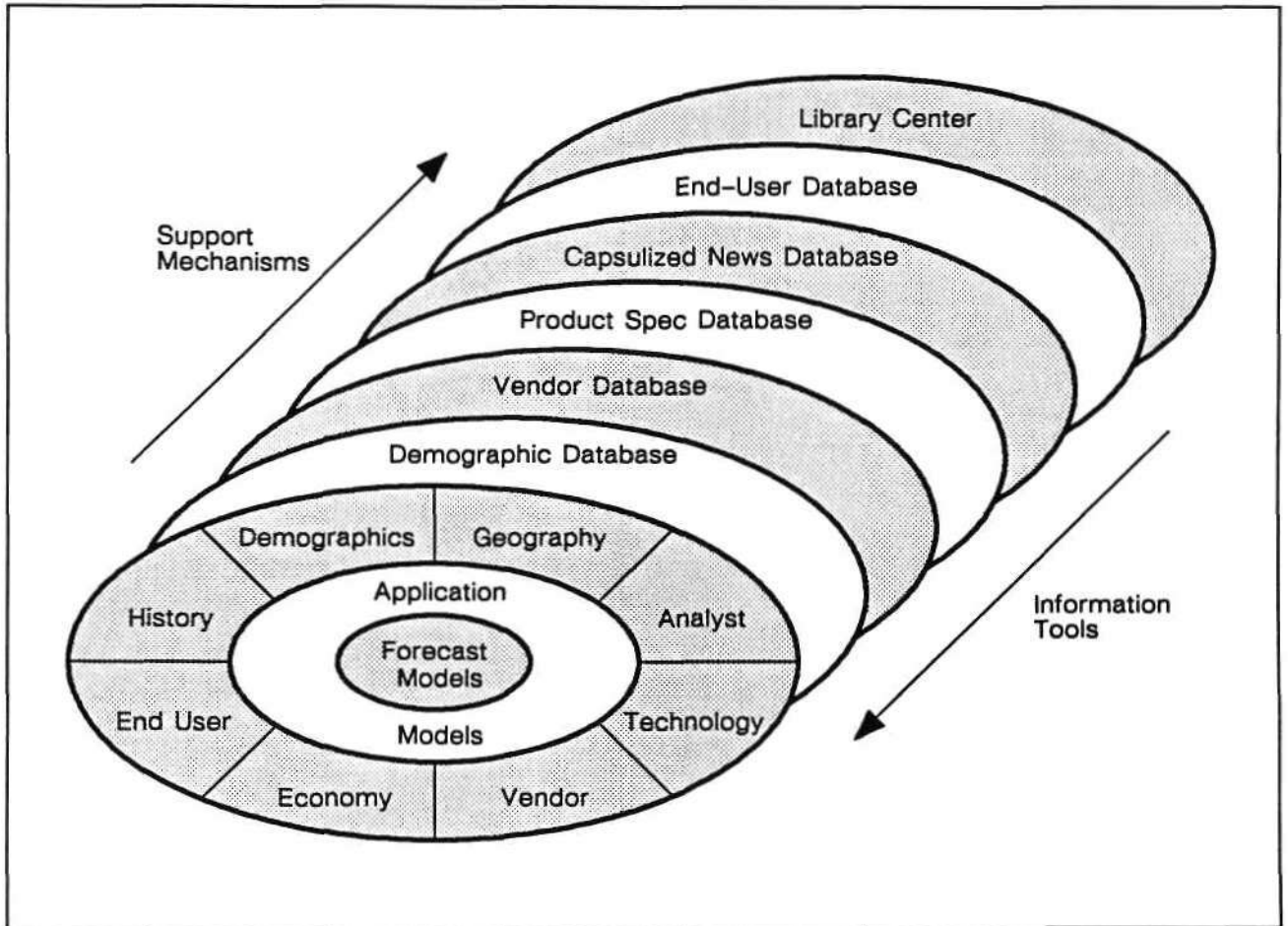
Dataquest's revenue and shipment estimates are based on the following sources:

- Information supplied by company management or gathered from publicly available published sources
- End-user surveys
- Information supplied by other Dataquest industry services relating to components/subsystems of CAD/CAM/CAE
- Information provided by OEMs or resellers of the manufacturers' products
- Senior staff estimates based on reliable historical data and in-depth understanding of a company's products and strategies

The CAD/CAM/CAE industry market estimates and forecasts are derived using the following research techniques:

- "Bottom-up" aggregation—This method involves adding all relevant vendor contributions to arrive at total market estimates for all historical data.
- Segment forecasting—For each application segment tracked by the CAD/CAM/CAE group, individual forecasts are derived following the basic information model defined previously. Specifically, each design phase covered within each application is segmented by channel, product, region, and platform. In this way, each application segment incorporates its own set of unique assumptions.
- Demand-based analysis—Market growth is tracked and forecast in terms of the present and anticipated demand of current and future users. This requires the development of a total available market (TAM) model and a satisfied available market figure to accurately assess the levels of penetration. Installed base and rates of product retirement are also evaluated. In addition, Dataquest analysts factor in the acceptance or ability for users to consume new technology.
- Capacity-based analysis—This method involves identifying future shipment volume constraints. These constraints, or "ceilings," can be the result of component availability, manufacturing capacity, or distribution capacity. In any case, constraint is capable of keeping shipments below the demand level.

Figure 1
Information Compendium



Source: Dataquest (September 1991)

TABLE NUMBER: 1
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	46,359	78,139	96,895	130,744	166,731	201,680	239,730	275,280	305,910	331,440	38%	15%
Workstation Shipments	53,755	87,271	106,715	143,780	179,185	213,170	249,940	283,800	313,260	337,940	35%	14%
CPU Installed Base	67,302	144,190	235,984	352,443	483,830	640,430	829,720	1,055,170	1,311,370	1,593,290	64%	27%
Workstation Installed Base	83,392	169,421	271,104	400,865	541,616	714,600	915,250	1,150,190	1,414,700	1,704,070	60%	26%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	102.8	50.3	61.3	63.4	60.1	57.9	55.2	53.1	52.1	51.9	-13%	-3%
Hardware-Only ASP	12.6	11.8	12.6	11.3	9.6	8.9	8.3	7.8	7.6	7.8	-7%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	1,430	1,583	2,225	2,576	2,816	3,361	3,705	4,056	4,420	4,843	18%	11%
CPU Revenue	899	1,026	1,675	2,033	2,310	2,477	2,745	3,023	3,310	3,618	27%	9%
Workstation Revenue	331	320	280	240	178	219	209	186	165	142	-14%	-4%
Peripheral Revenue (Turnkey)	200	237	270	303	328	665	752	847	945	1,084	13%	27%
Software Revenue	447	857	965	1,161	1,448	1,544	1,847	2,217	2,651	3,165	34%	17%
Bundled	318	335	436	627	749	662	728	807	890	1,017	24%	6%
Unbundled	129	522	529	534	699	881	1,119	1,410	1,762	2,148	53%	25%
Service Revenue	190	456	610	755	945	1,079	1,219	1,383	1,568	1,793	49%	14%
Total Revenue	2,068	2,896	3,800	4,492	5,210	5,983	6,771	7,656	8,639	9,802	26%	13%
Increase over Prior Year	79%	40%	31%	18%	16%	15%	13%	13%	13%	13%		

Source: Dataquest
 September 1991

TABLE NUMBER: 2
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Europe
 PLATFORM: Technical Workstation

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	7,724	14,572	25,818	39,982	47,598	59,560	72,940	88,520	106,360	128,460	58%	22%
Workstation Shipments	7,724	14,572	25,818	39,982	47,598	59,560	72,940	88,520	106,360	128,460	58%	22%
CPU Installed Base	11,978	26,402	51,605	89,775	133,400	183,800	248,170	328,090	425,850	545,710	83%	33%
Workstation Installed Base	11,978	26,402	51,605	89,775	133,400	183,800	248,170	328,090	425,850	545,710	83%	33%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	73.3	49.9	50.6	55.3	53.7	51.5	49.8	48.8	48.6	48.9	-7%	-2%
Hardware-Only ASP	31.3	24.7	24.5	17.8	19.0	17.2	15.7	14.9	14.3	14.2	-12%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	357	452	856	1,201	1,390	1,845	2,143	2,510	2,901	3,375	41%	19%
CPU Revenue	296	359	705	1,012	1,178	1,442	1,659	1,927	2,222	2,578	41%	17%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	60	93	151	189	211	403	484	584	679	797	37%	30%
Software Revenue	168	411	522	710	911	950	1,207	1,545	1,928	2,374	53%	21%
Bundled	143	179	257	443	542	451	534	636	733	858	40%	10%
Unbundled	25	232	266	267	369	499	674	909	1,196	1,516	96%	33%
Service Revenue	49	176	307	475	620	750	897	1,084	1,283	1,516	89%	20%
Total Revenue	573	1,039	1,686	2,386	2,921	3,545	4,248	5,140	6,113	7,265	50%	20%
Increase over Prior Year	137%	81%	62%	42%	22%	21%	20%	21%	19%	19%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 3
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Europe
 PLATFORM: Host/Server

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	----	----	----	----	----	----	----	----	----	----	-----	-----
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,730	4,007	5,131	5,002	5,733	6,200	6,280	5,980	5,750	5,570	35%	-1%
Workstation Shipments	9,127	13,138	14,951	18,038	18,187	17,690	16,490	14,510	13,100	12,070	19%	-8%
CPU Installed Base	3,827	7,824	12,887	17,622	22,017	27,750	32,870	37,890	42,690	47,310	55%	17%
Workstation Installed Base	19,917	33,055	48,007	66,045	79,803	101,920	118,410	132,920	146,010	158,080	41%	15%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	578.5	235.1	338.4	339.9	258.3	244.2	232.9	221.4	211.1	202.6	-16%	-5%
Hardware-Only ASP	497.4	241.5	124.4	134.0	110.1	102.1	94.8	87.4	80.9	74.6	-31%	-7%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	825	828	974	880	808	802	751	660	592	537	-1%	-8%
CPU Revenue	377	394	603	574	571	400	370	322	286	248	11%	-15%
Workstation Revenue	331	320	280	240	178	219	209	186	165	142	-14%	-4%
Peripheral Revenue (Turnkey)	117	113	91	66	59	183	172	152	141	147	-16%	20%
Software Revenue	183	266	237	204	236	227	213	190	179	181	7%	-5%
Bundled	144	123	146	152	178	173	162	143	131	131	5%	-6%
Unbundled	39	143	91	52	58	54	52	47	48	50	11%	-3%
Service Revenue	129	252	270	240	274	269	251	221	201	189	21%	-7%
Total Revenue	1,137	1,345	1,482	1,323	1,318	1,297	1,216	1,071	972	907	4%	-7%
Increase over Prior Year	40%	18%	10%	-11%	-0%	-2%	-6%	-12%	-9%	-7%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 4
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Europe
 PLATFORM: Personal Computer

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	36,904	59,560	65,946	85,760	113,400	135,930	160,510	180,780	193,800	197,410	32%	12%
Workstation Shipments	36,904	59,560	65,946	85,760	113,400	135,930	160,510	180,780	193,800	197,410	32%	12%
CPU Installed Base	51,497	109,963	171,492	245,046	328,413	428,800	548,680	689,180	842,830	1,000,270	59%	25%
Workstation Installed Base	51,497	109,963	171,492	245,046	328,413	428,800	548,680	689,180	842,830	1,000,270	59%	25%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	19.4	10.1	13.7	20.2	19.2	22.1	22.4	22.6	22.7	22.9	-0%	4%
Hardware-Only ASP	5.5	4.5	5.4	5.0	4.8	4.8	4.7	4.7	4.6	4.6	-3%	-1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	249	303	395	495	619	714	812	886	926	932	26%	9%
CPU Revenue	226	273	368	446	561	635	716	774	802	792	25%	7%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	23	30	28	49	58	79	96	112	125	140	27%	19%
Software Revenue	96	181	205	247	301	367	427	481	544	610	33%	15%
Bundled	31	33	33	32	29	38	33	27	26	28	-2%	-1%
Unbundled	65	147	172	215	272	329	394	454	518	582	43%	16%
Service Revenue	13	28	33	41	51	60	70	77	84	88	42%	11%
Total Revenue	358	511	633	783	971	1,141	1,308	1,444	1,554	1,630	28%	11%
Increase over Prior Year	273%	43%	24%	24%	24%	17%	15%	10%	8%	5%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 5
 TITLE: Final History and Forecast
 APPLICATION: Mechanical
 REGION: Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	====	====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	24,245	38,180	49,568	61,512	77,637	90,290	103,330	115,030	123,180	126,850	34%	10%
Workstation Shipments	30,041	45,253	57,539	70,953	86,707	98,490	110,580	121,090	128,650	131,980	30%	9%
CPU Installed Base	34,811	72,409	119,440	173,804	238,915	301,900	380,300	470,640	569,140	671,310	62%	23%
Workstation Installed Base	47,250	91,927	146,969	210,934	283,516	357,510	443,950	541,040	645,680	753,650	57%	22%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	111.8	55.5	69.4	68.4	64.0	60.3	56.6	53.6	52.1	52.0	-13%	-4%
Hardware-Only ASP	12.0	13.4	13.4	13.0	10.7	10.0	9.3	8.6	8.4	8.3	-3%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	870	942	1,360	1,489	1,585	1,785	1,851	1,887	1,930	1,960	16%	4%
CPU Revenue	489	574	975	1,140	1,265	1,293	1,347	1,383	1,414	1,428	27%	2%
Workstation Revenue	252	228	215	175	123	125	119	107	102	97	-16%	-5%
Peripheral Revenue (Turnkey)	129	140	170	175	197	367	385	396	414	435	11%	17%
Software Revenue	225	421	500	584	750	764	871	994	1,147	1,300	35%	12%
Bundled	177	188	271	353	443	380	391	397	409	426	26%	-1%
Unbundled	47	233	229	231	307	384	480	597	738	874	59%	23%
Service Revenue	112	270	360	441	550	599	638	675	725	774	49%	7%
Total Revenue	1,207	1,634	2,220	2,514	2,885	3,148	3,360	3,556	3,802	4,034	24%	7%
Increase over Prior Year	73%	35%	36%	13%	15%	9%	7%	6%	7%	6%		

Source: Dataquest
 September 1991

TABLE NUMBER: 6
 TITLE: Final History and Forecast
 APPLICATION: AEC
 REGION: Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	9,676	15,974	19,412	28,690	38,045	47,570	58,350	69,190	78,280	86,930	41%	18%
Workstation Shipments	10,347	16,878	20,304	30,051	39,244	48,700	59,290	69,910	78,790	87,290	40%	17%
CPU Installed Base	14,630	30,228	48,341	73,709	97,795	141,800	189,220	247,690	315,250	391,460	61%	32%
Workstation Installed Base	16,238	32,741	51,755	78,520	102,932	149,150	197,650	256,930	325,110	401,780	59%	31%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	109.9	38.5	45.6	50.6	45.9	45.0	43.2	42.2	41.3	41.1	-20%	-2%
Hardware-Only ASP	10.7	6.9	9.6	7.6	6.6	6.2	5.8	5.4	5.3	5.2	-11%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	186	188	303	358	410	497	558	622	687	768	22%	13%
CPU Revenue	135	140	249	287	339	387	438	490	541	601	26%	12%
Workstation Revenue	33	29	28	22	18	25	22	17	13	8	-14%	-15%
Peripheral Revenue (Turnkey)	17	19	27	49	53	85	99	114	133	159	32%	25%
Software Revenue	47	106	127	164	206	234	288	355	428	518	45%	20%
Bundled	27	35	48	72	85	75	81	87	99	119	34%	7%
Unbundled	20	71	79	92	122	158	207	267	329	399	57%	27%
Service Revenue	22	60	85	92	107	123	137	153	174	203	48%	14%
Total Revenue	255	354	516	613	724	853	983	1,130	1,288	1,489	30%	16%
Increase over Prior Year	77%	39%	45%	19%	18%	18%	15%	15%	14%	16%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 7
 TITLE: Final History and Forecast
 APPLICATION: GIS/Mapping
 REGION: Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,015	4,807	6,070	12,846	18,215	25,050	33,300	42,820	53,190	61,120	106%	27%
Workstation Shipments	1,529	5,458	6,840	13,932	19,580	26,430	34,610	43,990	54,190	61,920	89%	26%
CPU Installed Base	1,140	5,946	11,975	24,495	39,648	64,050	94,720	134,920	185,490	244,000	143%	44%
Workstation Installed Base	2,056	7,513	14,314	27,933	43,596	70,340	102,410	143,870	195,520	254,910	115%	42%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	198.5	73.8	81.8	80.2	73.0	68.5	64.4	61.5	59.6	58.7	-22%	-4%
Hardware-Only ASP	27.7	15.4	12.3	9.6	8.2	7.6	7.0	6.5	6.2	6.1	-26%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	91	140	162	279	348	517	667	847	1,061	1,293	40%	30%
CPU Revenue	49	91	123	225	293	398	517	660	828	1,006	57%	28%
Workstation Revenue	31	33	24	16	15	27	28	27	24	20	-17%	7%
Peripheral Revenue (Turnkey)	12	16	15	38	40	91	122	160	209	266	36%	46%
Software Revenue	24	48	77	135	184	211	283	369	477	600	67%	27%
Bundled	16	28	34	88	117	104	137	180	233	301	63%	21%
Unbundled	7	19	42	47	67	107	145	190	244	299	75%	35%
Service Revenue	16	32	49	82	111	152	199	257	328	411	61%	30%
Total Revenue	131	220	288	496	643	880	1,149	1,474	1,866	2,304	49%	29%
Increase over Prior Year	170%	68%	31%	72%	30%	37%	31%	28%	27%	23%		

Forecasts—Europe

Source: Dataquest
 September 1991

TABLE NUMBER: 8
 TITLE: Fiscal History and Forecast
 APPLICATION: Electronic Design Automation
 REGION: Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	11,423	19,178	21,844	27,696	32,835	38,770	44,750	48,250	51,260	56,540	30%	11%
Workstation Shipments	11,838	19,682	22,032	28,844	33,654	39,550	45,460	48,810	51,620	56,750	30%	11%
CPU Installed Base	16,721	35,606	56,228	80,435	107,472	132,690	165,480	201,920	241,490	286,530	59%	22%
Workstation Installed Base	17,848	37,240	58,066	83,478	111,571	137,600	171,250	208,350	248,390	293,730	58%	21%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	70.7	38.0	44.1	48.6	48.6	50.8	50.6	49.8	48.9	48.6	-9%	0%
Hardware-Only ASP	14.9	12.8	13.6	12.6	11.5	10.9	10.4	10.5	10.9	12.0	-6%	1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	283	312	400	450	474	562	629	700	741	823	14%	12%
CPU Revenue	226	221	329	381	413	399	444	488	526	584	16%	7%
Workstation Revenue	15	30	14	28	22	41	40	35	26	16	9%	-5%
Peripheral Revenue (Turnkey)	41	61	58	41	39	122	145	176	189	223	-2%	42%
Software Revenue	153	281	261	277	307	334	406	498	600	747	19%	19%
Bundled	98	83	82	113	104	103	119	142	149	171	1%	11%
Unbundled	54	198	179	164	204	231	287	356	451	576	39%	23%
Service Revenue	39	94	116	141	177	205	245	298	341	405	46%	18%
Total Revenue	474	687	777	869	958	1,102	1,280	1,496	1,682	1,975	19%	16%
Increase over Prior Year	80%	45%	13%	12%	10%	15%	16%	17%	12%	17%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 9
 TITLE: Final History and Forecast
 APPLICATION: Electronic CAE
 REGION: Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	6,730	10,327	11,721	18,392	22,100	26,220	30,360	33,080	34,990	38,390	35%	12%
Workstation Shipments	6,835	10,476	11,694	18,815	22,325	26,410	30,490	33,160	35,040	38,420	34%	11%
CPU Installed Base	10,450	20,553	31,435	47,650	65,742	84,850	108,370	134,700	163,010	194,770	58%	24%
Workstation Installed Base	10,682	20,935	31,794	48,448	66,914	86,140	109,840	136,290	164,690	196,520	58%	24%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	50.4	34.1	40.3	49.7	47.1	49.8	50.0	49.2	48.5	48.4	-2%	1%
Hardware-Only ASP	15.4	13.0	13.6	10.1	9.4	8.9	8.6	8.7	9.8	11.6	-12%	4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	140	160	207	250	264	321	367	426	463	536	17%	15%
CPU Revenue	110	108	163	204	227	232	263	299	329	382	20%	11%
Workstation Revenue	5	10	4	11	7	14	12	9	7	6	10%	-2%
Peripheral Revenue (Turnkey)	26	42	40	35	30	75	92	118	126	148	4%	38%
Software Revenue	66	130	133	157	180	204	266	344	425	541	28%	25%
Bundled	42	40	43	65	55	53	63	82	84	89	7%	10%
Unbundled	24	90	90	92	125	152	203	262	342	451	51%	29%
Service Revenue	14	41	57	75	94	113	143	186	220	271	61%	24%
Total Revenue	220	332	397	482	537	638	777	956	1,108	1,348	25%	20%
Increase over Prior Year	56%	51%	20%	21%	12%	19%	22%	23%	16%	22%		

Source: Dataquest
 September 1991

TABLE NUMBER: 10
 TITLE: Final History and Forecast
 APPLICATION: IC Layout
 REGION: Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	377	1,277	1,491	1,865	2,238	2,990	3,870	4,830	5,580	6,200	56%	23%
Workstation Shipments	390	1,304	1,498	1,839	2,227	2,990	3,870	4,830	5,580	6,200	55%	23%
CPU Installed Base	683	1,950	3,404	5,131	7,396	9,380	12,620	16,840	21,860	27,630	81%	30%
Workstation Installed Base	775	2,070	3,534	5,243	7,505	9,530	12,790	17,030	22,070	27,860	76%	30%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	104.2	30.1	56.8	54.3	53.5	51.0	48.9	47.7	47.1	47.1	-15%	-3%
Hardware-Only ASP	46.7	25.5	24.6	20.7	21.1	18.5	16.4	14.9	13.9	13.4	-18%	-9%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	20	29	40	41	49	56	64	73	77	76	25%	9%
CPU Revenue	16	21	33	38	46	40	46	53	58	56	31%	4%
Workstation Revenue	1	3	2	1	1	5	5	5	3	2	-4%	7%
Peripheral Revenue (Turnkey)	3	5	5	2	2	11	13	15	16	19	-14%	63%
Software Revenue	19	37	32	26	29	31	35	41	51	64	12%	17%
Bundled	6	5	6	4	6	8	9	9	10	15	-0%	20%
Unbundled	13	32	27	22	23	23	26	32	41	49	17%	16%
Service Revenue	3	9	15	14	21	23	26	30	34	36	57%	11%
Total Revenue	42	76	87	81	99	111	125	144	162	176	24%	12%
Increase over Prior Year	25%	80%	15%	-6%	22%	12%	13%	15%	13%	9%		

Source: Dataquest
 September 1991

TABLE NUMBER: 11
 TITLE: Final History and Forecast
 APPLICATION: PCB/Hybrid/MCM
 REGION: Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	4,316	7,574	8,632	7,438	8,496	9,560	10,530	10,340	10,690	11,950	18%	7%
Workstation Shipments	4,614	7,901	8,839	8,190	9,102	10,160	11,100	10,820	11,000	12,130	19%	6%
CPU Installed Base	5,588	13,103	21,390	27,654	34,334	38,470	44,490	50,380	56,620	64,130	57%	13%
Workstation Installed Base	6,391	14,235	22,738	29,788	37,151	41,940	48,610	55,030	61,630	69,350	55%	13%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	99.6	44.7	48.0	46.8	50.1	52.2	51.7	51.3	49.8	49.0	-16%	-0%
Hardware-Only ASP	11.7	10.6	11.5	17.5	14.7	14.2	13.9	14.4	13.4	12.8	6%	-3%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	123	123	153	160	161	185	198	201	201	210	7%	5%
CPU Revenue	101	92	133	138	140	126	135	136	139	145	9%	1%
Workstation Revenue	9	17	8	17	14	22	23	21	16	9	11%	-9%
Peripheral Revenue (Turnkey)	13	14	13	5	7	37	41	44	47	56	-14%	51%
Software Revenue	68	114	96	94	98	99	104	113	123	143	10%	8%
Bundled	50	38	34	44	43	42	47	51	55	67	-4%	9%
Unbundled	17	76	62	50	55	57	58	62	68	76	34%	7%
Service Revenue	22	43	45	52	62	69	75	82	88	98	30%	10%
Total Revenue	212	280	294	306	322	353	378	396	412	451	11%	7%
Increase over Prior Year	140%	32%	5%	4%	5%	10%	7%	5%	4%	9%		

Source: Dataquest
 September 1991

TABLE NUMBER: 12
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Benelux
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	3,315	5,691	7,132	9,333	11,107	13,370	15,620	17,270	18,860	19,560	35%	12%
Workstation Shipments	4,048	6,780	8,291	10,273	11,973	14,030	16,190	17,720	19,230	19,870	31%	11%
CPU Installed Base	4,356	9,999	16,844	25,246	34,887	44,080	56,120	69,800	85,080	101,050	68%	24%
Workstation Installed Base	5,456	12,189	20,193	29,541	39,828	49,990	62,670	76,870	92,580	108,940	64%	22%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	125.5	40.4	54.2	70.9	65.6	56.6	54.2	52.3	51.5	51.5	-15%	-5%
Hardware-Only ASP	12.4	11.8	12.4	10.9	10.3	9.3	8.6	8.0	7.8	7.9	-5%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	104	102	154	177	188	212	230	242	260	272	16%	8%
CPU Revenue	62	72	114	141	155	162	177	188	204	213	25%	7%
Workstation Revenue	27	18	24	17	13	16	16	14	12	10	-16%	-5%
Peripheral Revenue (Turnkey)	14	12	16	19	20	33	37	40	44	48	9%	19%
Software Revenue	30	60	58	66	74	72	83	96	111	128	25%	12%
Bundled	22	19	24	40	41	31	33	35	37	40	16%	-0%
Unbundled	8	41	35	27	33	40	50	61	75	88	44%	22%
Service Revenue	13	36	46	56	62	66	73	80	89	97	48%	9%
Total Revenue	147	198	258	300	324	350	387	418	460	496	22%	9%
Increase over Prior Year	89%	35%	30%	16%	8%	8%	11%	8%	10%	8%		

Source: Dataquest
 September 1991

TABLE NUMBER: 13
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Benelux
 PLATFORM: Technical Workstation

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	414	1,006	1,795	2,853	3,032	3,630	4,370	5,110	6,060	7,070	64%	18%
Workstation Shipments	414	1,006	1,795	2,853	3,032	3,630	4,370	5,110	6,060	7,070	64%	18%
CPU Installed Base	545	1,548	3,326	6,104	9,258	12,000	15,820	20,400	25,920	32,440	103%	29%
Workstation Installed Base	545	1,548	3,326	6,104	9,258	12,000	15,820	20,400	25,920	32,440	103%	29%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	79.1	45.8	43.0	56.4	52.9	50.9	49.3	48.4	48.3	48.7	-10%	-2%
Hardware-Only ASP	32.5	24.9	23.8	16.6	18.6	16.8	15.4	14.6	14.1	14.0	-13%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	19	28	55	82	85	113	129	145	166	186	46%	17%
CPU Revenue	15	22	46	70	72	91	103	115	132	148	47%	16%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	4	6	10	12	14	22	26	30	34	38	39%	23%
Software Revenue	11	34	33	44	47	42	53	66	81	95	45%	15%
Bundled	9	12	12	28	28	18	21	25	28	30	34%	2%
Unbundled	2	22	20	16	19	24	32	41	53	65	78%	28%
Service Revenue	3	15	24	36	38	45	53	62	72	81	92%	16%
Total Revenue	32	78	112	162	171	200	235	273	319	363	52%	16%
Increase over Prior Year	208%	140%	44%	44%	6%	17%	17%	16%	17%	14%		

Source: Dataquest
 September 1991

TABLE NUMBER: 14
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Benelux
 PLATFORM: Host/Server

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	129	299	511	348	423	410	420	390	370	340	35%	-4%
Workstation Shipments	911	1,388	1,670	1,287	1,288	1,070	990	840	750	660	9%	-13%
CPU Installed Base	200	498	1,009	1,351	1,728	2,090	2,450	2,770	3,070	3,340	72%	14%
Workstation Installed Base	1,300	2,688	4,358	5,645	6,669	8,000	8,990	9,830	10,580	11,230	51%	11%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	651.6	181.2	176.9	414.7	299.2	281.1	267.9	254.8	243.2	233.6	-18%	-5%
Hardware-Only ASP	467.4	239.4	136.3	125.4	117.5	107.3	99.0	90.8	83.6	76.9	-29%	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	66	54	72	63	64	53	49	42	37	30	-1%	-14%
CPU Revenue	30	31	42	42	47	27	25	21	18	13	12%	-22%
Workstation Revenue	27	18	24	17	13	16	16	14	12	10	-16%	-5%
Peripheral Revenue (Turnkey)	9	6	6	5	5	9	9	7	7	6	-17%	6%
Software Revenue	15	19	18	13	15	14	13	11	10	11	-1%	-5%
Bundled	12	6	10	11	12	12	10	9	8	9	1%	-5%
Unbundled	3	13	7	2	3	2	2	2	2	2	-6%	-6%
Service Revenue	9	20	21	18	21	18	17	14	13	11	23%	-12%
Total Revenue	91	93	111	94	100	85	79	67	59	52	3%	-12%
Increase over Prior Year	51%	3%	19%	-15%	7%	-16%	-7%	-15%	-11%	-12%		

Source: Dataquest
 September 1991

TABLE NUMBER: 15
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Benelux
 PLATFORM: Personal Computer

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	====	====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	2,772	4,386	4,825	6,133	7,653	9,330	10,830	11,770	12,420	12,150	29%	10%
Workstation Shipments	2,723	4,386	4,825	6,133	7,653	9,330	10,830	11,770	12,420	12,150	29%	10%
CPU Installed Base	3,611	7,953	12,509	17,792	23,900	29,990	37,850	46,640	56,090	65,270	60%	22%
Workstation Installed Base	3,611	7,953	12,509	17,792	23,900	29,990	37,850	46,640	56,090	65,270	60%	22%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	19.6	5.2	7.9	16.5	15.2	14.0	14.1	14.4	14.6	15.1	-6%	-0%
Hardware-Only ASP	5.6	4.5	5.4	5.0	4.8	4.7	4.7	4.6	4.5	4.5	-4%	-1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	18	19	26	32	38	45	52	55	57	56	20%	8%
CPU Revenue	17	19	26	30	36	44	49	52	54	52	20%	7%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	1	1	1	2	2	2	2	3	3	4	17%	13%
Software Revenue	4	7	8	10	12	16	18	19	21	21	29%	12%
Bundled	2	1	1	1	1	2	1	1	1	1	-19%	-2%
Unbundled	2	6	7	9	11	14	16	18	19	21	48%	13%
Service Revenue	1	1	1	2	3	3	4	4	4	4	36%	8%
Total Revenue	23	28	35	44	53	64	73	78	82	81	23%	9%
Increase over Prior Year	234%	18%	28%	25%	20%	21%	13%	6%	5%	-1%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 16
 TITLE: Final History and Forecast
 APPLICATION: Mechanical
 REGION: Benelux
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,766	3,050	4,000	4,327	5,037	5,890	6,640	7,130	7,530	7,450	30%	8%
Workstation Shipments	2,389	3,937	4,784	5,037	5,691	6,360	7,040	7,450	7,810	7,690	24%	6%
CPU Installed Base	2,367	5,390	9,231	13,055	17,652	20,980	25,720	30,950	36,570	42,120	65%	19%
Workstation Installed Base	3,261	7,171	11,797	16,335	21,464	25,450	30,640	36,230	42,190	48,030	60%	17%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	135.8	37.7	54.5	79.0	72.6	60.3	56.7	53.7	52.4	52.3	-14%	-6%
Hardware-Only ASP	11.7	12.6	12.7	12.5	11.5	10.4	9.6	8.9	8.6	8.5	-0%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	66	60	93	103	103	113	116	114	115	112	12%	2%
CPU Revenue	36	42	67	80	83	84	87	86	87	85	23%	0%
Workstation Revenue	21	11	17	12	9	10	10	9	8	7	-18%	-4%
Peripheral Revenue (Turnkey)	10	7	9	11	11	18	19	19	20	20	3%	12%
Software Revenue	16	29	29	34	37	32	35	38	43	47	23%	5%
Bundled	14	9	13	23	24	17	16	15	15	15	15%	-9%
Unbundled	2	20	16	11	13	16	19	23	28	32	53%	20%
Service Revenue	8	23	26	33	33	35	36	36	38	38	43%	3%
Total Revenue	90	112	149	171	173	180	187	188	196	197	18%	3%
Increase over Prior Year	79%	24%	34%	15%	1%	4%	4%	1%	4%	1%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 17
 TITLE: Final History and Forecast
 APPLICATION: AEC
 REGION: Benelux
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	716	1,084	1,452	2,075	2,617	3,230	3,890	4,430	4,920	5,220	38%	15%
Workstation Shipments	753	1,176	1,590	2,169	2,710	3,300	3,940	4,470	4,940	5,240	38%	14%
CPU Installed Base	939	2,011	3,395	5,262	7,285	9,920	13,040	16,720	20,870	25,340	67%	28%
Workstation Installed Base	1,034	2,199	3,722	5,684	7,738	10,510	13,700	17,420	21,610	26,110	65%	28%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	177.9	39.1	47.4	56.3	51.9	40.0	38.8	38.4	38.1	38.2	-27%	-6%
Hardware-Only ASP	10.5	7.3	9.9	7.5	6.8	6.3	5.8	5.4	5.2	5.1	-10%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	14	13	25	25	29	31	34	37	40	44	18%	9%
CPU Revenue	10	10	20	20	23	26	29	31	34	36	24%	9%
Workstation Revenue	3	2	3	2	1	2	1	1	1	1	-17%	-19%
Peripheral Revenue (Turnkey)	1	1	3	3	4	4	4	5	5	7	27%	13%
Software Revenue	3	7	8	8	9	9	10	12	14	16	32%	11%
Bundled	2	2	3	4	5	3	3	3	3	3	21%	-7%
Unbundled	1	5	5	4	4	6	7	9	11	12	50%	23%
Service Revenue	2	5	9	7	7	7	8	8	9	10	45%	6%
Total Revenue	19	25	42	39	45	47	52	57	63	69	24%	9%
Increase over Prior Year	120%	32%	66%	-6%	15%	4%	12%	9%	11%	10%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 18
 TITLE: Final History and Forecast
 APPLICATION: GIS/Mapping
 REGION: Benelux
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	64	289	384	857	1,196	1,600	2,090	2,580	3,140	3,420	108%	23%
Workstation Shipments	104	351	505	915	1,265	1,680	2,160	2,640	3,190	3,460	87%	22%
CPU Installed Base	67	357	738	1,575	2,558	4,140	6,070	8,480	11,450	14,710	148%	42%
Workstation Installed Base	123	474	977	1,872	2,871	4,590	6,590	9,070	12,090	15,390	120%	40%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	258.6	79.8	81.9	84.2	75.0	70.2	66.0	63.1	61.2	60.3	-27%	-4%
Hardware-Only ASP	27.8	17.6	12.9	9.4	9.0	8.0	7.3	6.7	6.3	6.2	-25%	-7%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	6	8	11	17	23	32	40	49	61	69	40%	25%
CPU Revenue	3	5	7	13	19	25	32	39	49	56	58%	24%
Workstation Revenue	2	2	3	1	1	2	2	2	1	2	-18%	10%
Peripheral Revenue (Turnkey)	1	1	1	2	3	5	7	8	11	12	40%	32%
Software Revenue	1	2	4	7	9	10	13	16	20	25	58%	22%
Bundled	1	1	2	4	6	4	5	6	7	11	48%	14%
Unbundled	0	1	3	3	4	6	8	10	12	14	82%	32%
Service Revenue	1	2	4	5	8	10	13	16	20	24	62%	25%
Total Revenue	9	12	19	29	40	52	66	82	101	119	47%	24%
Increase over Prior Year	230%	43%	53%	51%	40%	30%	28%	23%	24%	18%		

Source: Dataquest
 September 1991

Forecast Europe

TABLE NUMBER: 19
 TITLE: Final History and Forecast
 APPLICATION: Electronic Design Automation
 REGION: Benelux
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	769	1,268	1,296	2,075	2,258	2,640	3,010	3,130	3,270	3,460	31%	9%
Workstation Shipments	802	1,316	1,411	2,152	2,308	2,680	3,050	3,160	3,290	3,470	30%	9%
CPU Installed Base	983	2,242	3,479	5,354	7,392	9,050	11,300	13,660	16,180	18,890	66%	21%
Workstation Installed Base	1,037	2,345	3,698	5,650	7,753	9,450	11,740	14,150	16,690	19,410	65%	20%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	70.4	43.3	51.1	52.5	48.5	47.4	47.8	47.2	46.4	46.2	-9%	-1%
Hardware-Only ASP	15.1	13.2	14.2	12.2	12.5	11.5	11.0	11.0	11.3	12.2	-5%	-0%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	17	21	24	32	33	36	40	42	43	47	18%	7%
CPU Revenue	14	15	20	28	30	27	30	31	33	36	21%	4%
Workstation Revenue	1	2	1	2	2	3	3	2	2	1	12%	-11%
Peripheral Revenue (Turnkey)	2	4	3	3	2	6	7	8	8	10	-0%	34%
Software Revenue	10	22	17	18	19	21	25	30	35	41	19%	16%
Bundled	5	7	6	9	7	8	9	11	11	11	7%	10%
Unbundled	4	15	11	9	12	13	16	19	24	29	31%	19%
Service Revenue	2	6	7	11	13	14	17	19	21	24	61%	13%
Total Revenue	29	49	48	61	66	71	81	91	100	112	23%	11%
Increase over Prior Year	78%	71%	-2%	26%	9%	8%	14%	12%	10%	12%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 20
 TITLE: Final History and Forecast
 APPLICATION: Electronic CAE
 REGION: Benelux
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	447	728	710	1,411	1,527	1,790	2,040	2,140	2,230	2,350	36%	9%
Workstation Shipments	456	744	750	1,438	1,541	1,800	2,040	2,140	2,230	2,350	36%	9%
CPU Installed Base	608	1,328	1,999	3,285	4,650	5,890	7,480	9,160	10,940	12,840	66%	23%
Workstation Installed Base	626	1,364	2,074	3,388	4,778	6,020	7,610	9,310	11,090	12,990	66%	22%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	51.0	36.0	41.6	47.3	42.8	46.2	47.1	46.4	45.6	45.6	-4%	1%
Hardware-Only ASP	15.6	12.9	13.9	9.9	10.1	9.2	8.8	8.8	9.9	11.6	-10%	3%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	9	11	12	18	18	20	22	24	26	29	20%	10%
CPU Revenue	7	7	9	15	16	16	18	19	21	23	22%	8%
Workstation Revenue	0	1	0	1	1	1	0	0	0	0	9%	-100%
Peripheral Revenue (Turnkey)	1	3	2	2	2	4	4	5	5	6	9%	27%
Software Revenue	4	10	7	9	11	13	17	21	25	30	29%	22%
Bundled	2	4	3	5	4	5	6	7	7	7	13%	16%
Unbundled	2	6	4	4	7	8	11	14	18	22	43%	25%
Service Revenue	1	3	3	6	7	8	10	12	14	16	79%	18%
Total Revenue	13	24	23	33	36	41	49	57	65	75	28%	16%
Increase over Prior Year	55%	78%	-5%	47%	9%	15%	19%	17%	13%	16%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 21
 TITLE: Final History and Forecast
 APPLICATION: IC Layout
 REGION: Benelux
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	23	64	76	148	169	220	280	340	390	410	64%	19%
Workstation Shipments	21	66	114	146	167	220	280	340	390	410	68%	20%
CPU Installed Base	34	98	173	315	500	660	910	1,220	1,580	1,970	95%	32%
Workstation Installed Base	33	99	212	352	535	700	950	1,260	1,630	2,010	100%	30%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	99.7	37.2	53.8	52.9	54.5	52.2	50.1	48.7	48.0	48.2	-14%	-2%
Hardware-Only ASP	46.2	30.0	31.1	19.4	22.4	20.1	17.5	15.9	14.6	13.8	-17%	-9%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	1	2	2	3	4	5	5	5	6	5	36%	7%
CPU Revenue	1	1	2	3	4	3	3	4	4	4	41%	3%
Workstation Revenue	0	0	0	0	0	1	1	1	1	0	3%	30%
Peripheral Revenue (Turnkey)	0	0	0	0	0	1	1	1	1	1	2%	39%
Software Revenue	2	4	3	2	3	3	3	3	4	5	8%	12%
Bundled	0	0	0	0	1	1	1	1	1	1	21%	11%
Unbundled	2	4	3	1	2	2	2	3	3	4	5%	13%
Service Revenue	0	1	1	1	2	2	2	2	3	3	92%	7%
Total Revenue	3	7	6	6	8	9	10	11	12	13	27%	9%
Increase over Prior Year	42%	105%	-1%	-10%	44%	11%	10%	10%	10%	3%		

Source: Dataquest
 September 1991

TABLE NUMBER: 22
 TITLE: Final History and Forecast
 APPLICATION: PCB/Hybrid/MCM
 REGION: Benelux
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	299	476	509	516	561	630	690	650	660	700	17%	5%
Workstation Shipments	325	505	548	568	600	670	720	670	670	710	17%	3%
CPU Installed Base	341	815	1,307	1,754	2,243	2,500	2,910	3,280	3,650	4,000	60%	13%
Workstation Installed Base	378	881	1,412	1,911	2,440	2,740	3,180	3,580	3,970	4,410	59%	13%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	97.6	59.7	65.7	61.6	57.0	48.5	48.7	49.0	47.7	47.1	-13%	-4%
Hardware-Only ASP	11.9	12.0	11.9	16.6	16.5	15.4	15.1	15.5	14.2	13.4	9%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	7	8	10	11	11	12	13	12	12	12	12%	1%
CPU Revenue	6	6	9	10	10	8	9	9	8	9	15%	-3%
Workstation Revenue	1	1	1	1	1	1	1	1	1	1	15%	-10%
Peripheral Revenue (Turnkey)	1	1	1	0	0	2	2	2	3	3	-26%	61%
Software Revenue	4	8	6	6	6	5	5	5	6	6	12%	2%
Bundled	3	3	2	3	3	2	2	2	3	3	-1%	0%
Unbundled	1	5	4	3	3	3	3	3	3	4	38%	3%
Service Revenue	1	3	3	4	5	4	5	5	5	5	39%	3%
Total Revenue	12	19	19	22	22	21	22	22	23	24	16%	2%
Increase over Prior Year	131%	56%	2%	13%	-0%	-3%	7%	1%	1%	4%		

Source: Dataquest
 September 1991

TABLE NUMBER: 23
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: France
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	8,414	13,355	14,400	21,896	28,136	34,000	40,870	46,130	49,600	52,260	35%	13%
Workstation Shipments	10,402	15,296	16,206	23,854	29,989	35,640	42,330	47,330	50,590	53,110	30%	12%
CPU Installed Base	11,591	24,806	38,403	57,824	81,101	106,190	138,460	176,000	217,040	260,790	63%	26%
Workstation Installed Base	14,667	29,822	45,228	66,623	91,370	118,710	152,610	191,510	233,710	278,480	58%	25%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	124.5	65.6	86.8	78.0	70.1	61.5	58.8	56.8	56.0	56.0	-13%	-4%
Hardware-Only ASP	11.5	10.8	12.3	10.5	9.2	9.1	8.5	8.0	7.8	8.0	-5%	-3%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	225	259	349	393	434	512	567	606	636	676	18%	9%
CPU Revenue	139	165	260	323	365	405	453	489	516	547	27%	8%
Workstation Revenue	57	57	52	36	27	34	34	30	27	23	-17%	-3%
Peripheral Revenue (Turnkey)	29	37	37	34	42	72	80	88	93	106	10%	20%
Software Revenue	64	138	139	160	204	201	241	283	328	380	33%	13%
Bundled	46	50	64	88	106	81	89	95	100	109	23%	1%
Unbundled	18	88	75	72	98	120	152	188	227	270	53%	23%
Service Revenue	30	72	93	118	155	166	189	210	230	255	51%	11%
Total Revenue	319	470	581	671	793	879	997	1,099	1,193	1,311	26%	11%
Increase over Prior Year	48%	47%	24%	16%	18%	11%	13%	10%	9%	10%		

Source: Dataquest
 September 1991

Forecast—Europe

TABLE NUMBER: 24
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: France
 PLATFORM: Technical Workstation

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	890	1,783	2,956	5,671	6,833	8,520	10,480	12,460	14,610	17,460	66%	21%
Workstation Shipments	890	1,783	2,956	5,671	6,833	8,520	10,480	12,460	14,610	17,460	66%	21%
CPU Installed Base	1,349	3,123	6,029	11,510	18,193	25,310	34,730	46,140	59,690	76,100	92%	33%
Workstation Installed Base	1,349	3,123	6,029	11,510	18,193	25,310	34,730	46,140	59,690	76,100	92%	33%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	73.1	52.7	58.0	59.9	59.1	56.5	54.5	53.3	53.0	53.4	-5%	-2%
Hardware-Only ASP	33.2	25.3	24.3	18.0	19.4	17.5	16.0	15.2	14.6	14.5	-13%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	38	55	110	174	209	267	308	349	388	441	53%	16%
CPU Revenue	31	43	92	152	180	221	254	286	318	361	55%	15%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	7	12	19	22	30	45	54	62	69	80	43%	22%
Software Revenue	23	65	72	103	138	126	162	203	247	295	56%	16%
Bundled	18	25	32	63	80	54	64	73	80	89	46%	2%
Unbundled	6	40	40	40	59	72	98	130	167	206	79%	29%
Service Revenue	8	27	42	75	105	117	140	164	187	215	93%	15%
Total Revenue	69	147	225	353	453	510	609	717	822	951	60%	16%
Increase over Prior Year	87%	115%	53%	57%	28%	13%	19%	18%	15%	16%		

Source: Dataquest
 September 1991

TABLE NUMBER: 25
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: France
 PLATFORM: Host/Server

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	278	669	795	774	881	980	1,020	970	910	860	33%	-0%
Workstation Shipments	2,398	2,610	2,602	2,732	2,733	2,620	2,490	2,170	1,910	1,720	3%	-9%
CPU Installed Base	499	1,168	1,961	2,719	3,468	4,350	5,210	6,020	6,760	7,460	62%	17%
Workstation Installed Base	3,574	6,184	8,786	11,518	13,736	16,870	19,360	21,530	23,430	25,150	40%	13%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	626.7	262.4	442.4	423.1	262.9	253.3	242.8	232.0	222.0	212.8	-20%	-4%
Hardware-Only ASP	503.7	251.5	140.9	124.8	109.4	100.7	92.9	85.2	78.3	72.0	-32%	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	141	152	180	137	121	116	110	96	82	71	-4%	-10%
CPU Revenue	64	72	112	92	86	62	58	50	44	35	8%	-17%
Workstation Revenue	57	57	52	36	27	34	34	30	27	23	-17%	-3%
Peripheral Revenue (Turnkey)	20	23	17	9	8	20	18	16	12	14	-20%	11%
Software Revenue	33	52	44	29	33	31	30	26	25	26	1%	-5%
Bundled	25	21	26	23	24	23	22	19	18	19	-0%	-5%
Unbundled	8	31	17	6	9	8	8	7	7	7	3%	-6%
Service Revenue	20	42	47	37	41	40	38	33	29	26	20%	-9%
Total Revenue	194	246	271	203	196	186	178	155	136	123	0%	-9%
Increase over Prior Year	22%	27%	10%	-25%	-3%	-5%	-5%	-13%	-12%	-9%		

Source: Dataquest
 September 1991

TABLE NUMBER: 26
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: France
 PLATFORM: Personal Computer

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	7,246	10,903	10,648	15,451	20,422	24,490	29,360	32,700	34,070	33,930	30%	11%
Workstation Shipments	7,114	10,903	10,648	15,451	20,422	24,490	29,360	32,700	34,070	33,930	30%	11%
CPU Installed Base	9,744	20,515	30,413	43,595	59,440	76,530	98,520	123,840	150,580	177,240	57%	24%
Workstation Installed Base	9,744	20,515	30,413	43,595	59,440	76,530	98,520	123,840	150,580	177,240	57%	24%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	19.8	9.7	19.4	28.2	20.8	22.4	21.8	21.5	21.7	22.0	1%	1%
Hardware-Only ASP	5.6	4.5	5.0	5.1	4.9	4.9	4.8	4.8	4.7	4.7	-3%	-1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	46	52	58	82	104	129	149	162	166	164	23%	10%
CPU Revenue	44	50	57	79	99	122	141	152	154	151	23%	9%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	2	2	2	4	4	7	8	10	11	13	20%	23%
Software Revenue	9	21	23	28	33	44	50	53	56	59	40%	13%
Bundled	4	4	6	3	3	4	3	3	2	2	-13%	-3%
Unbundled	4	17	17	25	30	40	46	51	54	57	63%	14%
Service Revenue	2	3	4	6	8	10	11	13	14	14	39%	13%
Total Revenue	56	76	84	116	144	182	211	228	235	237	27%	10%
Increase over Prior Year	181%	36%	10%	37%	25%	26%	16%	8%	3%	1%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 27
 TITLE: Final History and Forecast
 APPLICATION: Mechanical
 REGION: France
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	4,173	6,354	7,174	10,098	13,029	15,160	17,600	19,390	20,200	20,360	33%	9%
Workstation Shipments	5,771	7,973	8,712	11,606	14,420	16,360	18,680	20,270	20,970	21,060	26%	8%
CPU Installed Base	5,982	12,257	19,002	27,841	38,550	49,340	62,800	78,050	94,110	110,330	59%	23%
Workstation Installed Base	8,386	16,280	24,563	34,922	46,702	59,190	73,850	90,110	107,060	124,100	54%	22%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	162.2	77.4	110.6	86.4	75.5	65.6	62.1	59.3	58.0	58.0	-17%	-5%
Hardware-Only ASP	10.9	12.3	14.0	12.2	10.4	10.2	9.5	8.8	8.6	8.5	-1%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	141	161	226	241	256	289	305	309	308	306	16%	4%
CPU Revenue	75	96	160	192	211	222	236	242	241	240	29%	3%
Workstation Revenue	47	45	43	27	18	22	22	20	19	17	-21%	-1%
Peripheral Revenue (Turnkey)	19	21	23	21	26	45	47	48	48	50	9%	13%
Software Revenue	33	67	76	93	120	109	127	144	162	180	38%	9%
Bundled	27	28	45	58	73	52	54	55	55	56	29%	-5%
Unbundled	7	39	31	35	46	58	73	89	107	124	62%	22%
Service Revenue	17	44	57	76	97	100	108	113	119	124	55%	5%
Total Revenue	191	272	359	410	473	498	540	567	589	611	25%	5%
Increase over Prior Year	38%	42%	32%	14%	15%	5%	8%	5%	4%	4%		

Source: Dataquest
 September 1991

TABLE NUMBER: 28
 TITLE: Final History and Forecast
 APPLICATION: AEC
 REGION: France
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,920	2,957	3,105	5,023	6,425	8,050	9,980	11,680	12,790	13,840	35%	17%
Workstation Shipments	1,945	3,109	3,246	5,203	6,625	8,210	10,120	11,780	12,860	13,890	36%	16%
CPU Installed Base	2,596	5,518	8,428	12,861	18,079	24,140	32,130	41,820	52,620	64,470	62%	29%
Workstation Installed Base	2,794	5,868	8,920	13,535	18,913	25,200	33,340	43,150	54,040	65,950	61%	28%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	164.8	28.8	41.9	48.2	47.1	42.4	40.9	40.2	39.7	39.7	-27%	-3%
Hardware-Only ASP	10.0	6.4	8.7	7.1	6.3	6.3	5.9	5.5	5.3	5.3	-11%	-3%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	29	26	38	49	59	72	83	91	98	107	20%	13%
CPU Revenue	22	20	32	41	50	63	73	81	87	95	22%	14%
Workstation Revenue	5	3	3	3	3	3	3	2	1	1	-9%	-19%
Peripheral Revenue (Turnkey)	2	2	2	5	6	6	7	8	10	11	31%	12%
Software Revenue	5	10	9	15	19	21	26	30	35	41	42%	17%
Bundled	3	3	3	6	9	8	9	9	10	11	31%	4%
Unbundled	2	7	6	9	10	13	17	21	25	30	58%	25%
Service Revenue	3	8	9	11	15	17	20	22	24	27	51%	13%
Total Revenue	36	43	57	74	92	110	128	143	157	175	26%	14%
Increase over Prior Year	46%	19%	32%	31%	24%	19%	16%	12%	9%	11%		

Source: Dataquest
 September 1991

TABLE NUMBER: 29
 TITLE: Final History and forecast
 APPLICATION: GIS/Mapping
 REGION: France
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	152	703	916	2,083	2,942	4,000	5,330	6,680	7,930	8,630	110%	24%
Workstation Shipments	202	754	1,020	2,194	3,081	4,140	5,460	6,790	8,020	8,710	98%	23%
CPU Installed Base	159	862	1,772	3,803	6,329	10,150	15,060	21,310	28,820	37,030	151%	42%
Workstation Installed Base	250	1,004	2,017	4,160	6,759	10,790	15,840	22,210	29,820	38,110	128%	41%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	171.9	107.5	88.4	101.3	90.3	78.8	74.5	71.5	69.7	68.9	-15%	-5%
Hardware-Only ASP	25.0	13.8	12.0	8.8	7.9	7.7	7.1	6.6	6.3	6.2	-25%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	8	15	20	30	44	59	77	95	114	133	51%	25%
CPU Revenue	5	10	16	25	38	51	66	83	99	115	67%	25%
Workstation Revenue	2	3	3	2	2	3	3	3	3	2	-5%	-1%
Peripheral Revenue (Turnkey)	1	1	1	3	5	6	7	10	12	16	44%	29%
Software Revenue	2	4	7	10	14	19	25	32	41	49	67%	29%
Bundled	1	3	4	6	8	9	12	15	19	23	57%	24%
Unbundled	1	1	3	3	6	10	14	18	22	26	87%	34%
Service Revenue	1	3	6	7	12	16	21	26	32	39	75%	27%
Total Revenue	11	21	32	47	70	94	123	154	187	221	57%	26%
Increase over Prior Year	122%	87%	49%	45%	50%	34%	31%	25%	21%	18%		

Source: Dataquest
 September 1991

TABLE NUMBER: 30
 TITLE: Final History and Forecast
 APPLICATION: Electronic Design Automation
 REGION: France
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	2,168	3,341	3,204	4,692	5,740	6,790	7,950	8,390	8,680	9,430	28%	10%
Workstation Shipments	2,484	3,460	3,228	4,851	5,863	6,920	8,080	8,480	8,740	9,460	24%	10%
CPU Installed Base	2,854	6,169	9,202	13,320	18,144	22,560	28,470	34,810	41,490	48,970	59%	22%
Workstation Installed Base	3,237	6,671	9,728	14,006	18,996	23,530	29,580	36,040	42,790	50,330	56%	22%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	66.9	56.3	58.5	63.0	57.6	51.0	50.1	49.0	48.2	48.0	-4%	-4%
Hardware-Only ASP	13.5	11.6	12.8	11.9	11.0	11.2	10.7	10.8	11.3	12.4	-5%	2%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	47	58	65	74	75	91	102	111	115	129	13%	11%
CPU Revenue	37	39	52	65	67	70	78	84	89	98	16%	8%
Workstation Revenue	3	6	3	4	3	6	6	5	4	3	2%	-5%
Peripheral Revenue (Turnkey)	7	13	10	5	5	15	18	22	23	29	-8%	43%
Software Revenue	25	57	47	42	52	52	63	76	90	110	20%	16%
Bundled	16	17	12	18	16	13	14	16	17	19	1%	3%
Unbundled	9	40	34	24	36	39	49	59	73	90	40%	20%
Service Revenue	9	18	21	24	31	34	41	49	56	66	37%	16%
Total Revenue	80	133	133	140	158	176	206	235	261	305	18%	14%
Increase over Prior Year	70%	66%	-0%	5%	13%	11%	17%	14%	11%	17%		

Source: Dataquest
 September 1991

TABLE NUMBER: 31
 TITLE: Final History and forecast
 APPLICATION: Electronic CAE
 REGION: France
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,337	1,844	1,822	3,087	3,853	4,580	5,360	5,700	5,900	6,390	30%	11%
Workstation Shipments	1,361	1,892	1,812	3,143	3,888	4,610	5,380	5,710	5,900	6,390	30%	10%
CPU Installed Base	1,868	3,691	5,393	8,112	11,390	14,570	18,710	23,190	27,900	33,150	57%	24%
Workstation Installed Base	1,914	3,785	5,477	8,252	11,605	14,780	18,940	23,440	28,160	33,410	57%	24%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	44.9	45.2	45.2	56.5	56.3	49.4	49.0	48.1	47.3	47.2	6%	-3%
Hardware-Only ASP	14.1	11.6	12.5	9.7	9.1	9.1	8.7	8.9	10.0	11.8	-10%	5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	25	30	34	38	41	51	58	65	71	84	13%	15%
CPU Revenue	20	18	26	33	36	39	45	49	54	64	16%	12%
Workstation Revenue	1	2	1	2	1	3	2	2	1	2	9%	6%
Peripheral Revenue (Turnkey)	4	9	7	4	4	9	11	14	15	18	-1%	35%
Software Revenue	12	28	26	23	29	29	39	49	59	75	24%	21%
Bundled	7	8	7	10	9	6	7	9	9	10	6%	2%
Unbundled	5	21	20	14	19	23	31	40	50	65	41%	27%
Service Revenue	4	9	10	12	16	18	23	29	35	43	40%	22%
Total Revenue	41	67	70	73	86	98	119	143	165	201	20%	19%
Increase over Prior Year	50%	61%	5%	3%	18%	14%	22%	20%	15%	22%		

Source: Dataquest
 September 1991

TABLE NUMBER: 32
 TITLE: Final History and Forecast
 APPLICATION: IC Layout
 REGION: France
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	58	141	161	320	387	520	690	860	960	1,050	61%	22%
Workstation Shipments	70	148	155	315	385	520	690	860	960	1,050	53%	22%
CPU Installed Base	96	236	392	697	1,095	1,490	2,110	2,900	3,790	4,780	84%	34%
Workstation Installed Base	112	259	410	710	1,108	1,510	2,130	2,920	3,820	4,810	77%	34%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	103.3	49.3	96.4	52.6	51.2	48.9	46.8	45.8	45.3	45.3	-16%	-2%
Hardware-Only ASP	55.6	40.0	32.1	21.2	21.6	19.3	17.1	15.6	14.6	14.1	-21%	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	3	5	6	7	9	10	12	13	14	15	25%	12%
CPU Revenue	3	4	5	7	8	8	9	11	12	11	32%	6%
Workstation Revenue	0	1	0	0	0	0	0	0	1	0	-12%	-100%
Peripheral Revenue (Turnkey)	1	1	1	0	0	2	2	3	2	4	-16%	75%
Software Revenue	3	9	6	4	8	9	10	12	14	16	25%	13%
Bundled	1	1	1	1	1	1	2	2	2	1	1%	3%
Unbundled	2	8	5	4	7	7	8	10	12	14	32%	15%
Service Revenue	1	2	3	3	4	5	6	7	7	8	54%	15%
Total Revenue	8	16	15	14	21	24	27	32	36	39	29%	13%
Increase over Prior Year	30%	109%	-9%	-4%	50%	13%	15%	16%	13%	9%		

Source: Dataquest
 September 1991

TABLE NUMBER: 33
 TITLE: Final History and Forecast
 APPLICATION: PCB/Hybrid/MCM
 REGION: France
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	773	1,357	1,222	1,284	1,500	1,690	1,900	1,820	1,820	1,990	18%	6%
Workstation Shipments	1,053	1,420	1,262	1,393	1,590	1,790	2,000	1,910	1,870	2,030	11%	5%
CPU Installed Base	890	2,242	3,417	4,511	5,658	6,500	7,650	8,730	9,790	11,040	59%	14%
Workstation Installed Base	1,211	2,626	3,841	5,044	6,284	7,240	8,510	9,680	10,820	12,100	51%	14%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	122.7	77.8	84.6	72.7	60.3	53.7	52.5	51.6	50.1	49.4	-16%	-4%
Hardware-Only ASP	10.5	9.5	10.6	15.2	13.3	14.6	14.3	14.8	13.8	13.2	6%	-0%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	18	23	25	29	25	30	32	32	31	31	9%	4%
CPU Revenue	14	17	21	25	23	22	24	24	23	23	13%	1%
Workstation Revenue	2	3	1	2	2	3	3	3	2	1	0%	-12%
Peripheral Revenue (Turnkey)	2	2	2	1	1	4	5	5	5	7	-29%	66%
Software Revenue	9	20	15	14	15	14	15	15	16	19	13%	5%
Bundled	7	8	4	7	6	5	6	6	6	8	-6%	6%
Unbundled	2	11	10	7	9	9	9	10	10	11	50%	5%
Service Revenue	4	8	8	10	11	11	12	13	13	15	30%	6%
Total Revenue	31	50	48	53	51	54	59	61	61	65	13%	5%
Increase over Prior Year	125%	61%	-4%	11%	-4%	6%	9%	3%	-0%	7%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 34
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Germany
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	13,391	25,056	37,306	41,026	48,665	61,610	74,670	87,110	97,540	105,780	38%	17%
Workstation Shipments	16,990	27,579	39,899	45,474	52,468	65,550	78,240	90,140	100,170	108,110	33%	16%
CPU Installed Base	17,711	42,594	78,820	116,145	152,971	201,390	259,860	330,770	412,160	501,800	71%	27%
Workstation Installed Base	22,978	50,384	89,206	131,008	170,735	224,450	286,820	361,090	445,440	537,740	65%	26%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	106.3	54.7	58.4	65.6	60.9	58.5	55.6	53.4	52.3	52.1	-13%	-3%
Hardware-Only ASP	12.8	11.4	11.5	11.9	9.8	9.0	8.3	7.8	7.7	7.8	-6%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	455	546	776	920	914	1,112	1,245	1,380	1,509	1,653	19%	13%
CPU Revenue	289	352	601	713	747	842	954	1,069	1,182	1,304	27%	12%
Workstation Revenue	105	109	80	85	55	70	68	62	56	49	-15%	-2%
Peripheral Revenue (Turnkey)	61	86	95	122	112	199	222	249	271	300	17%	22%
Software Revenue	158	290	331	438	497	555	677	822	987	1,172	33%	19%
Bundled	103	126	155	252	280	268	304	345	386	437	28%	9%
Unbundled	55	164	176	187	217	287	373	477	601	735	41%	28%
Service Revenue	63	143	196	259	300	349	400	458	521	594	48%	15%
Total Revenue	675	979	1,303	1,617	1,711	2,015	2,322	2,661	3,017	3,420	26%	15%
Increase over Prior Year	91%	45%	33%	24%	6%	18%	15%	15%	13%	13%		

Source: Dataquest
 September 1991

TABLE NUMBER: 35
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Germany
 PLATFORM: Technical Workstation

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	2,733	5,159	10,216	14,425	16,050	20,100	25,160	31,000	37,210	44,480	56%	23%
Workstation Shipments	2,733	5,159	10,216	14,425	16,050	20,100	25,160	31,000	37,210	44,480	56%	23%
CPU Installed Base	3,838	8,975	19,059	32,968	47,459	64,540	86,570	114,450	148,530	189,870	88%	32%
Workstation Installed Base	3,838	8,975	19,059	32,968	47,459	64,540	86,570	114,450	148,530	189,870	88%	32%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	72.6	58.2	46.5	56.0	53.2	51.1	49.5	48.6	48.4	48.8	-7%	-2%
Hardware-Only ASP	29.3	24.5	25.0	18.5	19.1	17.3	15.8	15.0	14.4	14.2	-10%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	128	184	316	462	483	618	736	877	1,015	1,176	39%	19%
CPU Revenue	108	145	262	382	407	492	584	694	808	942	39%	18%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	20	38	54	80	76	126	151	183	207	235	39%	25%
Software Revenue	55	136	181	267	316	349	452	583	728	890	55%	23%
Bundled	47	72	97	180	207	190	231	281	326	377	45%	13%
Unbundled	8	65	84	88	109	159	220	302	402	513	95%	36%
Service Revenue	15	55	99	163	195	235	289	355	423	499	89%	21%
Total Revenue	198	375	596	893	995	1,203	1,476	1,815	2,165	2,565	50%	21%
Increase over Prior Year	135%	89%	59%	50%	11%	21%	23%	23%	19%	18%		

Source: Dataquest
 September 1991

Forecast—Europe

TABLE NUMBER: 36
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Germany
 PLATFORM: Host/Server

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	603	1,409	1,599	1,593	1,736	1,950	2,010	1,940	1,890	1,850	30%	1%
Workstation Shipments	4,377	3,932	4,191	6,040	5,539	5,900	5,580	4,970	4,520	4,180	6%	-5%
CPU Installed Base	990	2,399	3,994	5,558	7,097	8,800	10,480	12,090	13,650	15,170	64%	16%
Workstation Installed Base	6,257	10,189	14,380	20,420	24,861	31,860	37,440	42,410	46,930	51,110	41%	16%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	495.5	214.5	342.2	320.3	240.6	229.2	219.0	209.0	198.9	190.0	-17%	-5%
Hardware-Only ASP	514.7	236.1	114.2	153.7	123.5	113.7	105.0	96.4	89.4	82.6	-30%	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	255	267	298	304	253	274	260	231	210	194	-0%	-5%
CPU Revenue	115	119	186	194	178	145	137	121	110	101	12%	-11%
Workstation Revenue	105	109	80	85	55	70	68	62	56	49	-15%	-2%
Peripheral Revenue (Turnkey)	36	39	32	25	20	59	54	48	44	44	-14%	18%
Software Revenue	53	85	68	72	73	75	73	66	63	62	8%	-3%
Bundled	45	44	43	54	59	59	57	51	48	46	7%	-5%
Unbundled	8	41	24	17	15	16	16	15	15	16	17%	1%
Service Revenue	43	78	82	81	90	95	90	81	74	70	20%	-5%
Total Revenue	352	429	448	456	416	444	423	378	347	326	4%	-5%
Increase over Prior Year	45%	22%	4%	2%	-9%	7%	-5%	-11%	-8%	-6%		

Source: Dataquest
 September 1991

TABLE NUMBER: 37
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Germany
 PLATFORM: Personal Computer

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	10,054	18,488	25,491	25,009	30,879	39,550	47,490	54,170	58,440	59,450	32%	14%
Workstation Shipments	9,880	18,488	25,491	25,009	30,879	39,550	47,490	54,170	58,440	59,450	33%	14%
CPU Installed Base	12,883	31,220	55,767	77,619	98,415	128,040	162,800	204,230	249,980	296,760	66%	25%
Workstation Installed Base	12,883	31,220	55,767	77,619	98,415	128,040	162,800	204,230	249,980	296,760	66%	25%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	22.8	10.4	17.7	27.9	28.1	29.0	29.2	29.5	29.5	29.8	5%	1%
Hardware-Only ASP	5.6	4.5	5.7	4.9	4.8	4.7	4.7	4.6	4.5	4.5	-4%	-1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	71	96	163	153	178	220	249	272	284	283	26%	10%
CPU Revenue	66	87	154	137	161	205	233	254	264	261	25%	10%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	5	9	9	16	17	14	16	18	20	21	37%	5%
Software Revenue	50	69	83	100	108	130	153	173	196	221	21%	15%
Bundled	10	11	14	18	14	18	16	13	12	14	8%	1%
Unbundled	39	58	68	82	94	111	137	160	184	207	24%	17%
Service Revenue	4	10	15	15	15	18	21	23	24	25	38%	11%
Total Revenue	125	174	260	268	301	368	423	468	504	528	25%	12%
Increase over Prior Year	373%	40%	50%	3%	12%	22%	15%	11%	8%	5%		

Source: Dataquest
 September 1991

TABLE NUMBER: 38
 TITLE: Final History and Forecast
 APPLICATION: Mechanical
 REGION: Germany
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	6,648	11,425	19,707	19,655	23,910	28,950	33,730	38,030	41,010	42,270	38%	12%
Workstation Shipments	9,662	13,229	21,823	22,975	26,642	31,750	36,240	40,150	42,940	44,080	29%	11%
CPU Installed Base	9,060	20,390	39,534	57,382	77,783	98,240	124,200	154,460	187,700	222,200	71%	23%
Workstation Installed Base	13,263	26,397	47,660	68,850	91,505	115,570	144,280	176,910	212,320	248,880	62%	22%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	124.4	69.8	63.7	72.6	64.6	60.7	56.8	53.7	52.2	52.1	-15%	-4%
Hardware-Only ASP	12.3	13.1	11.4	13.9	11.0	10.1	9.4	8.8	8.5	8.4	-3%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	268	325	469	542	530	600	628	644	661	672	19%	5%
CPU Revenue	153	196	351	407	420	446	472	490	505	512	29%	4%
Workstation Revenue	78	80	61	63	37	39	38	35	33	32	-17%	-3%
Peripheral Revenue (Turnkey)	38	49	58	71	73	115	118	120	123	128	18%	12%
Software Revenue	74	138	165	221	245	261	300	342	392	439	35%	12%
Bundled	55	73	98	144	163	152	161	167	174	180	31%	2%
Unbundled	18	65	67	77	82	109	139	175	218	258	45%	26%
Service Revenue	37	84	116	156	183	198	212	224	239	254	49%	7%
Total Revenue	379	547	750	919	958	1,059	1,140	1,210	1,293	1,364	26%	7%
Increase over Prior Year	80%	44%	37%	23%	4%	11%	8%	6%	7%	6%		

Source: Dataquest
 September 1991

TABLE NUMBER: 39
 TITLE: Final History and Forecast
 APPLICATION: AEC
 REGION: Germany
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	2,810	4,984	7,255	8,457	10,068	13,190	16,440	19,720	22,460	24,970	38%	20%
Workstation Shipments	2,935	5,286	7,478	8,891	10,414	13,560	16,750	19,960	22,630	25,090	37%	19%
CPU Installed Base	3,694	8,637	15,636	23,249	28,324	41,160	54,170	70,470	89,500	111,040	66%	31%
Workstation Installed Base	4,080	9,324	16,548	24,598	29,859	43,260	56,610	73,180	92,420	114,110	64%	31%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	89.8	36.3	48.6	52.9	48.7	48.8	46.8	45.7	44.8	44.6	-14%	-2%
Hardware-Only ASP	10.7	6.6	9.9	7.9	6.6	6.1	5.7	5.3	5.2	5.1	-11%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	55	57	111	114	119	152	173	194	215	239	21%	15%
CPU Revenue	39	43	93	90	99	126	145	165	184	204	26%	16%
Workstation Revenue	10	8	9	7	5	8	7	6	4	3	-14%	-10%
Peripheral Revenue (Turnkey)	6	7	10	17	14	19	21	24	27	31	26%	17%
Software Revenue	18	36	47	57	76	90	113	141	171	209	43%	23%
Bundled	9	12	18	26	31	29	33	37	42	53	36%	11%
Unbundled	9	24	28	31	44	60	80	105	129	156	49%	29%
Service Revenue	7	16	25	27	28	35	40	45	52	61	43%	17%
Total Revenue	80	109	183	198	222	277	326	381	438	508	29%	18%
Increase over Prior Year	82%	37%	68%	9%	12%	25%	18%	17%	15%	16%		

Source: Dataquest
 September 1991

TABLE NUMBER: 40
 TITLE: Final History and Forecast
 APPLICATION: GIS/Mapping
 REGION: Germany
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	277	1,699	1,897	4,178	5,324	7,730	10,600	13,950	17,600	20,480	109%	31%
Workstation Shipments	464	1,964	2,107	4,440	5,753	8,240	11,100	14,410	18,000	20,800	88%	29%
CPU Installed Base	303	2,001	3,887	7,965	11,817	19,850	29,620	42,740	59,510	79,160	150%	46%
Workstation Installed Base	593	2,557	4,653	8,995	12,983	21,850	32,150	45,760	62,960	82,960	116%	45%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	270.7	73.1	80.9	78.5	72.4	68.0	63.6	60.5	58.5	57.5	-28%	-5%
Hardware-Only ASP	28.4	13.7	11.9	10.1	8.5	7.5	6.9	6.4	6.1	6.0	-26%	-7%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	33	54	49	111	116	176	233	300	377	461	37%	32%
CPU Revenue	16	34	38	90	99	142	189	247	313	384	57%	31%
Workstation Revenue	12	13	6	5	5	10	10	10	9	8	-19%	9%
Peripheral Revenue (Turnkey)	5	7	4	16	11	25	33	43	55	68	24%	44%
Software Revenue	10	16	20	51	63	74	103	138	180	227	59%	29%
Bundled	6	11	10	39	45	44	60	81	107	137	65%	25%
Unbundled	4	5	10	12	18	30	43	57	73	89	48%	38%
Service Revenue	6	10	14	27	35	49	67	88	114	143	57%	32%
Total Revenue	49	80	83	189	213	300	402	525	671	831	45%	31%
Increase over Prior Year	198%	63%	4%	128%	13%	41%	34%	31%	28%	24%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 41
 TITLE: Final History and Forecast
 APPLICATION: Electronic Design Automation
 REGION: Germany
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	3,655	6,948	8,448	8,737	9,363	11,730	13,900	15,410	16,470	18,060	27%	14%
Workstation Shipments	3,929	7,100	8,490	9,167	9,660	12,000	14,140	15,610	16,600	18,130	25%	13%
CPU Installed Base	4,654	11,567	19,763	27,549	35,048	42,140	51,870	63,110	75,460	89,410	66%	21%
Workstation Installed Base	5,042	12,106	20,345	28,565	36,388	43,760	53,770	65,240	77,740	91,790	64%	20%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	68.5	33.5	43.7	46.1	49.3	49.9	49.5	48.7	47.7	47.5	-8%	-1%
Hardware-Only ASP	14.9	12.2	13.0	12.8	11.6	10.6	10.2	10.3	10.7	11.8	-6%	0%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	98	111	147	152	150	183	211	242	255	282	11%	13%
CPU Revenue	81	79	120	126	128	129	148	168	181	203	12%	10%
Workstation Revenue	5	9	4	10	7	13	13	12	9	6	12%	-4%
Peripheral Revenue (Turnkey)	13	23	23	17	14	41	50	63	66	73	3%	38%
Software Revenue	56	100	100	110	114	130	161	201	243	298	19%	21%
Bundled	32	31	29	42	40	42	50	61	64	67	6%	11%
Unbundled	24	69	71	67	74	88	112	141	180	231	32%	26%
Service Revenue	13	32	41	49	55	66	81	101	116	137	42%	20%
Total Revenue	167	243	288	310	318	379	453	544	615	717	17%	18%
Increase over Prior Year	101%	45%	19%	8%	2%	19%	20%	20%	13%	17%		

Forecast—Europe

Source: Dataquest
 September 1991

TABLE NUMBER: 42
 TITLE: Final History and Forecast
 APPLICATION: Electronic CAE
 REGION: Germany
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	2,114	3,766	4,185	5,757	6,317	7,940	9,460	10,640	11,290	12,270	31%	14%
Workstation Shipments	2,167	3,810	4,182	5,925	6,395	8,010	9,510	10,670	11,310	12,280	31%	14%
CPU Installed Base	2,838	6,577	10,592	15,768	20,793	26,410	33,560	41,900	50,890	60,860	65%	24%
Workstation Installed Base	2,926	6,709	10,721	16,065	21,192	26,860	34,080	42,460	51,470	61,460	64%	24%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	50.1	30.0	54.1	51.8	47.3	49.3	49.1	48.2	47.5	47.4	-1%	0%
Hardware-Only ASP	15.3	12.7	13.2	10.1	9.4	8.9	8.5	8.6	9.7	11.4	-11%	4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	46	57	80	87	84	109	129	155	166	186	16%	17%
CPU Revenue	36	39	62	69	71	77	90	106	116	133	19%	13%
Workstation Revenue	1	3	1	4	2	5	5	4	3	2	13%	0%
Peripheral Revenue (Turnkey)	9	15	16	14	11	27	34	45	47	52	5%	37%
Software Revenue	26	49	54	65	70	82	109	143	177	223	28%	26%
Bundled	13	14	15	24	22	21	26	34	34	35	13%	10%
Unbundled	13	35	39	41	48	61	83	109	143	189	39%	31%
Service Revenue	4	14	21	27	29	38	49	65	77	94	64%	26%
Total Revenue	76	119	154	178	183	230	288	363	419	503	24%	22%
Increase over Prior Year	81%	57%	29%	15%	3%	26%	25%	26%	16%	20%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 43
 TITLE: Final History and Forecast
 APPLICATION: IC Layout
 REGION: Germany
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	119	472	497	520	540	780	1,040	1,330	1,550	1,720	46%	26%
Workstation Shipments	159	480	488	514	538	780	1,040	1,330	1,550	1,720	36%	26%
CPU Installed Base	185	655	1,144	1,625	2,077	2,630	3,460	4,580	5,970	7,550	83%	29%
Workstation Installed Base	234	712	1,193	1,669	2,124	2,680	3,510	4,640	6,030	7,620	74%	29%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	104.2	20.6	54.7	56.8	53.9	51.4	49.3	48.1	47.5	47.5	-15%	-2%
Hardware-Only ASP	47.3	29.8	26.3	20.7	21.4	18.0	15.9	14.5	13.6	13.1	-18%	-9%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	6	9	14	12	12	14	17	19	21	22	16%	13%
CPU Revenue	5	7	11	11	11	11	13	15	16	17	22%	10%
Workstation Revenue	1	1	1	0	0	1	1	1	1	1	-8%	5%
Peripheral Revenue (Turnkey)	1	2	2	1	0	2	3	3	4	4	-16%	55%
Software Revenue	5	10	10	8	7	8	9	11	14	16	10%	17%
Bundled	2	2	2	2	2	2	3	3	3	3	-8%	13%
Unbundled	3	8	8	6	6	6	7	8	11	13	20%	18%
Service Revenue	1	3	5	5	6	6	7	8	10	10	47%	13%
Total Revenue	12	23	29	25	25	29	33	39	44	48	19%	14%
Increase over Prior Year	30%	82%	28%	-15%	0%	15%	16%	18%	14%	9%		

Forecasts—Europe

Source: Dataquest
 September 1991

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TABLE NUMBER: 44
 TITLE: Final History and Forecast
 APPLICATION: PCB/Hybrid/MCM
 REGION: Germany
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,422	2,710	3,767	2,460	2,505	3,010	3,400	3,440	3,630	4,060	15%	10%
Workstation Shipments	1,604	2,810	3,821	2,729	2,727	3,210	3,600	3,610	3,740	4,120	14%	9%
CPU Installed Base	1,631	4,334	8,026	10,156	12,178	13,100	14,850	16,630	18,600	21,000	65%	12%
Workstation Installed Base	1,881	4,685	8,431	10,831	13,073	14,220	16,180	18,140	20,230	22,710	62%	12%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	89.8	41.2	33.2	39.1	51.7	50.6	50.0	49.6	48.3	47.6	-13%	-2%
Hardware-Only ASP	11.7	9.3	10.9	19.2	15.6	13.7	13.5	13.9	12.9	12.2	7%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	45	44	53	53	54	60	65	67	69	73	4%	6%
CPU Revenue	40	33	46	46	46	41	45	46	48	53	4%	3%
Workstation Revenue	3	5	2	6	5	7	7	7	5	3	14%	-7%
Peripheral Revenue (Turnkey)	3	6	5	2	3	12	13	14	15	17	2%	40%
Software Revenue	25	41	36	37	37	40	43	48	53	59	10%	10%
Bundled	17	15	12	17	17	19	21	24	26	29	1%	11%
Unbundled	8	26	24	20	20	21	22	24	26	29	24%	8%
Service Revenue	8	15	15	17	20	22	25	27	30	33	24%	11%
Total Revenue	79	101	105	108	111	121	133	142	151	165	9%	8%
Increase over Prior Year	151%	28%	4%	3%	3%	9%	10%	7%	6%	9%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 45
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Italy
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	====	====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	5,913	8,192	9,628	11,823	15,716	20,250	24,490	28,390	31,370	33,840	28%	17%
Workstation Shipments	6,909	9,182	10,991	13,057	17,184	21,470	25,600	29,330	32,170	34,560	26%	15%
CPU Installed Base	7,634	15,749	24,893	35,176	47,483	62,370	81,400	104,340	130,280	158,710	58%	27%
Workstation Installed Base	9,091	18,197	28,705	40,229	53,552	70,230	90,450	114,410	141,240	170,470	56%	26%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	87.5	45.6	60.1	80.2	74.1	62.4	59.5	57.3	56.5	56.7	-4%	-5%
Hardware-Only ASP	12.1	12.6	12.4	11.6	9.3	8.9	8.3	7.7	7.5	7.6	-6%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	168	159	205	242	281	332	371	408	441	480	14%	11%
CPU Revenue	113	103	152	190	228	258	291	323	352	386	19%	11%
Workstation Revenue	34	32	32	24	21	23	23	21	19	17	-11%	-5%
Peripheral Revenue (Turnkey)	22	24	21	27	32	52	58	64	70	78	10%	20%
Software Revenue	42	77	92	103	137	155	188	225	267	318	35%	18%
Bundled	32	28	39	57	77	76	85	96	107	125	24%	10%
Unbundled	10	48	54	47	61	80	102	129	160	192	58%	26%
Service Revenue	17	43	59	70	106	121	139	160	181	206	59%	14%
Total Revenue	227	278	356	416	524	608	698	793	889	1,004	23%	14%
Increase over Prior Year	101%	23%	28%	17%	26%	16%	15%	14%	12%	13%		

Source: Dataquest
 September 1991

TABLE NUMBER: 46
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Italy
 PLATFORM: Technical Workstation

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,074	1,201	1,954	3,629	4,344	5,730	7,110	8,660	10,370	12,510	42%	24%
Workstation Shipments	1,074	1,201	1,954	3,629	4,344	5,730	7,110	8,660	10,370	12,510	42%	24%
CPU Installed Base	1,371	2,566	4,477	7,947	11,812	16,750	23,010	30,830	40,350	52,010	71%	35%
Workstation Installed Base	1,371	2,566	4,477	7,947	11,812	16,750	23,010	30,830	40,350	52,010	71%	35%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	67.8	58.2	47.4	57.8	57.7	55.3	53.6	52.7	52.7	53.4	-4%	-2%
Hardware-Only ASP	39.1	25.5	23.8	17.2	18.8	17.1	15.6	14.8	14.2	14.0	-17%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	53	44	60	108	137	181	212	248	284	328	26%	19%
CPU Revenue	45	34	51	90	116	150	175	204	234	270	27%	18%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	8	10	9	18	21	31	37	44	51	59	26%	23%
Software Revenue	17	39	49	69	90	100	129	167	207	255	51%	23%
Bundled	16	16	21	39	54	52	63	76	90	108	36%	15%
Unbundled	1	24	28	30	36	48	66	90	117	147	129%	32%
Service Revenue	5	17	28	42	71	87	106	129	151	178	91%	20%
Total Revenue	76	101	137	219	298	367	447	543	643	761	41%	21%
Increase over Prior Year	208%	32%	36%	59%	36%	23%	22%	22%	18%	18%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 47
 TITLE: Final History and forecast
 APPLICATION: All Applications
 REGION: Italy
 PLATFORM: Host/Server

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	172	319	606	502	520	550	580	560	540	520	32%	-0%
Workstation Shipments	1,250	1,310	1,969	1,736	1,989	1,770	1,680	1,490	1,340	1,240	12%	-9%
CPU Installed Base	267	587	1,191	1,686	2,121	2,640	3,130	3,610	4,060	4,500	68%	16%
Workstation Installed Base	1,724	3,034	5,003	6,739	8,190	10,500	12,180	13,680	15,020	16,260	48%	15%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	608.4	354.4	291.2	436.5	312.0	291.3	276.9	262.8	251.1	242.4	-15%	-5%
Hardware-Only ASP	491.9	240.4	139.8	130.5	133.9	121.9	112.5	103.2	94.8	86.9	-28%	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	86	85	110	94	91	82	78	70	62	57	1%	-9%
CPU Revenue	41	42	69	64	64	42	39	35	31	28	12%	-15%
Workstation Revenue	34	32	32	24	21	23	23	21	19	17	-11%	-5%
Peripheral Revenue (Turnkey)	11	11	10	6	6	17	16	14	13	12	-15%	15%
Software Revenue	19	22	24	20	29	26	24	22	21	21	10%	-6%
Bundled	13	9	16	17	22	20	19	17	15	15	14%	-7%
Unbundled	7	13	8	3	7	6	6	5	5	6	2%	-4%
Service Revenue	10	23	29	26	30	27	26	23	21	20	30%	-8%
Total Revenue	116	130	163	140	149	134	129	115	104	97	7%	-8%
Increase over Prior Year	50%	12%	26%	-14%	6%	-10%	-4%	-11%	-9%	-7%		

Source: Dataquest
 September 1991

TABLE NUMBER: 48
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Italy
 PLATFORM: Personal Computer

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	4,667	6,671	7,068	7,692	10,851	13,970	16,810	19,170	20,460	20,810	23%	14%
Workstation Shipments	4,585	6,671	7,068	7,692	10,851	13,970	16,810	19,170	20,460	20,810	24%	14%
CPU Installed Base	5,996	12,597	19,225	25,543	33,550	42,980	55,260	69,910	85,870	102,200	54%	25%
Workstation Installed Base	5,996	12,597	19,225	25,543	33,550	42,980	55,260	69,910	85,870	102,200	54%	25%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	16.9	6.8	8.6	27.2	22.4	21.7	21.2	21.1	21.2	21.7	7%	-1%
Hardware-Only ASP	5.4	4.5	4.7	4.9	4.7	4.6	4.6	4.5	4.5	4.5	-3%	-1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	29	30	35	40	54	70	81	90	95	95	16%	12%
CPU Revenue	27	27	33	36	49	66	77	85	88	88	16%	13%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	2	3	2	3	5	4	5	6	7	7	25%	8%
Software Revenue	5	15	19	14	19	30	34	37	40	42	37%	18%
Bundled	3	3	2	1	1	4	3	3	2	3	-24%	18%
Unbundled	2	12	17	13	17	26	31	34	37	40	75%	18%
Service Revenue	1	2	2	3	5	6	7	8	8	9	49%	13%
Total Revenue	35	48	56	57	77	107	123	135	142	146	21%	14%
Increase over Prior Year	211%	35%	17%	2%	36%	39%	15%	10%	5%	3%		

Source: Dataquest
 September 1991

TABLE NUMBER: 49
 TITLE: Final History and Forecast
 APPLICATION: Mechanical
 REGION: Italy
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	3,491	4,421	5,139	5,652	7,503	9,360	10,880	12,230	13,010	13,350	21%	12%
Workstation Shipments	4,374	5,247	6,316	6,580	8,620	10,250	11,690	12,910	13,620	13,920	18%	10%
CPU Installed Base	4,497	8,873	13,731	18,511	24,487	30,550	38,460	47,710	57,740	68,110	53%	23%
Workstation Installed Base	5,727	10,930	16,967	22,681	29,453	36,820	45,590	55,580	66,280	77,290	51%	21%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	86.2	45.5	68.2	83.2	77.5	63.4	59.6	56.5	55.1	55.0	-3%	-7%
Hardware-Only ASP	11.3	13.8	14.2	13.3	10.4	10.0	9.3	8.7	8.4	8.3	-2%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	112	99	135	142	165	184	194	199	202	204	10%	4%
CPU Revenue	69	61	95	108	130	142	150	156	159	161	17%	4%
Workstation Revenue	27	23	26	17	15	14	14	13	12	11	-13%	-6%
Peripheral Revenue (Turnkey)	16	15	13	16	19	28	30	30	31	32	4%	11%
Software Revenue	28	42	56	60	85	95	111	127	146	165	32%	14%
Bundled	24	17	26	31	47	46	48	48	49	51	19%	2%
Unbundled	5	26	30	28	38	49	63	79	97	114	68%	25%
Service Revenue	10	27	38	41	64	71	78	84	91	97	57%	9%
Total Revenue	151	168	229	243	313	350	382	410	439	467	20%	8%
Increase over Prior Year	125%	11%	36%	6%	29%	12%	9%	8%	7%	6%		

Source: Dataquest
 September 1991

TABLE NUMBER: 50
 TITLE: Final History and Forecast
 APPLICATION: AEC
 REGION: Italy
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,211	1,676	2,220	2,497	3,514	4,680	5,840	6,980	7,820	8,620	31%	20%
Workstation Shipments	1,222	1,733	2,326	2,611	3,654	4,780	5,920	7,050	7,870	8,660	32%	19%
CPU Installed Base	1,601	3,258	5,366	7,516	10,014	13,780	18,410	24,190	30,810	38,230	58%	31%
Workstation Installed Base	1,675	3,389	5,603	7,868	10,453	14,370	19,100	24,950	31,620	39,080	58%	30%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	101.5	45.4	32.4	82.7	74.5	53.4	52.2	52.1	52.1	52.5	-7%	-7%
Hardware-Only ASP	10.6	7.1	7.4	8.0	6.6	6.3	5.8	5.5	5.3	5.2	-11%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	24	20	25	31	40	45	51	58	64	71	14%	12%
CPU Revenue	20	16	21	25	33	38	44	51	56	63	13%	14%
Workstation Revenue	2	2	2	2	2	2	2	1	1	1	-3%	-17%
Peripheral Revenue (Turnkey)	1	2	2	4	5	4	5	6	7	7	39%	8%
Software Revenue	4	10	12	11	12	13	16	19	23	28	30%	19%
Bundled	2	3	4	5	7	7	8	9	10	13	43%	12%
Unbundled	2	7	8	6	4	6	8	10	13	15	18%	28%
Service Revenue	2	6	8	7	12	12	14	16	18	21	58%	11%
Total Revenue	30	35	45	50	64	70	81	93	104	119	21%	13%
Increase over Prior Year	63%	18%	27%	11%	28%	10%	16%	15%	12%	14%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 51
 TITLE: Final History and Forecast
 APPLICATION: GIS/Mapping
 REGION: Italy
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	====	====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	122	573	798	1,245	1,829	2,640	3,580	4,650	5,730	6,560	97%	29%
Workstation Shipments	160	626	869	1,343	1,961	2,790	3,720	4,780	5,850	6,650	87%	28%
CPU Installed Base	128	701	1,495	2,701	4,063	6,710	9,970	14,290	19,700	25,940	137%	45%
Workstation Installed Base	182	809	1,674	2,979	4,386	7,280	10,690	15,150	20,680	27,020	121%	44%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	164.4	44.6	58.4	92.3	81.8	73.4	69.0	66.0	64.0	63.1	-16%	-5%
Hardware-Only ASP	29.1	17.0	10.4	10.1	8.1	7.7	7.1	6.5	6.2	6.1	-27%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	10	14	16	29	37	53	69	88	109	131	37%	29%
CPU Revenue	7	9	11	24	31	42	56	73	91	110	46%	29%
Workstation Revenue	3	3	2	2	2	3	3	3	3	2	-12%	6%
Peripheral Revenue (Turnkey)	1	2	2	3	4	8	10	13	15	19	46%	36%
Software Revenue	2	4	6	14	19	24	33	44	56	71	69%	30%
Bundled	1	2	2	11	15	16	22	30	39	50	85%	28%
Unbundled	1	2	4	3	4	8	10	14	18	21	41%	37%
Service Revenue	2	3	4	9	13	18	24	32	40	49	65%	30%
Total Revenue	15	20	25	53	69	95	126	163	205	252	48%	30%
Increase over Prior Year	103%	38%	25%	108%	31%	38%	33%	29%	25%	23%		

Source: Dataquest
 September 1991

TABLE NUMBER: 52
 TITLE: Final History and forecast
 APPLICATION: Electronic Design Automation
 REGION: Italy
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,088	1,522	1,472	2,429	2,870	3,570	4,200	4,540	4,810	5,310	27%	13%
Workstation Shipments	1,153	1,575	1,400	2,523	2,949	3,650	4,270	4,600	4,840	5,330	26%	13%
CPU Installed Base	1,408	2,917	4,302	6,447	8,919	11,340	14,570	18,150	22,020	26,420	59%	24%
Workstation Installed Base	1,506	3,069	4,462	6,701	9,260	11,760	15,090	18,730	22,650	27,080	57%	24%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	66.3	47.0	63.7	57.9	48.5	48.7	47.8	46.9	46.0	45.8	-8%	-1%
Hardware-Only ASP	14.9	14.9	15.2	12.9	11.2	10.8	10.3	10.3	10.7	11.7	-7%	1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	22	27	30	40	40	51	57	63	66	74	16%	13%
CPU Revenue	17	18	24	33	34	36	40	43	47	52	18%	9%
Workstation Revenue	1	4	2	3	2	4	4	4	3	2	10%	-1%
Peripheral Revenue (Turnkey)	4	5	4	4	4	11	13	16	17	19	3%	38%
Software Revenue	7	21	18	18	22	23	28	35	42	54	32%	20%
Bundled	6	6	6	9	8	6	7	8	9	12	8%	9%
Unbundled	2	14	12	9	14	17	21	26	33	42	75%	24%
Service Revenue	3	8	10	13	17	20	24	29	33	39	60%	19%
Total Revenue	32	55	58	71	79	93	109	126	141	167	25%	16%
Increase over Prior Year	54%	73%	5%	22%	11%	19%	17%	16%	12%	18%		

Source: Dataquest
 September 1991

TABLE NUMBER: 53
 TITLE: Final History and Forecast
 APPLICATION: Electronic CAE
 REGION: Italy
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
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UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	667	875	816	1,707	1,982	2,480	2,920	3,190	3,370	3,720	31%	13%
Workstation Shipments	681	887	804	1,737	2,004	2,500	2,940	3,200	3,380	3,720	31%	13%
CPU Installed Base	920	1,785	2,540	4,062	5,800	7,570	9,910	12,510	15,320	18,500	58%	26%
Workstation Installed Base	948	1,825	2,568	4,121	5,889	7,680	10,040	12,650	15,470	18,650	58%	26%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	56.2	38.7	53.9	53.3	50.7	46.9	46.0	45.0	44.3	44.2	-3%	-3%
Hardware-Only ASP	15.5	14.0	14.5	10.2	9.0	9.0	8.5	8.6	9.6	11.3	-13%	5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	13	14	15	22	22	28	32	36	40	46	13%	16%
CPU Revenue	10	9	12	18	18	21	24	26	29	34	15%	13%
Workstation Revenue	0	1	0	1	1	1	1	1	1	1	9%	1%
Peripheral Revenue (Turnkey)	2	4	3	3	3	6	7	9	10	12	3%	34%
Software Revenue	5	10	10	10	13	14	18	24	30	40	29%	26%
Bundled	4	4	4	6	4	3	3	4	5	7	-0%	12%
Unbundled	1	6	6	5	9	11	15	20	25	33	89%	30%
Service Revenue	1	4	5	7	9	10	13	17	20	25	85%	24%
Total Revenue	19	27	30	39	43	52	63	77	90	111	23%	21%
Increase over Prior Year	44%	46%	10%	32%	10%	20%	22%	22%	17%	24%		

Source: Dataquest
 September 1991

TABLE NUMBER: 54
 TITLE: Final History and Forecast
 APPLICATION: IC Layout
 REGION: Italy
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	29	73	85	156	156	220	290	370	420	470	53%	25%
Workstation Shipments	32	76	84	151	155	220	290	370	420	470	49%	25%
CPU Installed Base	48	121	204	352	517	670	930	1,260	1,650	2,090	81%	32%
Workstation Installed Base	53	128	210	353	517	680	930	1,270	1,660	2,100	77%	32%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	108.0	45.0	85.0	52.4	53.5	50.9	49.0	47.8	47.3	47.1	-16%	-3%
Hardware-Only ASP	65.0	52.1	40.2	21.3	22.3	20.3	17.5	15.5	14.0	13.1	-23%	-10%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	2	3	4	3	4	5	5	6	6	6	18%	11%
CPU Revenue	1	2	3	3	3	3	3	4	4	4	24%	6%
Workstation Revenue	0	0	0	0	0	1	1	1	1	0	-11%	31%
Peripheral Revenue (Turnkey)	0	0	1	0	0	1	1	1	1	1	-14%	52%
Software Revenue	1	5	3	2	2	2	2	3	3	4	15%	15%
Bundled	1	1	0	0	1	0	1	1	1	1	2%	9%
Unbundled	1	4	2	2	1	2	2	2	3	3	23%	18%
Service Revenue	0	1	2	1	2	2	2	3	3	3	54%	11%
Total Revenue	3	9	8	7	7	9	10	11	12	13	22%	12%
Increase over Prior Year	13%	170%	-11%	-9%	1%	21%	13%	14%	9%	5%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 55
 TITLE: Final History and Forecast
 APPLICATION: PCB/Hybrid/MCM
 REGION: Italy
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	393	574	571	567	732	870	980	980	1,010	1,130	17%	9%
Workstation Shipments	441	613	593	634	791	930	1,040	1,030	1,040	1,150	16%	8%
CPU Installed Base	440	1,012	1,558	2,033	2,603	3,090	3,730	4,370	5,040	5,830	56%	18%
Workstation Installed Base	505	1,116	1,684	2,227	2,854	3,410	4,110	4,810	5,520	6,330	54%	17%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	92.2	66.7	79.2	66.7	46.1	50.2	49.6	49.1	47.8	47.1	-16%	0%
Hardware-Only ASP	11.5	12.8	12.5	19.4	15.8	14.5	14.2	14.6	13.4	12.6	8%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	7	10	11	14	15	18	20	20	20	22	20%	8%
CPU Revenue	5	7	9	12	12	12	13	13	13	14	23%	3%
Workstation Revenue	1	2	1	2	1	2	2	2	2	1	14%	-7%
Peripheral Revenue (Turnkey)	1	1	1	0	1	4	5	5	5	6	5%	43%
Software Revenue	1	6	6	6	7	7	7	8	9	10	49%	6%
Bundled	1	2	2	3	3	3	3	4	4	4	27%	5%
Unbundled	0	4	3	2	4	4	4	5	5	6	116%	7%
Service Revenue	2	3	3	5	6	7	8	9	10	11	42%	12%
Total Revenue	10	19	20	24	28	33	36	38	39	42	30%	9%
Increase over Prior Year	106%	91%	5%	20%	17%	16%	10%	6%	3%	9%		

Forecasts—Europe

Source: Dataquest
 September 1991

TABLE NUMBER: 56
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Scandinavia
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	4,526	6,764	9,369	12,320	13,801	15,910	18,200	20,480	22,630	24,840	32%	12%
Workstation Shipments	5,564	7,484	10,494	13,484	14,954	16,650	18,810	20,970	23,050	25,200	28%	11%
CPU Installed Base	5,946	12,647	21,623	32,705	43,889	55,080	68,640	84,480	102,470	122,680	65%	23%
Workstation Installed Base	7,512	14,933	25,035	37,289	49,312	61,690	75,970	92,400	110,910	131,580	60%	22%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	138.1	59.3	56.6	64.7	69.8	56.5	54.1	52.3	51.5	51.6	-16%	-6%
Hardware-Only ASP	14.0	12.8	12.4	11.6	9.8	8.9	8.3	7.8	7.6	7.8	-9%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	142	142	204	237	233	244	259	277	301	335	13%	8%
CPU Revenue	86	88	154	190	192	192	205	221	242	270	22%	7%
Workstation Revenue	36	35	31	21	17	17	16	14	13	11	-18%	-9%
Peripheral Revenue (Turnkey)	20	19	19	26	24	35	38	41	46	55	5%	18%
Software Revenue	37	72	82	88	108	106	124	147	175	213	31%	15%
Bundled	29	27	30	48	50	38	39	42	45	54	15%	1%
Unbundled	8	45	51	40	58	69	85	105	130	160	64%	22%
Service Revenue	17	44	57	73	75	78	85	95	108	126	44%	11%
Total Revenue	196	258	343	397	416	429	468	519	585	675	21%	10%
Increase over Prior Year	66%	32%	33%	16%	5%	3%	9%	11%	13%	15%		

Source: Dataquest
 September 1991

TABLE NUMBER: 57
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Scandinavia
 PLATFORM: Technical Workstation

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	414	928	1,741	4,098	3,704	4,300	5,070	6,030	7,260	8,980	73%	19%
Workstation Shipments	414	928	1,741	4,098	3,704	4,300	5,070	6,030	7,260	8,980	73%	19%
CPU Installed Base	600	1,524	3,244	7,257	10,697	14,470	18,970	24,450	31,150	39,570	105%	30%
Workstation Installed Base	600	1,524	3,244	7,257	10,697	14,470	18,970	24,450	31,150	39,570	105%	30%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	91.4	47.3	45.9	48.1	52.8	51.0	49.4	48.6	48.4	48.9	-13%	-2%
Hardware-Only ASP	37.4	25.4	23.5	16.6	18.8	17.0	15.6	14.8	14.4	14.3	-16%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	20	26	57	105	103	132	146	167	193	230	50%	17%
CPU Revenue	16	21	48	90	88	109	121	137	158	188	52%	16%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	4	5	8	16	15	22	25	30	35	42	41%	23%
Software Revenue	11	31	36	44	53	60	75	95	119	149	47%	23%
Bundled	10	11	13	30	32	23	26	31	35	42	33%	6%
Unbundled	1	19	23	14	22	38	49	64	84	107	100%	38%
Service Revenue	3	14	25	42	43	54	62	74	89	107	96%	20%
Total Revenue	35	70	118	191	200	246	283	336	401	487	55%	20%
Increase over Prior Year	113%	104%	67%	63%	4%	23%	15%	19%	19%	21%		

Source: Dataquest
 September 1991

TABLE NUMBER: 58
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Scandinavia
 PLATFORM: Host/Server

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	194	426	602	545	608	530	530	500	480	460	33%	-5%
Workstation Shipments	1,302	1,145	1,726	1,709	1,762	1,270	1,150	990	890	830	8%	-14%
CPU Installed Base	309	735	1,335	1,872	2,397	2,880	3,300	3,700	4,080	4,440	67%	13%
Workstation Installed Base	1,875	3,020	4,746	6,455	7,820	9,490	10,630	11,630	12,520	13,350	43%	11%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	602.3	238.3	286.7	431.7	275.0	259.1	247.3	235.6	227.1	220.9	-18%	-4%
Hardware-Only ASP	495.4	235.7	128.3	109.7	95.2	88.3	81.3	74.5	68.8	63.4	-34%	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	95	88	109	92	83	60	54	46	42	38	-3%	-14%
CPU Revenue	45	41	69	64	60	32	28	24	21	19	8%	-21%
Workstation Revenue	36	35	31	21	17	17	16	14	13	11	-18%	-9%
Peripheral Revenue (Turnkey)	14	12	9	7	6	11	10	8	7	9	-19%	8%
Software Revenue	18	26	28	19	23	17	16	14	13	12	6%	-11%
Bundled	16	13	16	16	18	13	12	11	9	9	4%	-13%
Unbundled	2	13	11	3	5	4	4	3	3	4	18%	-5%
Service Revenue	14	28	30	28	28	21	19	16	15	14	20%	-13%
Total Revenue	127	142	166	139	134	98	89	77	69	64	1%	-14%
Increase over Prior Year	38%	12%	17%	-17%	-3%	-27%	-10%	-13%	-10%	-7%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 59
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Scandinavia
 PLATFORM: Personal Computer

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	----	----	----	----	----	----	----	----	----	----	-----	-----
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	3,918	5,411	7,027	7,677	9,489	11,070	12,600	13,950	14,890	15,390	25%	10%
Workstation Shipments	3,847	5,411	7,027	7,677	9,489	11,070	12,600	13,950	14,890	15,390	25%	10%
CPU Installed Base	5,037	10,388	17,045	23,576	30,796	37,740	46,360	56,330	67,240	78,670	57%	21%
Workstation Installed Base	5,037	10,388	17,045	23,576	30,796	37,740	46,360	56,330	67,240	78,670	57%	21%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	22.7	12.0	5.1	11.6	15.6	13.2	12.7	12.6	12.8	13.3	-9%	-3%
Hardware-Only ASP	5.6	4.5	5.8	4.9	4.7	4.6	4.5	4.5	4.4	4.4	-4%	-1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	27	28	39	39	47	53	59	64	67	67	15%	7%
CPU Revenue	25	26	38	36	43	50	56	60	63	63	15%	8%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	2	2	1	3	3	2	3	3	4	4	16%	2%
Software Revenue	7	15	18	25	32	29	33	38	43	52	45%	10%
Bundled	3	3	1	1	1	2	2	1	1	3	-30%	35%
Unbundled	4	12	17	24	32	27	32	37	42	49	66%	9%
Service Revenue	1	2	3	3	3	4	4	5	5	5	37%	8%
Total Revenue	35	45	59	68	83	85	96	106	115	124	24%	8%
Increase over Prior Year	246%	30%	31%	14%	22%	3%	13%	10%	8%	8%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 60
 TITLE: Final History and Forecast
 APPLICATION: Mechanical
 REGION: Scandinavia
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	2,240	3,115	4,337	5,734	6,131	6,930	7,650	8,370	8,940	9,350	29%	9%
Workstation Shipments	3,090	3,632	5,255	6,608	7,025	7,460	8,090	8,730	9,250	9,640	23%	7%
CPU Installed Base	3,051	6,130	10,258	15,370	20,825	24,970	30,450	36,660	43,440	50,620	62%	19%
Workstation Installed Base	4,276	7,873	12,919	18,911	25,081	30,030	36,020	42,660	49,810	57,350	56%	18%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	160.7	74.9	77.6	68.8	80.0	59.9	56.2	53.2	51.8	51.8	-16%	-8%
Hardware-Only ASP	14.1	14.7	13.0	13.0	10.8	9.8	9.1	8.5	8.2	8.1	-6%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	83	83	118	133	126	129	129	129	132	135	11%	1%
CPU Revenue	45	47	85	104	101	98	99	100	102	105	23%	1%
Workstation Revenue	26	24	22	16	12	9	9	8	8	7	-17%	-10%
Peripheral Revenue (Turnkey)	13	12	12	14	13	21	21	21	22	23	1%	12%
Software Revenue	18	38	40	45	54	47	52	60	70	82	31%	9%
Bundled	15	15	17	27	29	19	18	18	19	21	18%	-7%
Unbundled	3	23	23	18	24	28	34	42	51	61	71%	20%
Service Revenue	10	27	32	40	39	39	40	42	45	49	39%	4%
Total Revenue	112	148	190	218	220	215	222	231	246	266	18%	4%
Increase over Prior Year	53%	32%	28%	15%	1%	-2%	3%	4%	7%	8%		

Forecasts—Europe

Source: Dataquest
 September 1991

TABLE NUMBER: 61
 TITLE: Final History and forecast
 APPLICATION: AEC
 REGION: Scandinavia
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	====	====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,124	1,787	2,183	2,871	3,333	3,910	4,590	5,320	5,970	6,720	31%	15%
Workstation Shipments	1,177	1,870	2,296	2,996	3,454	3,990	4,650	5,370	6,000	6,740	31%	14%
CPU Installed Base	1,421	3,193	5,277	7,830	9,801	13,190	16,590	20,730	25,520	31,050	62%	26%
Workstation Installed Base	1,564	3,418	5,616	8,294	10,300	13,870	17,350	21,540	26,380	31,940	60%	25%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	121.4	30.1	38.2	48.0	55.6	40.4	39.5	39.4	39.4	39.7	-18%	-7%
Hardware-Only ASP	11.2	7.1	9.9	7.8	6.4	6.2	5.7	5.3	5.1	5.1	-13%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	23	20	34	37	38	40	43	47	52	59	14%	9%
CPU Revenue	16	15	28	30	32	33	36	40	45	51	19%	10%
Workstation Revenue	4	4	4	2	2	2	2	2	1	1	-20%	-13%
Peripheral Revenue (Turnkey)	2	2	2	5	4	4	5	5	6	7	16%	10%
Software Revenue	5	11	14	16	21	20	24	29	35	43	42%	15%
Bundled	4	4	4	7	8	5	5	5	5	7	22%	-4%
Unbundled	2	8	10	9	13	15	19	24	30	37	70%	23%
Service Revenue	3	7	11	12	12	11	12	13	14	16	47%	7%
Total Revenue	31	38	58	64	71	70	78	89	101	119	24%	11%
Increase over Prior Year	121%	25%	53%	10%	11%	-1%	11%	13%	14%	17%		

Forecasts—Europe

Source: Dataquest
 September 1991

TABLE NUMBER: 62
 TITLE: Final History and Forecast
 APPLICATION: GIS/Mapping
 REGION: Scandinavia
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	147	420	586	1,110	1,491	1,910	2,430	3,040	3,730	4,280	78%	23%
Workstation Shipments	216	500	680	1,197	1,571	1,980	2,490	3,100	3,780	4,310	64%	22%
CPU Installed Base	157	577	1,156	2,230	3,445	5,270	7,450	10,240	13,720	17,750	116%	39%
Workstation Installed Base	255	755	1,429	2,591	3,804	5,800	8,060	10,920	14,460	18,540	96%	37%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	203.4	119.3	116.1	88.8	79.0	72.1	67.7	64.7	62.7	61.8	-21%	-5%
Hardware-Only ASP	25.7	17.8	13.3	10.1	8.3	7.5	6.9	6.4	6.0	6.0	-25%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	13	16	20	25	27	34	42	53	66	81	21%	25%
CPU Revenue	6	9	14	20	22	27	34	43	53	65	36%	24%
Workstation Revenue	5	5	4	2	1	2	2	2	2	2	-29%	7%
Peripheral Revenue (Turnkey)	2	2	2	3	4	5	6	8	11	14	23%	29%
Software Revenue	3	5	11	11	12	15	20	25	31	39	44%	26%
Bundled	3	3	4	6	6	5	7	8	10	12	24%	16%
Unbundled	0	2	7	5	7	10	13	17	21	27	99%	32%
Service Revenue	2	4	6	9	10	13	16	20	25	32	41%	26%
Total Revenue	18	24	37	44	49	62	78	98	122	151	28%	25%
Increase over Prior Year	146%	35%	53%	19%	11%	27%	25%	25%	25%	24%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 63
 TITLE: Final History and Forecast
 APPLICATION: Electronic Design Automation
 REGION: Scandinavia
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,015	1,443	2,264	2,606	2,847	3,170	3,540	3,750	3,990	4,500	29%	10%
Workstation Shipments	1,080	1,482	2,264	2,683	2,904	3,220	3,580	3,780	4,010	4,510	28%	9%
CPU Installed Base	1,317	2,748	4,932	7,275	9,818	11,640	14,140	16,840	19,800	23,260	65%	19%
Workstation Installed Base	1,416	2,887	5,071	7,493	10,128	11,990	14,540	17,280	20,260	23,750	64%	19%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	80.5	40.1	21.8	55.1	46.4	50.7	50.3	49.5	48.6	48.5	-13%	1%
Hardware-Only ASP	16.3	14.1	13.6	13.3	12.5	11.3	10.8	10.9	11.4	12.6	-6%	0%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	23	23	32	42	42	41	44	48	52	61	15%	8%
CPU Revenue	19	16	27	36	37	33	36	38	42	49	18%	6%
Workstation Revenue	2	3	1	2	2	3	3	3	2	1	1%	-11%
Peripheral Revenue (Turnkey)	3	4	3	4	3	5	6	7	8	11	1%	29%
Software Revenue	10	18	17	17	21	24	28	33	39	49	20%	19%
Bundled	7	5	5	7	6	9	10	12	12	14	-2%	17%
Unbundled	3	13	12	9	14	15	18	22	27	35	46%	20%
Service Revenue	2	6	9	12	14	15	18	21	24	29	62%	16%
Total Revenue	36	47	57	71	76	81	90	102	115	139	21%	13%
Increase over Prior Year	47%	33%	21%	23%	7%	7%	11%	13%	13%	21%		

Source: Dataquest
 September 1991

TABLE NUMBER: 64
 TITLE: Final History and Forecast
 APPLICATION: Electronic CAE
 REGION: Scandinavia
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	584	809	1,585	1,736	1,832	2,040	2,270	2,410	2,550	2,870	33%	9%
Workstation Shipments	600	817	1,567	1,762	1,848	2,050	2,280	2,410	2,550	2,870	32%	9%
CPU Installed Base	814	1,613	3,145	4,718	6,354	7,560	9,180	10,930	12,820	15,030	67%	19%
Workstation Installed Base	845	1,653	3,166	4,765	6,444	7,640	9,270	11,020	12,920	15,130	66%	19%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	56.4	36.4	13.1	50.1	49.4	47.9	48.0	47.1	46.4	46.2	-3%	-1%
Hardware-Only ASP	17.0	13.8	12.7	10.8	10.2	8.9	8.6	8.8	10.0	11.9	-12%	3%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	12	12	18	23	22	20	22	24	28	34	15%	10%
CPU Revenue	10	9	15	19	19	17	19	21	23	29	18%	9%
Workstation Revenue	1	1	0	1	1	1	1	1	0	0	-1%	-7%
Peripheral Revenue (Turnkey)	2	2	2	3	2	2	3	3	4	5	-1%	21%
Software Revenue	4	8	9	10	12	14	18	22	28	36	35%	24%
Bundled	3	3	3	4	3	4	5	6	7	8	3%	19%
Unbundled	1	5	6	6	9	10	13	16	21	28	78%	26%
Service Revenue	1	3	4	6	7	7	9	11	14	18	79%	22%
Total Revenue	17	23	31	39	40	42	49	58	69	88	25%	17%
Increase over Prior Year	26%	37%	35%	27%	3%	5%	16%	19%	18%	27%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 65
 TITLE: Final History and Forecast
 APPLICATION: IC Layout
 REGION: Scandinavia
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	28	64	77	236	262	330	420	520	600	680	75%	21%
Workstation Shipments	30	67	73	231	260	330	420	520	600	680	71%	21%
CPU Installed Base	45	108	184	413	702	950	1,340	1,830	2,400	3,050	99%	34%
Workstation Installed Base	50	116	187	411	701	950	1,340	1,830	2,400	3,060	94%	34%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	115.5	29.4	59.2	53.7	54.7	52.2	50.2	48.9	48.2	48.1	-17%	-3%
Hardware-Only ASP	63.5	37.1	38.5	20.0	21.2	18.8	16.7	15.5	14.6	14.2	-24%	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	2	2	3	5	6	6	7	8	8	9	34%	10%
CPU Revenue	1	1	2	5	5	5	5	6	7	7	40%	6%
Workstation Revenue	0	0	0	0	0	1	1	1	0	0	-7%	15%
Peripheral Revenue (Turnkey)	0	0	0	0	0	1	1	1	1	2	-8%	61%
Software Revenue	1	2	3	1	2	2	2	3	3	4	10%	15%
Bundled	0	0	0	0	1	1	1	1	1	1	7%	19%
Unbundled	1	2	3	1	1	1	1	2	2	3	11%	13%
Service Revenue	0	0	1	1	2	2	2	2	3	3	82%	9%
Total Revenue	3	5	7	8	10	10	11	13	14	16	31%	11%
Increase over Prior Year	5%	46%	39%	14%	27%	7%	11%	14%	11%	10%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 66
 TITLE: Final History and Forecast
 APPLICATION: PCB/Hybrid/MCM
 REGION: Scandinavia
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	403	570	601	634	752	790	850	820	840	950	17%	5%
Workstation Shipments	450	598	624	690	797	840	890	850	860	960	15%	4%
CPU Installed Base	458	1,026	1,603	2,145	2,762	3,130	3,620	4,090	4,580	5,100	57%	13%
Workstation Installed Base	522	1,118	1,718	2,317	2,982	3,390	3,930	4,430	4,940	5,560	55%	13%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	116.1	48.5	79.9	63.8	42.9	53.1	52.8	52.5	51.1	50.6	-22%	3%
Hardware-Only ASP	12.5	12.6	12.1	17.9	15.8	14.6	14.4	14.9	13.9	13.4	6%	-3%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	9	9	11	14	14	15	16	16	16	17	11%	4%
CPU Revenue	8	7	10	13	12	11	11	11	12	12	12%	0%
Workstation Revenue	1	2	1	1	1	2	2	2	1	0	4%	-19%
Peripheral Revenue (Turnkey)	1	1	1	0	1	2	2	2	3	5	6%	32%
Software Revenue	5	8	6	5	7	7	8	8	8	10	7%	7%
Bundled	4	2	2	3	3	4	4	4	4	5	-9%	12%
Unbundled	1	6	4	3	4	4	4	4	4	5	32%	3%
Service Revenue	1	3	3	4	5	6	6	7	7	8	44%	11%
Total Revenue	16	20	20	24	26	28	30	30	31	35	13%	6%
Increase over Prior Year	99%	26%	2%	19%	8%	9%	4%	3%	3%	11%		

Forecasts—Europe

Source: Dataquest
 September 1991

TABLE NUMBER: 67
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Spain
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	7,720	10,170	13,370	16,440	19,460	21,900	NA	23%
Workstation Shipments	NA	NA	NA	NA	8,171	10,720	13,910	16,930	19,920	22,320	NA	22%
CPU Installed Base	NA	NA	NA	NA	6,770	17,890	31,260	47,700	67,160	89,070	NA	67%
Workstation Installed Base	NA	NA	NA	NA	7,162	18,890	32,800	49,730	69,650	91,980	NA	67%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	50.5	51.7	48.9	46.7	45.7	45.6	NA	-2%
Hardware-Only ASP	NA	NA	NA	NA	8.6	7.3	6.9	6.5	6.4	6.5	NA	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	108	156	190	223	260	299	NA	23%
CPU Revenue	NA	NA	NA	NA	82	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	6	0	0	0	0	0	NA	-100%
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	20	156	190	223	260	299	NA	72%
Software Revenue	NA	NA	NA	NA	44	33	45	60	79	99	NA	18%
Bundled	NA	NA	NA	NA	23	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	22	33	45	60	79	99	NA	36%
Service Revenue	NA	NA	NA	NA	33	41	51	62	75	89	NA	22%
Total Revenue	NA	NA	NA	NA	185	230	287	345	414	487	NA	21%
Increase over Prior Year	NA	NA	NA	NA	NA	24%	24%	20%	20%	18%		

Source: Dataquest
 September 1991

TABLE NUMBER: 68
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Spain
 PLATFORM: Technical Workstation

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	2,425	2,530	3,400	4,390	5,650	7,110	NA	24%
Workstation Shipments	NA	NA	NA	NA	2,425	2,530	3,400	4,390	5,650	7,110	NA	24%
CPU Installed Base	NA	NA	NA	NA	2,263	4,960	8,360	12,750	18,390	25,510	NA	62%
Workstation Installed Base	NA	NA	NA	NA	2,263	4,960	8,360	12,750	18,390	25,510	NA	62%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	42.8	42.3	41.4	41.1	41.3	41.8	NA	-0%
Hardware-Only ASP	NA	NA	NA	NA	16.8	14.5	13.2	12.4	11.9	11.8	NA	-7%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	56	79	102	128	160	196	NA	28%
CPU Revenue	NA	NA	NA	NA	45	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	12	79	102	128	160	196	NA	76%
Software Revenue	NA	NA	NA	NA	25	18	27	38	52	67	NA	22%
Bundled	NA	NA	NA	NA	16	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	9	18	27	38	52	67	NA	48%
Service Revenue	NA	NA	NA	NA	21	27	35	45	57	71	NA	27%
Total Revenue	NA	NA	NA	NA	103	124	163	211	269	334	NA	26%
Increase over Prior Year	NA	NA	NA	NA	NA	20%	32%	29%	27%	24%		

Source: Dataquest
 September 1991

TABLE NUMBER: 69
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Spain
 PLATFORM: Host/Server

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	----	----	----	----	----	----	----	----	----	----	-----	-----
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	153	210	230	230	230	230	NA	9%
Workstation Shipments	NA	NA	NA	NA	604	760	770	720	680	650	NA	1%
CPU Installed Base	NA	NA	NA	NA	137	360	590	810	1,040	1,270	NA	56%
Workstation Installed Base	NA	NA	NA	NA	529	1,360	2,130	2,850	3,530	4,180	NA	51%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	301.9	285.3	270.5	256.0	244.7	237.0	NA	-5%
Hardware-Only ASP	NA	NA	NA	NA	103.2	91.5	86.0	81.0	76.9	71.7	NA	-7%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	23	36	36	34	32	31	NA	6%
CPU Revenue	NA	NA	NA	NA	15	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	6	0	0	0	0	0	NA	-100%
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	2	36	36	34	32	31	NA	81%
Software Revenue	NA	NA	NA	NA	8	2	2	2	2	2	NA	-23%
Bundled	NA	NA	NA	NA	6	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	2	2	2	2	2	2	NA	1%
Service Revenue	NA	NA	NA	NA	8	10	10	9	9	8	NA	2%
Total Revenue	NA	NA	NA	NA	38	47	48	45	43	41	NA	2%
Increase over Prior Year	NA	NA	NA	NA	NA	24%	2%	-7%	-4%	-3%		

Forecast—Europe

Source: Dataquest
 September 1991

TABLE NUMBER: 70
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Spain
 PLATFORM: Personal Computer

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	5,143	7,430	9,740	11,830	13,590	14,570	NA	23%
Workstation Shipments	NA	NA	NA	NA	5,143	7,430	9,740	11,830	13,590	14,570	NA	23%
CPU Installed Base	NA	NA	NA	NA	4,370	12,570	22,310	34,140	47,730	62,290	NA	70%
Workstation Installed Base	NA	NA	NA	NA	4,370	12,570	22,310	34,140	47,730	62,290	NA	70%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	23.8	27.8	27.4	26.8	26.5	26.2	NA	2%
Hardware-Only ASP	NA	NA	NA	NA	4.9	4.8	4.8	4.7	4.7	4.7	NA	-1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	29	42	52	61	68	72	NA	20%
CPU Revenue	NA	NA	NA	NA	22	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	6	42	52	61	68	72	NA	62%
Software Revenue	NA	NA	NA	NA	11	13	17	21	26	30	NA	22%
Bundled	NA	NA	NA	NA	1	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	10	13	17	21	26	30	NA	24%
Service Revenue	NA	NA	NA	NA	4	5	6	8	9	10	NA	22%
Total Revenue	NA	NA	NA	NA	44	59	75	89	102	111	NA	21%
Increase over Prior Year	NA	NA	NA	NA	NA	36%	26%	19%	15%	9%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 71
 TITLE: Final History and Forecast
 APPLICATION: Mechanical
 REGION: Spain
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	3,002	3,730	4,690	5,560	6,310	6,720	NA	17%
Workstation Shipments	NA	NA	NA	NA	3,314	4,100	5,060	5,890	6,640	7,050	NA	16%
CPU Installed Base	NA	NA	NA	NA	3,410	6,730	11,420	16,980	23,290	30,010	NA	54%
Workstation Installed Base	NA	NA	NA	NA	3,690	7,420	12,480	18,370	25,010	32,060	NA	54%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	51.8	53.7	49.8	46.6	45.1	45.0	NA	-3%
Hardware-Only ASP	NA	NA	NA	NA	9.3	8.5	8.0	7.5	7.4	7.3	NA	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	52	75	85	91	99	104	NA	15%
CPU Revenue	NA	NA	NA	NA	38	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	4	0	0	0	0	0	NA	-100%
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	10	75	85	91	99	104	NA	61%
Software Revenue	NA	NA	NA	NA	20	11	15	20	26	32	NA	10%
Bundled	NA	NA	NA	NA	12	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	8	11	15	20	26	32	NA	32%
Service Revenue	NA	NA	NA	NA	16	21	24	27	30	33	NA	15%
Total Revenue	NA	NA	NA	NA	88	107	124	138	155	170	NA	14%
Increase over Prior Year	NA	NA	NA	NA	NA	21%	16%	11%	13%	9%		

Source: Dataquest
 September 1991

TABLE NUMBER: 72
 TITLE: Final History and Forecast
 APPLICATION: AEC
 REGION: Spain
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	2,882	3,900	5,250	6,610	7,900	9,030	NA	26%
Workstation Shipments	NA	NA	NA	NA	2,928	3,980	5,310	6,660	7,930	9,050	NA	25%
CPU Installed Base	NA	NA	NA	NA	1,379	6,790	12,030	18,640	26,530	35,560	NA	92%
Workstation Installed Base	NA	NA	NA	NA	1,423	6,900	12,210	18,870	26,800	35,860	NA	91%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	30.2	29.9	27.9	26.4	25.1	24.4	NA	-4%
Hardware-Only ASP	NA	NA	NA	NA	8.0	5.9	5.6	5.4	5.3	5.3	NA	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	28	33	41	48	56	64	NA	18%
CPU Revenue	NA	NA	NA	NA	21	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	1	0	0	0	0	0	NA	-100%
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	7	33	41	48	56	64	NA	57%
Software Revenue	NA	NA	NA	NA	7	7	9	13	17	21	NA	23%
Bundled	NA	NA	NA	NA	3	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	5	7	9	13	17	21	NA	35%
Service Revenue	NA	NA	NA	NA	6	7	8	10	11	13	NA	16%
Total Revenue	NA	NA	NA	NA	42	46	58	71	84	98	NA	19%
Increase over Prior Year	NA	NA	NA	NA	NA	11%	27%	22%	19%	17%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 73
 TITLE: Final History and Forecast
 APPLICATION: GIS/Mapping
 REGION: Spain
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	699	1,040	1,530	2,100	2,770	3,310	NA	36%
Workstation Shipments	NA	NA	NA	NA	751	1,110	1,600	2,170	2,840	3,360	NA	35%
CPU Installed Base	NA	NA	NA	NA	563	1,740	3,270	5,370	8,140	11,450	NA	83%
Workstation Installed Base	NA	NA	NA	NA	591	1,860	3,460	5,630	8,470	11,830	NA	82%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	74.9	73.8	68.0	64.0	61.3	59.9	NA	-4%
Hardware-Only ASP	NA	NA	NA	NA	7.4	6.6	6.2	5.9	5.7	5.7	NA	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	14	29	41	55	73	93	NA	45%
CPU Revenue	NA	NA	NA	NA	12	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	1	0	0	0	0	0	NA	-100%
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	2	29	41	55	73	93	NA	120%
Software Revenue	NA	NA	NA	NA	9	7	10	14	20	25	NA	22%
Bundled	NA	NA	NA	NA	5	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	4	7	10	14	20	25	NA	45%
Service Revenue	NA	NA	NA	NA	5	7	10	14	20	25	NA	39%
Total Revenue	NA	NA	NA	NA	28	43	62	84	112	143	NA	38%
Increase over Prior Year	NA	NA	NA	NA	NA	51%	44%	36%	34%	27%		

Source: Dataquest
 September 1991

TABLE NUMBER: 74
 TITLE: Final History and Forecast
 APPLICATION: Electronic Design Automation
 REGION: Spain
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	----	----	----	----	----	----	----	----	----	----	-----	-----
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	1,137	1,490	1,910	2,190	2,480	2,850	NA	20%
Workstation Shipments	NA	NA	NA	NA	1,178	1,530	1,940	2,220	2,500	2,860	NA	19%
CPU Installed Base	NA	NA	NA	NA	1,418	2,630	4,540	6,720	9,200	12,050	NA	53%
Workstation Installed Base	NA	NA	NA	NA	1,458	2,710	4,650	6,860	9,370	12,230	NA	53%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	55.4	50.9	48.6	46.5	45.7	45.5	NA	-4%
Hardware-Only ASP	NA	NA	NA	NA	9.5	8.6	8.3	8.3	8.7	9.5	NA	0%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	14	20	24	28	32	37	NA	22%
CPU Revenue	NA	NA	NA	NA	12	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	1	0	0	0	0	0	NA	-100%
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	2	20	24	28	32	37	NA	90%
Software Revenue	NA	NA	NA	NA	8	8	10	13	17	22	NA	23%
Bundled	NA	NA	NA	NA	3	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	5	8	10	13	17	22	NA	34%
Service Revenue	NA	NA	NA	NA	5	7	9	11	14	17	NA	27%
Total Revenue	NA	NA	NA	NA	27	35	43	52	62	76	NA	23%
Increase over Prior Year	NA	NA	NA	NA	NA	30%	24%	22%	19%	22%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 75
 TITLE: Final History and Forecast
 APPLICATION: Electronic CAE
 REGION: Spain
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	867	1,130	1,440	1,650	1,860	2,130	NA	20%
Workstation Shipments	NA	NA	NA	NA	880	1,140	1,450	1,660	1,870	2,140	NA	19%
CPU Installed Base	NA	NA	NA	NA	1,019	2,000	3,440	5,080	6,950	9,080	NA	55%
Workstation Installed Base	NA	NA	NA	NA	1,033	2,020	3,470	5,130	6,990	9,130	NA	55%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	50.2	46.5	45.3	44.0	43.3	43.2	NA	-3%
Hardware-Only ASP	NA	NA	NA	NA	8.4	7.6	7.3	7.4	8.1	9.3	NA	2%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	9	12	15	19	22	26	NA	23%
CPU Revenue	NA	NA	NA	NA	7	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	-100%
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	1	12	15	19	22	26	NA	80%
Software Revenue	NA	NA	NA	NA	5	4	6	8	11	16	NA	27%
Bundled	NA	NA	NA	NA	1	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	3	4	6	8	11	16	NA	38%
Service Revenue	NA	NA	NA	NA	3	4	5	7	9	11	NA	30%
Total Revenue	NA	NA	NA	NA	17	20	27	34	42	53	NA	26%
Increase over Prior Year	NA	NA	NA	NA	NA	20%	32%	28%	23%	26%		

Source: Dataquest
 September 1991

TABLE NUMBER: 76
 TITLE: Final History and Forecast
 APPLICATION: IC Layout
 REGION: Spain
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	76	110	170	220	270	310	NA	32%
Workstation Shipments	NA	NA	NA	NA	77	120	170	220	270	310	NA	32%
CPU Installed Base	NA	NA	NA	NA	80	190	360	580	850	1,160	NA	71%
Workstation Installed Base	NA	NA	NA	NA	81	190	360	580	850	1,160	NA	70%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	55.5	53.4	51.0	49.2	49.1	48.6	NA	-3%
Hardware-Only ASP	NA	NA	NA	NA	14.0	12.5	11.2	10.2	9.5	9.2	NA	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	1	2	2	3	3	3	NA	23%
CPU Revenue	NA	NA	NA	NA	1	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	-100%
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	0	2	2	3	3	3	NA	132%
Software Revenue	NA	NA	NA	NA	1	0	0	1	1	1	NA	13%
Bundled	NA	NA	NA	NA	0	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	0	0	0	1	1	1	NA	24%
Service Revenue	NA	NA	NA	NA	1	1	1	1	1	1	NA	18%
Total Revenue	NA	NA	NA	NA	2	3	4	4	5	6	NA	20%
Increase over Prior Year	NA	NA	NA	NA	NA	27%	24%	21%	18%	9%		

Source: Dataquest
 September 1991

TABLE NUMBER: 77
 TITLE: Final History and Forecast
 APPLICATION: PCB/Hybrid/MCM
 REGION: Spain
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	----	----	----	----	----	----	----	----	----	----	-----	-----
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	NA	NA	NA	NA	194	250	300	310	350	400	NA	16%
Workstation Shipments	NA	NA	NA	NA	220	270	330	340	360	420	NA	14%
CPU Installed Base	NA	NA	NA	NA	318	440	750	1,060	1,410	1,810	NA	42%
Workstation Installed Base	NA	NA	NA	NA	344	490	820	1,160	1,520	1,940	NA	41%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	NA	NA	NA	NA	64.8	58.9	55.3	52.3	50.5	49.5	NA	-5%
Hardware-Only ASP	NA	NA	NA	NA	12.9	12.0	11.8	12.2	11.6	11.4	NA	-2%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	NA	NA	NA	NA	4	5	6	7	7	8	NA	18%
CPU Revenue	NA	NA	NA	NA	3	0	0	0	0	0	NA	-100%
Workstation Revenue	0	0	0	0	1	0	0	0	0	0	NA	-100%
Peripheral Revenue (Turnkey)	NA	NA	NA	NA	0	5	6	7	7	8	NA	152%
Software Revenue	NA	NA	NA	NA	3	4	4	4	4	5	NA	14%
Bundled	NA	NA	NA	NA	1	0	0	0	0	0	NA	-100%
Unbundled	NA	NA	NA	NA	1	4	4	4	4	5	NA	28%
Service Revenue	NA	NA	NA	NA	1	2	3	3	3	4	NA	23%
Total Revenue	NA	NA	NA	NA	8	11	13	14	15	17	NA	18%
Increase over Prior Year	NA	NA	NA	NA	NA	51%	9%	8%	11%	14%		

Source: Dataquest
 September 1991

TABLE NUMBER: 78
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: United Kingdom
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	9,207	11,866	11,550	27,578	30,986	32,320	34,270	36,980	40,320	44,530	35%	8%
Workstation Shipments	11,369	13,535	13,087	30,485	32,957	34,020	35,600	38,000	41,150	45,260	30%	7%
CPU Installed Base	11,878	23,640	34,490	59,839	89,191	110,610	136,990	166,060	198,480	235,120	66%	21%
Workstation Installed Base	15,086	28,517	40,907	69,181	100,308	123,890	151,770	182,050	215,490	253,050	61%	20%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	93.9	49.4	61.7	52.4	48.4	54.9	53.0	51.4	50.8	51.0	-15%	1%
Hardware-Only ASP	13.0	16.8	21.9	11.3	9.8	9.3	8.7	8.2	8.1	8.3	-7%	-3%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	294	302	384	487	476	527	525	546	591	666	13%	7%
CPU Revenue	189	200	291	392	405	416	420	444	486	551	21%	6%
Workstation Revenue	64	61	55	49	26	40	35	29	25	21	-20%	-4%
Peripheral Revenue (Turnkey)	40	41	37	46	46	70	70	73	81	94	3%	16%
Software Revenue	104	187	191	221	261	275	297	337	396	482	26%	13%
Bundled	76	73	82	110	115	112	112	119	130	155	11%	6%
Unbundled	28	115	110	111	146	162	184	218	266	327	52%	17%
Service Revenue	46	103	122	143	159	177	181	196	221	259	36%	10%
Total Revenue	444	593	697	851	896	978	1,002	1,080	1,208	1,407	19%	9%
Increase over Prior Year	81%	34%	18%	22%	5%	9%	2%	8%	12%	16%		

Source: Dataquest
 September 1991

Forecasts - Europe

TABLE NUMBER: 79
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: United Kingdom
 PLATFORM: Technical Workstation

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	2,031	3,175	5,149	7,569	8,048	9,910	10,920	12,570	14,940	18,520	41%	18%
Workstation Shipments	2,031	3,175	5,149	7,569	8,048	9,910	10,920	12,570	14,940	18,520	41%	18%
CPU Installed Base	2,822	5,981	11,035	18,239	28,051	33,270	42,240	52,860	65,850	82,420	78%	24%
Workstation Installed Base	2,822	5,981	11,035	18,239	28,051	33,270	42,240	52,860	65,850	82,420	78%	24%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	73.9	53.8	53.3	55.3	54.1	51.9	50.1	49.2	48.9	49.3	-8%	-2%
Hardware-Only ASP	27.9	24.3	24.1	17.1	19.4	17.6	16.1	15.3	14.8	14.7	-9%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	90	102	167	216	228	301	314	349	401	480	26%	16%
CPU Revenue	75	84	147	187	198	254	266	295	340	408	27%	16%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	15	18	20	29	30	46	48	54	61	72	19%	19%
Software Revenue	47	93	107	141	169	174	198	238	290	363	38%	17%
Bundled	40	38	46	80	85	83	88	100	113	137	21%	10%
Unbundled	7	55	60	61	84	91	110	138	177	226	87%	22%
Service Revenue	14	43	65	94	109	131	141	161	188	227	68%	16%
Total Revenue	151	238	338	451	506	605	653	748	879	1,069	35%	16%
Increase over Prior Year	139%	57%	42%	33%	12%	20%	8%	15%	17%	22%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 80
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: United Kingdom
 PLATFORM: Host/Server

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	313	797	927	1,073	1,135	1,140	1,040	940	880	860	38%	-5%
Workstation Shipments	2,591	2,466	2,465	3,980	3,107	2,840	2,370	1,960	1,720	1,590	5%	-13%
CPU Installed Base	548	1,345	2,270	3,325	4,417	5,340	6,200	6,960	7,660	8,330	69%	14%
Workstation Installed Base	3,756	6,222	8,687	12,667	15,534	18,610	20,980	22,940	24,660	26,260	43%	11%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	650.3	230.3	460.6	284.3	231.0	226.0	213.1	200.5	191.3	185.7	-23%	-4%
Hardware-Only ASP	506.6	240.5	110.7	129.2	87.0	81.3	74.9	68.7	63.4	58.4	-36%	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	162	159	182	166	130	118	99	82	71	65	-5%	-13%
CPU Revenue	75	79	112	104	94	58	48	39	34	30	6%	-21%
Workstation Revenue	64	61	55	49	26	40	35	29	25	21	-20%	-4%
Peripheral Revenue (Turnkey)	23	20	15	12	10	19	16	13	13	14	-19%	7%
Software Revenue	41	55	49	37	40	36	30	25	23	24	-1%	-10%
Bundled	31	27	30	26	26	26	21	18	16	16	-4%	-10%
Unbundled	10	28	19	11	14	10	9	7	7	8	7%	-10%
Service Revenue	30	55	54	43	43	39	33	27	24	22	9%	-12%
Total Revenue	233	269	286	246	212	193	162	134	118	111	-2%	-12%
Increase over Prior Year	42%	16%	6%	-14%	-14%	-9%	-16%	-17%	-12%	-6%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 81
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: United Kingdom
 PLATFORM: Personal Computer

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	***	***	***	***	***	***	***	***	***	***	***	***
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	6,863	7,894	5,473	18,936	21,802	21,270	22,300	23,460	24,490	25,150	34%	3%
Workstation Shipments	6,747	7,894	5,473	18,936	21,802	21,270	22,300	23,460	24,490	25,150	34%	3%
CPU Installed Base	8,508	16,314	21,186	38,275	56,723	72,000	88,540	106,240	124,970	144,370	61%	21%
Workstation Installed Base	8,508	16,314	21,186	38,275	56,723	72,000	88,540	106,240	124,970	144,370	61%	21%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	13.8	9.5	10.9	11.3	10.0	9.7	9.9	10.0	9.8	9.7	-8%	-1%
Hardware-Only ASP	5.3	4.4	5.0	5.1	5.1	5.0	5.0	4.9	4.8	4.8	-1%	-1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	42	41	34	105	119	108	111	115	119	121	30%	0%
CPU Revenue	39	37	31	101	113	104	106	109	112	113	30%	-0%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	2	4	3	4	6	4	5	6	7	8	23%	9%
Software Revenue	16	39	36	43	53	64	68	74	83	95	34%	13%
Bundled	6	8	5	5	4	3	2	2	1	2	-8%	-14%
Unbundled	11	32	31	39	49	61	66	72	82	94	46%	14%
Service Revenue	3	6	3	6	7	7	8	8	9	10	31%	6%
Total Revenue	60	86	73	154	179	179	188	198	211	226	31%	5%
Increase over Prior Year	225%	42%	-15%	110%	16%	0%	5%	5%	7%	7%		

Source: Dataquest
 September 1991

TABLE NUMBER: 82
 TITLE: Final History and Forecast
 APPLICATION: Mechanical
 REGION: United Kingdom
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	4,939	6,294	5,558	12,625	13,735	13,620	13,870	14,480	15,170	15,860	29%	3%
Workstation Shipments	6,727	7,569	6,811	14,446	15,066	14,770	14,750	15,150	15,750	16,400	22%	2%
CPU Installed Base	6,424	12,660	17,829	29,236	42,614	50,100	59,930	70,380	81,520	93,340	60%	17%
Workstation Installed Base	8,918	16,429	22,853	36,093	50,651	59,610	70,450	81,690	93,530	106,030	54%	16%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	97.4	50.5	68.2	52.2	50.4	57.0	53.9	51.3	50.1	50.1	-15%	-0%
Hardware-Only ASP	12.1	18.0	25.5	13.0	10.8	10.1	9.4	8.8	8.5	8.4	-3%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	172	175	218	259	247	252	234	225	225	232	9%	-1%
CPU Revenue	101	110	158	204	207	194	181	176	177	182	20%	-3%
Workstation Revenue	49	41	41	34	18	22	18	16	15	14	-22%	-5%
Peripheral Revenue (Turnkey)	23	24	18	21	22	37	34	33	34	36	-1%	10%
Software Revenue	50	91	92	99	128	133	136	146	166	192	27%	8%
Bundled	38	40	43	54	62	60	55	52	53	56	13%	-2%
Unbundled	12	52	49	45	67	72	81	94	114	136	55%	15%
Service Revenue	26	58	67	75	83	87	84	85	90	99	33%	4%
Total Revenue	248	324	377	433	458	472	453	456	482	523	17%	3%
Increase over Prior Year	75%	31%	16%	15%	6%	3%	-4%	1%	6%	9%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 83
 TITLE: Final History and Forecast
 APPLICATION: AEC
 REGION: United Kingdom
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,662	2,271	2,073	6,124	6,652	7,100	7,710	8,550	9,440	10,630	41%	10%
Workstation Shipments	1,775	2,464	2,220	6,493	6,814	7,280	7,840	8,640	9,500	10,680	40%	9%
CPU Installed Base	2,168	4,415	6,343	12,017	17,556	23,290	29,420	36,400	44,260	53,320	69%	25%
Workstation Installed Base	2,485	4,925	6,999	13,044	18,715	24,690	30,980	38,070	46,030	55,150	66%	24%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	113.5	50.9	58.0	49.9	37.6	47.8	47.5	48.0	48.7	49.5	-24%	6%
Hardware-Only ASP	11.3	8.3	14.6	7.6	6.6	6.6	6.1	5.7	5.5	5.4	-13%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	36	40	56	81	70	82	82	87	95	109	18%	9%
CPU Revenue	25	28	44	66	60	68	69	74	81	93	25%	9%
Workstation Revenue	8	8	7	5	2	5	4	3	2	2	-26%	-8%
Peripheral Revenue (Turnkey)	4	4	5	10	8	10	10	11	12	15	20%	14%
Software Revenue	9	25	27	40	40	45	50	58	69	84	46%	16%
Bundled	6	9	11	17	14	15	15	16	19	23	24%	11%
Unbundled	3	16	16	24	27	30	35	42	50	61	70%	18%
Service Revenue	6	16	20	22	21	26	26	28	31	37	37%	12%
Total Revenue	51	81	103	144	131	152	158	172	195	231	27%	12%
Increase over Prior Year	59%	58%	27%	40%	-9%	16%	4%	9%	13%	19%		

Source: Dataquest
 September 1991

TABLE NUMBER: 84
 TITLE: Final History and Forecast
 APPLICATION: GIS/Mapping
 REGION: United Kingdom
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	230	751	897	2,873	3,696	4,510	5,370	6,520	7,960	9,350	100%	20%
Workstation Shipments	338	869	1,039	3,313	4,071	4,780	5,600	6,710	8,120	9,480	86%	18%
CPU Installed Base	244	994	1,884	4,710	8,674	12,330	17,270	23,360	30,890	39,810	144%	36%
Workstation Installed Base	412	1,281	2,313	5,579	9,875	13,870	19,050	25,350	33,060	42,130	121%	34%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	131.6	68.8	78.2	69.0	63.1	60.5	57.4	55.3	54.1	53.6	-17%	-3%
Hardware-Only ASP	30.5	24.4	21.2	9.5	8.2	7.8	7.2	6.7	6.4	6.3	-28%	-5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	18	29	38	56	68	94	110	132	163	203	40%	25%
CPU Revenue	10	19	29	44	55	82	97	118	146	181	54%	27%
Workstation Revenue	6	6	5	4	2	5	4	4	3	2	-19%	-3%
Peripheral Revenue (Turnkey)	2	4	4	8	10	8	9	11	14	20	49%	14%
Software Revenue	4	16	26	31	43	46	56	69	87	111	77%	21%
Bundled	3	8	11	18	23	18	22	27	34	45	60%	15%
Unbundled	1	7	14	14	20	28	34	42	53	65	115%	27%
Service Revenue	3	9	13	18	22	29	34	41	52	66	60%	24%
Total Revenue	25	53	77	105	133	170	200	243	302	379	51%	23%
Increase over Prior Year	197%	111%	45%	36%	26%	28%	18%	21%	25%	26%		

Source: Dataquest
 September 1991

TABLE NUMBER: 85
 TITLE: Final History and Forecast
 APPLICATION: Electronic Design Automation
 REGION: United Kingdom
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	2,375	2,549	3,021	5,955	6,903	7,080	7,330	7,440	7,750	8,690	31%	5%
Workstation Shipments	2,529	2,633	3,017	6,233	7,006	7,190	7,410	7,500	7,780	8,700	29%	4%
CPU Installed Base	3,043	5,570	8,434	13,878	20,348	24,900	30,360	35,930	41,810	48,650	61%	19%
Workstation Installed Base	3,272	5,882	8,742	14,466	21,067	25,720	31,280	36,930	42,870	49,740	59%	19%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	77.7	38.2	41.5	44.8	38.4	47.7	48.3	47.8	47.0	46.8	-16%	4%
Hardware-Only ASP	15.9	21.9	21.4	12.8	11.7	11.4	11.0	11.1	11.7	12.9	-7%	2%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	68	59	72	92	92	98	99	103	108	121	8%	6%
CPU Revenue	54	42	60	79	83	73	74	77	82	95	11%	3%
Workstation Revenue	3	6	2	7	3	10	9	7	5	4	3%	4%
Peripheral Revenue (Turnkey)	11	11	10	7	6	16	17	19	20	23	-16%	33%
Software Revenue	41	56	46	51	50	51	55	64	74	95	5%	14%
Bundled	29	16	16	22	17	19	20	24	24	31	-13%	13%
Unbundled	12	40	30	29	33	32	35	40	50	64	29%	14%
Service Revenue	10	20	22	27	32	35	38	43	48	57	34%	12%
Total Revenue	119	135	140	169	174	184	192	210	230	273	10%	9%
Increase over Prior Year	90%	13%	4%	21%	3%	6%	4%	9%	10%	19%		

Source: Dataquest
 September 1991

TABLE NUMBER: 86
 TITLE: Final History and Forecast
 APPLICATION: Electronic CAE
 REGION: United Kingdom
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	----	----	----	----	----	----	----	----	----	----	-----	-----
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,345	1,435	1,689	3,906	4,509	4,650	4,800	4,910	5,090	5,670	35%	5%
Workstation Shipments	1,375	1,453	1,666	4,012	4,537	4,670	4,810	4,910	5,090	5,670	35%	5%
CPU Installed Base	1,806	3,225	4,811	8,403	12,319	15,830	19,540	23,360	27,350	31,930	62%	21%
Workstation Installed Base	1,858	3,295	4,857	8,556	12,512	16,030	19,760	23,590	27,590	32,180	61%	21%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	53.8	34.3	35.1	43.4	35.1	46.3	47.5	46.8	46.1	46.0	-10%	6%
Hardware-Only ASP	16.3	21.0	20.4	10.3	9.7	9.3	9.0	9.1	10.4	12.4	-12%	5%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	31	30	36	50	50	54	55	59	64	78	13%	9%
CPU Revenue	24	21	29	42	45	42	43	46	50	61	17%	7%
Workstation Revenue	1	2	1	3	1	3	2	2	1	1	2%	3%
Peripheral Revenue (Turnkey)	6	7	6	6	5	9	10	12	13	16	-5%	27%
Software Revenue	14	22	20	26	27	30	35	43	51	64	19%	19%
Bundled	10	8	8	13	8	10	12	14	14	15	-6%	13%
Unbundled	3	14	13	13	19	20	24	29	36	49	55%	21%
Service Revenue	3	8	11	14	17	19	22	27	30	38	51%	17%
Total Revenue	48	60	67	90	95	104	112	129	145	180	19%	14%
Increase over Prior Year	52%	26%	11%	35%	5%	10%	8%	15%	13%	24%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 87
 TITLE: Final History and Forecast
 APPLICATION: IC Layout
 REGION: United Kingdom
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	====	====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	106	176	302	462	551	650	760	900	1,020	1,160	51%	16%
Workstation Shipments	120	179	294	458	547	650	760	900	1,020	1,160	46%	16%
CPU Installed Base	159	334	629	1,067	1,780	2,090	2,740	3,530	4,440	5,500	83%	25%
Workstation Installed Base	180	357	644	1,079	1,793	2,110	2,760	3,550	4,460	5,520	78%	25%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	103.2	41.1	33.6	53.0	54.8	52.2	50.1	48.8	48.4	48.4	-15%	-2%
Hardware-Only ASP	34.4	43.5	29.9	20.6	21.0	18.4	16.6	15.4	14.6	14.3	-12%	-7%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	5	6	8	10	12	12	13	14	14	11	26%	-1%
CPU Revenue	4	5	7	9	11	9	10	11	11	10	32%	-3%
Workstation Revenue	0	1	0	0	0	1	1	1	1	0	9%	5%
Peripheral Revenue (Turnkey)	1	1	1	0	0	2	2	2	2	1	-18%	35%
Software Revenue	6	6	6	7	5	5	5	5	7	12	-5%	20%
Bundled	1	1	1	1	1	2	2	2	2	6	-5%	40%
Unbundled	4	5	5	6	4	3	3	4	5	6	-4%	9%
Service Revenue	1	2	3	3	4	4	4	4	5	5	53%	5%
Total Revenue	11	14	18	20	21	21	21	23	26	29	17%	6%
Increase over Prior Year	38%	25%	25%	12%	7%	-2%	3%	10%	11%	11%		

Source: Dataquest
 September 1991

TABLE NUMBER: 88
 TITLE: Final History and Forecast
 APPLICATION: PCB/Hybrid/MCM
 REGION: United Kingdom
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	924	938	1,030	1,587	1,844	1,790	1,760	1,630	1,640	1,860	19%	0%
Workstation Shipments	1,034	1,001	1,057	1,763	1,923	1,880	1,840	1,680	1,670	1,870	17%	-1%
CPU Installed Base	1,077	2,011	2,993	4,408	6,249	6,980	8,080	9,050	10,020	11,220	55%	12%
Workstation Installed Base	1,234	2,231	3,240	4,831	6,762	7,580	8,770	9,800	10,810	12,030	53%	12%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	104.8	42.4	51.4	46.1	41.1	49.2	49.4	49.8	48.5	47.9	-21%	3%
Hardware-Only ASP	12.6	19.0	19.8	17.3	13.6	14.6	14.4	14.8	14.0	13.5	2%	-0%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	33	22	28	32	30	32	31	30	29	32	-3%	1%
CPU Revenue	27	16	23	27	27	22	21	20	21	24	1%	-3%
Workstation Revenue	2	3	1	4	2	6	6	5	3	2	4%	4%
Peripheral Revenue (Turnkey)	5	3	3	1	0	5	5	5	5	6	-44%	66%
Software Revenue	22	28	19	18	18	16	15	15	17	19	-5%	1%
Bundled	17	7	8	9	7	7	7	7	8	9	-19%	4%
Unbundled	4	21	12	9	10	9	8	8	9	10	24%	-1%
Service Revenue	6	10	9	10	11	12	12	12	12	14	17%	5%
Total Revenue	61	60	56	59	59	60	58	57	58	65	-1%	2%
Increase over Prior Year	161%	-1%	-7%	6%	-1%	3%	-3%	-1%	2%	11%		

Source: Dataquest
 September 1991

Forecast—Europe

TABLE NUMBER: 89
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Rest of Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	----	----	----	----	----	----	----	----	----	----	-----	-----
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,593	7,215	7,510	6,766	10,600	14,060	18,250	22,470	26,130	28,730	61%	22%
Workstation Shipments	1,807	7,416	7,746	7,153	11,488	15,100	19,260	23,380	26,970	29,500	59%	21%
CPU Installed Base	2,012	9,209	16,592	22,724	27,538	42,180	56,980	76,010	98,710	124,070	92%	35%
Workstation Installed Base	2,340	9,737	17,355	23,876	29,348	45,290	61,130	81,090	104,640	130,790	88%	35%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	52.5	22.0	54.3	41.2	49.9	55.9	52.8	50.5	48.8	48.1	-1%	-1%
Hardware-Only ASP	12.9	6.7	7.3	9.1	8.6	8.2	7.7	7.3	7.2	7.4	-10%	-3%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	44	73	154	121	181	266	319	374	421	463	43%	21%
CPU Revenue	22	48	104	84	137	201	244	288	327	349	57%	21%
Workstation Revenue	8	8	7	7	12	17	18	17	15	10	12%	-3%
Peripheral Revenue (Turnkey)	14	16	44	29	32	47	57	68	80	104	24%	26%
Software Revenue	12	33	71	84	122	147	192	246	308	373	80%	25%
Bundled	9	12	42	33	57	56	65	74	84	96	57%	11%
Unbundled	2	22	29	51	64	91	127	172	224	277	130%	34%
Service Revenue	5	14	35	37	57	81	100	122	144	167	82%	24%
Total Revenue	60	120	259	241	360	494	611	741	874	1,002	56%	23%
Increase over Prior Year	116%	99%	116%	-7%	49%	37%	24%	21%	18%	15%		

Source: Dataquest
 September 1991

TABLE NUMBER: 90
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Rest of Europe
 PLATFORM: Technical Workstation

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	168	1,322	2,007	1,738	3,163	4,830	6,420	8,280	10,260	12,330	108%	31%
Workstation Shipments	168	1,322	2,007	1,738	3,163	4,830	6,420	8,280	10,260	12,330	108%	31%
CPU Installed Base	244	1,564	3,562	5,246	5,667	12,540	18,450	26,220	35,970	47,790	120%	53%
Workstation Installed Base	244	1,564	3,562	5,246	5,667	12,540	18,450	26,220	35,970	47,790	120%	53%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	71.1	13.2	64.3	46.2	48.4	46.7	45.3	44.8	44.3	44.3	-9%	-2%
Hardware-Only ASP	34.7	24.4	27.3	29.0	19.3	17.5	16.0	15.2	14.6	14.5	-14%	-6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	8	13	91	53	88	155	197	247	295	337	83%	31%
CPU Revenue	5	10	60	42	73	123	156	195	232	261	92%	29%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	3	4	32	11	15	31	41	52	63	76	56%	39%
Software Revenue	3	12	44	42	72	80	112	155	205	260	116%	29%
Bundled	3	5	34	23	41	31	40	51	61	76	91%	13%
Unbundled	0	8	10	19	31	49	73	105	144	185	254%	43%
Service Revenue	1	5	25	23	37	55	72	94	116	138	153%	30%
Total Revenue	12	30	160	118	197	289	382	497	616	736	101%	30%
Increase over Prior Year	81%	151%	431%	-26%	66%	47%	32%	30%	24%	20%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 91
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Rest of Europe
 PLATFORM: Host/Server

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	43	87	92	167	277	420	450	450	450	440	60%	10%
Workstation Shipments	272	287	327	554	1,165	1,460	1,460	1,370	1,290	1,210	44%	1%
CPU Installed Base	65	152	243	408	653	1,070	1,500	1,930	2,370	2,790	78%	34%
Workstation Installed Base	392	680	1,007	1,561	2,463	4,180	5,650	7,010	8,300	9,520	58%	31%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	602.6	297.8	466.5	160.2	246.7	240.5	228.0	215.6	203.9	194.8	-20%	-5%
Hardware-Only ASP	364.0	285.5	143.1	209.5	134.2	126.4	116.4	106.6	98.6	91.2	-22%	-7%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	19	22	22	24	43	64	64	59	55	51	22%	3%
CPU Revenue	9	11	14	15	28	34	34	31	28	23	34%	-3%
Workstation Revenue	8	8	7	7	12	17	18	17	15	10	12%	-3%
Peripheral Revenue (Turnkey)	3	3	2	2	3	12	12	12	13	17	1%	39%
Software Revenue	4	7	7	14	16	25	26	24	23	24	46%	8%
Bundled	3	3	4	5	12	20	20	19	17	17	38%	8%
Unbundled	0	4	3	10	4	5	6	6	6	7	109%	10%
Service Revenue	3	6	7	7	13	19	19	18	17	17	45%	5%
Total Revenue	26	36	37	46	72	108	109	102	96	91	29%	5%
Increase over Prior Year	38%	38%	2%	26%	56%	50%	1%	-7%	-6%	-5%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 92
 TITLE: Final History and Forecast
 APPLICATION: All Applications
 REGION: Rest of Europe
 PLATFORM: Personal Computer

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	1,383	5,807	5,412	4,862	7,161	8,820	11,370	13,740	15,420	15,960	51%	17%
Workstation Shipments	1,368	5,807	5,412	4,862	7,161	8,820	11,370	13,740	15,420	15,960	51%	17%
CPU Installed Base	1,704	7,494	12,787	17,069	21,218	28,570	37,030	47,850	60,370	73,480	88%	28%
Workstation Installed Base	1,704	7,494	12,787	17,069	21,218	28,570	37,030	47,850	60,370	73,480	88%	28%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	22.8	18.0	20.5	24.2	25.1	25.7	25.3	25.1	24.7	24.5	2%	-0%
Hardware-Only ASP	6.2	4.7	5.2	5.0	4.7	4.6	4.6	4.5	4.4	4.4	-7%	-1%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	16	38	40	43	51	48	58	67	71	75	33%	8%
CPU Revenue	9	28	30	27	37	44	54	62	67	65	44%	12%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	NA	NA
Peripheral Revenue (Turnkey)	8	10	10	16	14	4	4	5	5	11	16%	-6%
Software Revenue	5	14	19	27	33	42	54	66	80	88	62%	21%
Bundled	3	4	5	5	5	6	5	5	6	3	12%	-9%
Unbundled	2	10	15	22	29	36	49	61	74	85	98%	24%
Service Revenue	1	3	3	6	7	7	8	10	11	12	51%	12%
Total Revenue	22	54	63	77	91	96	120	143	162	175	42%	14%
Increase over Prior Year	77%	142%	16%	22%	19%	5%	25%	19%	14%	8%		

Source: Dataquest
 September 1991

Forecast—Europe

TABLE NUMBER: 93
 TITLE: Final History and Forecast
 APPLICATION: Mechanical
 REGION: Rest of Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	988	3,521	3,653	3,422	5,290	6,640	8,280	9,840	11,010	11,500	52%	17%
Workstation Shipments	1,160	3,665	3,837	3,700	5,930	7,420	9,040	10,530	11,670	12,130	50%	15%
CPU Installed Base	1,194	4,706	8,285	11,375	13,594	20,730	27,310	35,460	44,780	54,580	84%	32%
Workstation Installed Base	1,448	5,104	8,867	12,237	14,969	23,030	30,380	39,230	49,210	59,660	79%	32%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	43.4	19.3	59.2	41.1	49.9	56.0	52.3	49.3	47.9	47.8	4%	-1%
Hardware-Only ASP	12.4	7.1	8.1	10.4	9.6	9.2	8.6	8.1	7.9	7.9	-6%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	27	39	100	69	105	143	161	175	187	194	40%	13%
CPU Revenue	12	23	59	44	74	107	122	134	143	144	58%	14%
Workstation Revenue	5	5	5	5	8	8	8	8	8	7	13%	-2%
Peripheral Revenue (Turnkey)	10	12	37	20	23	28	31	34	36	43	22%	13%
Software Revenue	5	15	42	33	62	76	95	117	142	163	89%	21%
Bundled	4	6	29	16	33	35	39	41	44	46	66%	7%
Unbundled	1	9	12	17	29	41	56	75	97	117	169%	32%
Service Revenue	3	8	22	18	35	48	56	64	73	80	78%	18%
Total Revenue	36	62	164	121	202	267	312	356	402	437	54%	17%
Increase over Prior Year	132%	75%	164%	-27%	68%	32%	17%	14%	13%	9%		

Forecasts—Europe

Source: Dataquest
 September 1991

TABLE NUMBER: 94
 TITLE: Final History and Forecast
 APPLICATION: AEC
 REGION: Rest of Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	====	====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	231	1,215	1,125	1,643	2,554	3,510	4,670	5,900	6,990	7,900	82%	25%
Workstation Shipments	249	1,240	1,147	1,688	2,645	3,620	4,770	5,990	7,050	7,950	81%	25%
CPU Installed Base	314	1,525	2,626	4,160	5,357	9,340	13,420	18,730	25,140	32,450	103%	43%
Workstation Installed Base	349	1,585	2,709	4,287	5,532	9,670	13,850	19,250	25,720	33,080	99%	43%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	97.0	38.5	37.6	35.2	34.9	40.7	37.3	34.7	32.3	30.9	-23%	-2%
Hardware-Only ASP	10.6	5.7	6.5	6.8	6.2	6.0	5.6	5.3	5.1	5.0	-13%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	5	12	15	21	28	42	51	59	66	76	52%	22%
CPU Revenue	3	10	12	16	22	34	41	49	54	59	59%	22%
Workstation Revenue	1	1	1	1	1	4	3	3	2	0	3%	-100%
Peripheral Revenue (Turnkey)	1	1	2	5	5	5	6	7	10	17	64%	28%
Software Revenue	2	8	10	17	22	29	39	51	65	77	80%	28%
Bundled	1	3	4	6	7	8	8	9	10	10	63%	6%
Unbundled	1	5	6	10	15	21	31	42	54	67	93%	35%
Service Revenue	1	3	4	6	6	9	11	13	15	18	75%	24%
Total Revenue	8	23	28	44	56	81	101	123	146	170	63%	25%
Increase over Prior Year	195%	185%	23%	56%	29%	43%	25%	22%	18%	17%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 95
 TITLE: Final History and Forecast
 APPLICATION: GIS/Mapping
 REGION: Rest of Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	22	372	594	499	1,039	1,620	2,380	3,310	4,330	5,090	162%	37%
Workstation Shipments	42	394	621	530	1,127	1,710	2,470	3,390	4,400	5,150	127%	36%
CPU Installed Base	24	396	989	1,468	2,201	3,840	6,020	9,130	13,260	18,150	210%	52%
Workstation Installed Base	50	444	1,064	1,573	2,327	4,130	6,400	9,600	13,810	18,760	162%	52%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	321.8	97.3	89.5	82.6	69.8	68.4	63.6	60.2	58.0	56.8	-32%	-4%
Hardware-Only ASP	30.9	9.0	8.3	7.9	7.3	7.1	6.6	6.2	5.9	5.9	-30%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	3	6	9	12	20	39	55	75	99	122	59%	44%
CPU Revenue	1	4	7	9	17	30	42	59	77	95	88%	41%
Workstation Revenue	1	1	1	0	1	3	3	3	3	3	-4%	24%
Peripheral Revenue (Turnkey)	0	1	1	2	1	7	10	13	18	24	31%	76%
Software Revenue	1	2	3	12	14	16	23	32	42	53	111%	30%
Bundled	1	1	1	4	10	7	9	13	17	22	102%	18%
Unbundled	0	1	2	7	5	9	13	19	25	31	138%	45%
Service Revenue	1	1	2	6	6	9	13	19	26	33	77%	41%
Total Revenue	4	9	14	29	40	64	91	126	166	208	74%	39%
Increase over Prior Year	229%	111%	54%	105%	37%	59%	43%	38%	32%	25%		

Source: Dataquest
 September 1991

TABLE NUMBER: 96
 TITLE: Final History and Forecast
 APPLICATION: Electronic Design Automation
 REGION: Rest of Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	====	====	====	====	====	====	====	====	====	====	=====	=====
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	352	2,107	2,138	1,202	1,717	2,290	2,920	3,420	3,800	4,240	49%	20%
Workstation Shipments	357	2,116	2,142	1,235	1,787	2,360	2,990	3,480	3,850	4,280	50%	19%
CPU Installed Base	480	2,582	4,692	5,720	6,386	8,270	10,230	12,690	15,530	18,880	91%	24%
Workstation Installed Base	492	2,604	4,716	5,779	6,520	8,460	10,490	13,010	15,900	19,290	91%	24%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	59.6	14.8	44.6	35.0	60.0	68.7	67.4	65.8	63.9	63.0	0%	1%
Hardware-Only ASP	14.9	6.2	6.5	10.2	10.6	9.8	9.5	9.8	10.5	11.7	-8%	2%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	8	15	30	18	28	42	52	64	69	71	37%	20%
CPU Revenue	6	12	25	15	24	31	39	48	52	51	43%	17%
Workstation Revenue	0	1	0	1	1	2	3	2	2	0	47%	-46%
Peripheral Revenue (Turnkey)	2	2	4	3	3	8	10	14	16	21	15%	44%
Software Revenue	4	9	16	23	22	26	35	46	59	80	55%	29%
Bundled	3	1	8	6	7	7	8	11	12	18	20%	20%
Unbundled	1	7	8	16	15	19	27	36	48	62	134%	32%
Service Revenue	0	2	7	7	10	14	19	26	31	36	119%	29%
Total Revenue	12	26	53	48	61	82	106	136	159	188	49%	25%
Increase over Prior Year	43%	109%	105%	-9%	28%	35%	29%	28%	17%	18%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 97
 TITLE: Final History and Forecast
 APPLICATION: Electronic CAE
 REGION: Rest of Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	236	871	914	788	1,212	1,610	2,060	2,440	2,700	2,990	51%	20%
Workstation Shipments	238	874	915	797	1,233	1,640	2,080	2,460	2,720	3,010	51%	20%
CPU Installed Base	324	1,191	2,085	2,781	3,417	4,930	6,560	8,570	10,830	13,390	80%	31%
Workstation Installed Base	330	1,201	2,095	2,800	3,462	5,000	6,650	8,680	10,960	13,540	80%	31%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	51.7	21.0	43.7	43.8	63.3	68.8	68.2	66.8	65.8	65.7	5%	1%
Hardware-Only ASP	13.9	6.1	6.7	8.6	8.8	8.3	8.1	8.4	9.6	11.6	-11%	6%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	5	7	13	12	18	26	33	43	47	53	40%	24%
CPU Revenue	3	5	9	9	14	20	25	32	36	38	45%	22%
Workstation Revenue	0	0	0	0	0	1	1	1	0	0	39%	-32%
Peripheral Revenue (Turnkey)	1	2	4	2	3	5	7	10	11	14	23%	38%
Software Revenue	2	4	6	13	14	17	25	34	45	58	57%	32%
Bundled	2	1	3	4	4	4	5	7	7	8	16%	13%
Unbundled	0	3	3	10	10	14	20	27	37	50	277%	38%
Service Revenue	0	1	3	4	6	9	12	18	21	26	134%	34%
Total Revenue	7	12	22	29	38	52	70	94	113	136	51%	29%
Increase over Prior Year	50%	59%	91%	32%	31%	36%	35%	35%	20%	21%		

Source: Dataquest
 September 1991

TABLE NUMBER: 98
 TITLE: Final History and Forecast
 APPLICATION: IC Layout
 REGION: Rest of Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	*****	*****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	13	288	293	24	97	150	220	290	350	400	65%	33%
Workstation Shipments	9	289	292	24	99	150	220	290	350	400	80%	32%
CPU Installed Base	24	312	604	611	645	680	770	940	1,180	1,520	128%	19%
Workstation Installed Base	21	309	601	608	646	680	770	950	1,180	1,520	137%	19%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	103.7	19.5	88.8	52.3	50.0	48.0	45.9	44.9	44.4	44.3	-17%	-2%
Hardware-Only ASP	32.0	5.8	6.0	26.0	19.4	17.5	15.5	14.2	13.3	12.9	-12%	-8%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	1	2	2	1	2	3	4	4	5	4	36%	16%
CPU Revenue	0	2	2	1	2	2	3	3	3	2	44%	5%
Workstation Revenue	0	0	0	0	0	0	0	0	0	0	41%	-100%
Peripheral Revenue (Turnkey)	0	0	0	0	0	0	1	1	1	2	-18%	98%
Software Revenue	0	1	2	1	2	2	3	4	5	7	65%	27%
Bundled	0	0	0	0	0	0	0	1	1	2	5%	37%
Unbundled	NA	1	1	1	2	2	2	3	4	5	NA	24%
Service Revenue	0	0	0	0	1	1	1	2	2	2	108%	21%
Total Revenue	1	3	5	2	5	6	8	10	12	13	53%	22%
Increase over Prior Year	-18%	193%	73%	-50%	117%	27%	24%	26%	21%	12%		

Source: Dataquest
 September 1991

Forecasts—Europe

TABLE NUMBER: 99
 TITLE: Final History and Forecast
 APPLICATION: PCB/Hybrid/MCM
 REGION: Rest of Europe
 PLATFORM: All Platforms

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	CAGR 86-90	CAGR 90-95
	****	****	****	****	****	****	****	****	****	****	****	****
UNIT SHIPMENT DATA (Workstation Shipments)												
CPU Shipments	103	948	931	390	408	530	640	680	750	850	41%	16%
Workstation Shipments	109	953	934	414	454	570	690	720	780	870	43%	14%
CPU Installed Base	132	1,079	2,003	2,329	2,323	2,660	2,900	3,180	3,520	3,970	105%	11%
Workstation Installed Base	142	1,094	2,021	2,371	2,412	2,780	3,070	3,390	3,760	4,230	103%	12%
CALCULATED AVERAGE SYSTEM PRICE DATA (Thousands of U.S. Dollars)												
Turnkey ASP	75.3	11.6	43.7	25.9	55.8	70.8	68.2	65.7	62.0	59.6	-7%	1%
Hardware-Only ASP	15.0	6.6	6.6	14.5	14.3	12.6	12.4	12.9	12.2	11.9	-1%	-4%
REVENUE DATA (Millions of U.S. Dollars)												
Hardware Revenue	3	7	15	6	9	13	15	17	17	15	34%	11%
CPU Revenue	2	6	14	5	7	9	11	12	13	10	39%	7%
Workstation Revenue	0	1	0	0	1	1	2	1	1	0	53%	-100%
Peripheral Revenue (Turnkey)	1	0	0	0	1	2	3	3	3	5	-3%	55%
Software Revenue	1	4	8	8	6	7	8	9	10	15	49%	20%
Bundled	1	1	4	2	3	3	3	4	4	9	33%	27%
Unbundled	0	3	4	6	4	4	5	5	6	7	68%	13%
Service Revenue	0	1	3	2	3	5	5	6	7	8	101%	19%
Total Revenue	4	12	26	17	18	25	28	32	34	38	44%	16%
Increase over Prior Year	57%	177%	126%	-37%	10%	35%	16%	11%	9%	10%		

Source: Dataquest
 September 1991

Forecasts—Europe

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Market Share Estimates
Europe

Source:
Dataquest

CAD/CAM/CAE

Market Share Estimates
Europe

Source:
Dataquest

Published by Dataquest Incorporated

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Market Share Estimates—Europe

Market Share Estimates

The following is a description of the information reported in the *Market Share Estimates* book for each segment:

- *Source*—All companies in database; overview of industry
- *Mechanical Applications*—All companies in database with mechanical revenue
- *AEC and GIS Applications*—All companies in database with AEC or GIS revenue
- *Electronic Design Automation Applications*—All companies in database with EDA revenue
- *Europe*—All European-based companies and all other companies with more than \$1 million in European revenue
- *Asia*—All Asian-based companies and all other companies with more than \$1 million in Asian revenue
- *Personal CAD and Distribution Channels*—All companies in database with PC revenue

Market Database Methodology

Dataquest's CAD/CAM/CAE industry service is committed to consistently delivering to clients the most accurate data available on the CAD/CAM/CAE industry, both in terms of market history and forecast. Our annual delivery schedule is designed to meet that commitment, as follows:

- *First quarter (January 31)*—We will provide complete preliminary market share tables for the year just completed. Historical database is opened for changes for a six-month period.

- *Second quarter (March 31)*: We provide complete preliminary forecast tables, including a new five-year forecast period.
- *Third quarter (July 1)*: We send complete final updated market share tables based on additional data collection and analysis over the previous six months as well as company history tables. At this point, the market share database is frozen and will not be changed until the end of the year. For the next six months, supplementary market data will be based on this final market data.
- *Fourth quarter (October 1)*: We provide complete final forecast tables, taking into consideration changes in the market during the previous six months.

Since January, when the preliminary market share numbers were published, over 35 new companies have been added to the market share database. This brings the total number of companies recognized in the CAD/CAM/CAE market to 430. The market share numbers also have been rechecked and verified for all vendors worldwide. Year-end 1990 financial results released this past spring have also been checked and incorporated into the final numbers.

Additionally, a number of companies significantly improved or made changes to their reporting methods during this past update cycle. These changes have been incorporated into this update. Dataquest's policy is to continually update its market information for any year, based on any new data received, in order to arrive at the most accurate market representation possible.

TABLE NUMBER: 1
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	651.4	420.6	124.4	26,886	12.5%	15.0%	8.6%	15.0%
Computervision	575.5	244.2	143.6	5,925	11.0%	8.7%	9.9%	3.3%
Hewlett-Packard	409.6	297.6	38.4	24,338	7.9%	10.6%	2.7%	13.6%
Intergraph	368.2	196.0	73.1	3,846	7.1%	7.0%	5.0%	2.1%
Digital	359.8	262.2	.0	2,640	6.9%	9.3%	.0%	1.5%
Siemens	258.4	130.6	91.1	3,499	5.0%	4.6%	6.3%	2.0%
Compaq	197.7	197.7	.0	32,937	3.8%	7.0%	.0%	18.4%
Sun	177.2	154.1	.0	7,448	3.4%	5.5%	.0%	4.2%
McDonnell Douglas	124.9	64.2	48.4	2,099	2.4%	2.3%	3.3%	1.2%
Mentor Graphics	120.7	33.9	50.7	1,196	2.3%	1.2%	3.5%	.7%
Control Data	90.9	50.6	12.5	1,201	1.7%	1.8%	.9%	.7%
Autodesk	80.9	.0	80.9	0	1.6%	.0%	5.6%	.0%
Schlumberger	78.6	27.9	28.7	824	1.5%	1.0%	2.0%	.5%
Matra Datavision	68.1	30.7	27.3	743	1.3%	1.1%	1.9%	.4%
Dassault*	67.6	.0	57.5	0	1.3%	.0%	4.0%	.0%
Apple Computer	59.0	51.9	.0	11,340	1.1%	1.8%	.0%	6.3%
Norsk Data	50.0	25.6	8.8	500	1.0%	.9%	.6%	.3%
Dazix	44.9	7.2	18.0	331	.9%	.3%	1.2%	.2%
Racal-Redac	39.7	1.6	32.2	181	.8%	.1%	2.2%	.1%
Valid	39.6	2.7	23.8	204	.8%	.1%	1.6%	.1%
STI-Straessle	39.6	9.1	21.8	370	.8%	.3%	1.5%	.2%
ISICAD	34.3	14.2	15.2	300	.7%	.5%	1.1%	.2%
Data Technology/DATECH*	34.0	6.2	24.3	981	.7%	.2%	1.7%	.5%
Silicon Graphics	32.4	28.5	.0	724	.6%	1.0%	.0%	.4%
Cadence	31.3	.0	23.3	0	.6%	.0%	1.6%	.0%
Cisigraph	31.1	10.9	10.8	288	.6%	.4%	.7%	.2%
Nemetschek	30.9	12.3	18.5	500	.6%	.4%	1.3%	.3%
ItalCad	30.0	14.1	7.2	280	.6%	.5%	.5%	.2%
Investronica SA	25.5	20.4	2.6	1,018	.5%	.7%	.2%	.6%
Kewill Systems	25.0	7.5	13.8	500	.5%	.3%	1.0%	.3%
SDRC	24.1	.0	24.1	0	.5%	.0%	1.7%	.0%
ICL	22.9	13.5	7.8	629	.4%	.5%	.5%	.4%
PAFEC	22.9	.0	22.9	0	.4%	.0%	1.6%	.0%

(Continued)

Market Share Estimates—Europe

TABLE NUMBER: 1
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Ferranti	21.8	8.1	10.0	201	.4%	.3%	.7%	.1%
Wiechers Datentechnik	20.3	16.2	4.1	494	.4%	.6%	.3%	.3%
Ziegler	18.4	.0	18.4	0	.4%	.0%	1.3%	.0%
Vero International Software	18.2	.0	16.6	0	.3%	.0%	1.1%	.0%
MacNeal-Schwendler	16.6	.0	15.9	0	.3%	.0%	1.1%	.0%
CADAM	16.0	7.0	7.7	1,000	.3%	.2%	.5%	.6%
Mannesmann PROCAD	15.7	8.0	4.4	218	.3%	.3%	.3%	.1%
ESRI	15.7	.0	13.9	0	.3%	.0%	1.0%	.0%
Hahn & Kolb	15.4	9.3	4.6	220	.3%	.3%	.3%	.1%
ISYKON Software	15.4	7.7	5.4	220	.3%	.3%	.4%	.1%
ABB Cade International	15.2	8.9	4.6	66	.3%	.3%	.3%	.0%
Landmark Graphics	14.6	7.1	4.4	89	.3%	.3%	.3%	.0%
Calay	14.4	4.5	8.3	234	.3%	.2%	.6%	.1%
Research Machines	14.3	14.3	.0	2,200	.3%	.5%	.0%	1.2%
Engineering Computer Services*	13.7	5.5	4.7	215	.3%	.2%	.3%	.1%
Delcam International	13.1	4.6	6.6	218	.3%	.2%	.5%	.1%
Caditron	13.0	6.5	5.2	200	.2%	.2%	.4%	.1%
Gerber Systems	12.4	6.1	4.1	178	.2%	.2%	.3%	.1%
Exapt	12.3	6.0	4.2	211	.2%	.2%	.3%	.1%
CAD Centre	12.1	.0	6.4	0	.2%	.0%	.4%	.0%
Star Informatic	12.0	10.5	3.1	550	.2%	.4%	.2%	.3%
Auto-Trol	11.8	4.7	4.1	138	.2%	.2%	.3%	.1%
Cimatron	11.6	5.2	5.2	344	.2%	.2%	.4%	.2%
Sysscan	11.6	5.1	3.0	103	.2%	.2%	.2%	.1%
CAD Lab	11.5	.0	9.2	0	.2%	.0%	.6%	.0%
Aucotec	10.5	3.7	5.8	167	.2%	.1%	.4%	.1%
Microway	10.5	7.1	3.5	95	.2%	.3%	.2%	.1%
DATAID Technologies*	10.5	.0	2.1	0	.2%	.0%	.1%	.0%
Cimlinc	10.3	2.1	6.2	197	.2%	.1%	.4%	.1%
Fides Industrielle Automation	10.0	1.2	9.0	75	.2%	.0%	.6%	.0%
LPKF	9.9	6.4	2.5	400	.2%	.2%	.2%	.2%
Unisys	9.9	5.0	3.5	151	.2%	.2%	.2%	.1%
Scientific Calc.	9.5	1.2	5.6	34	.2%	.0%	.4%	.0%

(Continued)

TABLE NUMBER: 1
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Soft-Tech Software Technologie	9.0	.9	7.2	225	.2%	.0%	.5%	.1%
Radan Computational	8.9	3.1	4.5	300	.2%	.1%	.3%	.2%
PDA Engineering	8.8	.0	8.8	0	.2%	.0%	.6%	.0%
Laser-Scan	8.8	2.2	4.4	29	.2%	.1%	.3%	.0%
Framasoft	8.4	.0	5.1	0	.2%	.0%	.4%	.0%
Micrograph*	8.4	5.1	2.5	175	.2%	.2%	.2%	.1%
Tebis	8.4	1.3	5.9	42	.2%	.0%	.4%	.0%
Moss Systems	8.3	.0	7.4	0	.2%	.0%	.5%	.0%
Kockums Computer Systems	8.1	2.0	4.5	400	.2%	.1%	.3%	.2%
EEsof	7.8	.0	6.8	5	.1%	.0%	.5%	.0%
VLSI Technology	7.6	.2	6.3	22	.1%	.0%	.4%	.0%
DAT Standard Information syste	7.6	.0	7.2	0	.1%	.0%	.5%	.0%
Albert Nestler	7.4	2.4	3.2	95	.1%	.1%	.2%	.1%
Teradyne	7.3	.0	6.0	0	.1%	.0%	.4%	.0%
t2 Solutions	7.1	3.6	2.6	136	.1%	.1%	.2%	.1%
CIMTEK*	7.1	3.4	3.0	67	.1%	.1%	.2%	.0%
BATISOFT	7.0	1.1	3.5	225	.1%	.0%	.2%	.1%
Kloekner-Moeller	6.8	4.1	2.4	107	.1%	.1%	.2%	.1%
Club Informatico SA*	6.7	3.0	3.3	260	.1%	.1%	.2%	.1%
Swanson Analysis	6.5	.0	6.5	0	.1%	.0%	.4%	.0%
Ground Modelling Systems	6.4	4.3	3.2	36	.1%	.2%	.2%	.0%
rotring euroCAD	6.4	4.0	2.4	170	.1%	.1%	.2%	.1%
Spectrum Graphics	6.3	1.9	3.1	58	.1%	.1%	.2%	.0%
RIB/RZB	6.2	.6	4.9	30	.1%	.0%	.3%	.0%
DECISA*	5.9	3.4	1.8	104	.1%	.1%	.1%	.1%
Alias Research	5.7	.0	5.7	0	.1%	.0%	.4%	.0%
Technische Computer Systeme	5.4	1.1	4.3	137	.1%	.0%	.3%	.1%
Parametric Technology	5.3	.0	4.9	0	.1%	.0%	.3%	.0%
Clemessy	5.2	4.2	.8	10	.1%	.1%	.1%	.0%
Serbi	5.2	.0	5.2	0	.1%	.0%	.4%	.0%
debis Systemhaus	5.2	1.3	3.1	180	.1%	.0%	.2%	.1%
Synercom	5.1	.0	2.4	0	.1%	.0%	.2%	.0%
Olivetti	5.0	4.2	.0	800	.1%	.1%	.0%	.4%

(Continued)

TABLE NUMBER: 1
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Zycad	4.6	3.8	.0	38	.1%	.1%	.0%	.0%
Computer Services Consultants	4.5	.0	4.5	0	.1%	.0%	.3%	.0%
Marcus Computer Systeme	4.4	2.3	1.5	137	.1%	.1%	.1%	.1%
FHECOR*	4.0	.0	4.0	0	.1%	.0%	.3%	.0%
Hochtief	4.0	.6	2.8	34	.1%	.0%	.2%	.0%
Synopsys	3.9	.0	3.5	0	.1%	.0%	.2%	.0%
AnaCAD	3.9	.0	3.9	0	.1%	.0%	.3%	.0%
Intercad	3.9	2.0	1.1	189	.1%	.1%	.1%	.1%
Genrad	3.7	.7	2.5	39	.1%	.0%	.2%	.0%
Orcad	3.7	.0	3.7	0	.1%	.0%	.3%	.0%
LSI Logic	3.6	.4	2.8	9	.1%	.0%	.2%	.0%
Robocom	3.5	.0	3.5	0	.1%	.0%	.2%	.0%
Datagraphic	3.4	1.7	1.4	55	.1%	.1%	.1%	.0%
MCS	3.3	.0	2.9	0	.1%	.0%	.2%	.0%
Pathtrace	3.3	.9	2.2	46	.1%	.0%	.2%	.0%
Genasys II	3.2	1.1	1.9	11	.1%	.0%	.1%	.0%
Solbourne	3.2	3.2	.0	237	.1%	.1%	.0%	.1%
Asicom*	3.1	.3	2.8	100	.1%	.0%	.2%	.1%
Complansoft CAD	3.1	1.5	1.5	216	.1%	.1%	.1%	.1%
Whessoe Computing Systems	3.1	.0	3.1	0	.1%	.0%	.2%	.0%
Viewlogic Systems	3.0	.0	2.5	0	.1%	.0%	.2%	.0%
XAO Industrie	3.0	1.1	1.8	108	.1%	.0%	.1%	.1%
Xilinx	3.0	.0	2.7	0	.1%	.0%	.2%	.0%
Logic Automation	3.0	.0	3.0	0	.1%	.0%	.2%	.0%
Eptisa*	2.9	.1	2.3	2	.1%	.0%	.2%	.0%
ISKA	2.9	1.3	1.2	53	.1%	.0%	.1%	.0%
Silvar-Lisco	2.9	.0	1.8	0	.1%	.0%	.1%	.0%
Cadtronic	2.8	1.6	1.3	84	.1%	.1%	.1%	.0%
Dell Computer	2.8	2.8	.0	698	.1%	.1%	.0%	.4%
Assigraph	2.8	.0	2.2	21	.1%	.0%	.2%	.0%
MARC	2.7	.0	2.7	0	.1%	.0%	.2%	.0%
Ikos Systems	2.7	2.7	.0	12	.1%	.1%	.0%	.0%
Alper Systems	2.7	1.3	.7	18	.1%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 1
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue			Mkstrs Shipped	Market Share			
	Revenue	Hardware Revenue	Software Revenue		Total Revenue	Hardware Revenue	Software Revenue	Mkstrs Shipped
ALS Design	2.6	.0	2.6	0	.0%	.0%	.2%	.0%
Gable CAD Systems	2.6	1.0	1.2	32	.0%	.0%	.1%	.0%
CANTEK	2.5	.0	2.1	0	.0%	.0%	.1%	.0%
FEA Limited	2.5	.6	.6	48	.0%	.0%	.0%	.0%
ADRA Systems	2.5	.9	1.4	45	.0%	.0%	.1%	.0%
Academi Systems	2.3	.2	1.8	9	.0%	.0%	.1%	.0%
Caroline Informatique	2.3	.5	1.6	30	.0%	.0%	.1%	.0%
Superdraft	2.3	1.1	1.1	123	.0%	.0%	.1%	.1%
Anilam Electronics	2.2	.7	1.3	28	.0%	.0%	.1%	.0%
Catalpa	2.2	.8	1.1	18	.0%	.0%	.1%	.0%
BETROMEX	2.2	.0	2.2	0	.0%	.0%	.1%	.0%
ABB Engineering Automation	2.1	.0	2.1	0	.0%	.0%	.1%	.0%
ICAD	2.1	.0	1.7	0	.0%	.0%	.1%	.0%
Sinus Software	1.9	.9	.9	36	.0%	.0%	.1%	.0%
Lamp Software	1.8	.5	1.2	88	.0%	.0%	.1%	.0%
Elstree Computing	1.8	.8	1.0	50	.0%	.0%	.1%	.0%
Macao Systems	1.8	1.0	.7	17	.0%	.0%	.0%	.0%
Aplein*	1.7	1.6	.1	20	.0%	.1%	.0%	.0%
CAD-UL	1.7	.0	1.7	0	.0%	.0%	.1%	.0%
Micrografx	1.7	.0	1.7	0	.0%	.0%	.1%	.0%
Microsim	1.7	.0	1.6	0	.0%	.0%	.1%	.0%
Data I/O	1.6	.0	1.6	0	.0%	.0%	.1%	.0%
ACTEL	1.6	.0	1.4	0	.0%	.0%	.1%	.0%
ETAK	1.5	.1	1.5	4	.0%	.0%	.1%	.0%
CADKEY	1.5	1.0	.5	150	.0%	.0%	.0%	.1%
Moda CAD	1.5	.4	1.0	13	.0%	.0%	.1%	.0%
Everex Systems	1.5	1.5	.0	458	.0%	.1%	.0%	.3%
ARKTEC	1.4	.4	1.0	40	.0%	.0%	.1%	.0%
Soft*	1.4	.0	1.2	0	.0%	.0%	.1%	.0%
MEDESIGN	1.4	.4	.5	15	.0%	.0%	.0%	.0%
DECAD	1.3	.2	.8	5	.0%	.0%	.1%	.0%
ERDAS	1.3	.2	1.0	7	.0%	.0%	.1%	.0%
Smallworld Systems	1.3	.5	.8	36	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 1
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total Hardware Revenue		Software Revenue		Wkstns Shipped	Market Share		
	Revenue	Revenue	Revenue	Revenue		Revenue	Wkstns Shipped	
CAD Software	1.3	.0	1.1	0	0	.0%	.1%	.0%
CNC Software	1.2	.0	1.2	0	0	.0%	.0%	.1%
Test Systems Strategies	1.2	.0	1.0	0	0	.0%	.0%	.1%
DAPCO	1.2	.0	.8	0	0	.0%	.0%	.1%
Comdisco Systems	1.2	.0	1.1	0	0	.0%	.0%	.1%
FEGS	1.1	.0	.9	0	0	.0%	.0%	.1%
CAD TECH Iberica*	1.1	.6	.5	59	0	.0%	.0%	.0%
Integer	1.1	.0	.9	0	0	.0%	.0%	.1%
Forestight Resources	1.1	.0	1.0	0	0	.0%	.0%	.1%
Mechanical Dynamics	1.0	.0	.9	0	0	.0%	.0%	.1%
Aucos elektronische Garate	1.0	.3	.7	100	0	.0%	.0%	.1%
Dynamic Graphics	1.0	.0	.9	0	0	.0%	.0%	.1%
Vantage Analysis Systems	1.0	.0	1.0	0	0	.0%	.0%	.1%
Accugraph	1.0	.4	.4	25	0	.0%	.0%	.1%
DELTA CAD*	1.0	.4	.4	12	12	.0%	.0%	.0%
CENTUNION*	.9	.2	.5	12	12	.0%	.0%	.0%
S.T.L.D. s.r.l.	.8	.0	.8	0	0	.0%	.0%	.1%
Number One Systems	.8	.1	.7	20	20	.0%	.0%	.1%
Vision 3D	.7	.4	.2	6	6	.0%	.0%	.0%
Inca	.7	.0	.7	0	0	.0%	.0%	.0%
Computational Mechanics	.7	.0	.7	0	0	.0%	.0%	.0%
CAD/MATIC	.7	.1	.5	4	4	.0%	.0%	.0%
Contract Data Research	.7	.0	.5	0	0	.0%	.0%	.0%
Masta Corporation	.6	.0	.4	5	5	.0%	.0%	.0%
ACERI SA	.6	.1	.3	3	3	.0%	.0%	.0%
CAD-Capture	.5	.0	.1	0	0	.0%	.0%	.0%
LEICA	.4	.0	.3	0	0	.0%	.0%	.0%
Logic Control*	.4	.2	.1	80	80	.0%	.0%	.0%
Kontron Instruments	.2	.1	.1	4	4	.0%	.0%	.0%
Instrumatic Espanola	.2	.0	.2	0	0	.0%	.0%	.0%
ESDU International	.2	.0	.2	0	0	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 1 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
TOOL Software	.2	.1	.1	4	.0%	.0%	.0%	.0%
Dolphin Integration	.1	.0	.1	0	.0%	.0%	.0%	.0%
Other Companies	99.0	201.5	.0	32,077	1.9%	7.2%	.0%	17.9%
All Companies	5,211.1	2,812.7	1,448.3	179,208	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	3,942.6	2,335.5	835.1	159,805	75.7%	83.0%	57.7%	89.2%
All Asian-Based Companies	1.3	.6	.6	17	.0%	.0%	.0%	.0%
All European-Based Companies	1,267.3	476.7	612.6	19,386	24.3%	16.9%	42.3%	10.8%
All Hardware Companies	1,410.9	1,222.7	.0	131,074	27.1%	43.5%	.0%	73.1%
All Turnkey & SW Companies	3,800.1	1,590.1	1,448.3	48,134	72.9%	56.5%	100.0%	26.9%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 2
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Market Share			
					Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Computervision	505.5	216.9	122.1	4,055	17.3%	15.7%	13.4%	8.5%
Hewlett-Packard	327.6	231.6	38.4	12,438	11.2%	16.7%	4.2%	26.1%
Intergraph	304.8	169.6	54.8	3,371	10.4%	12.3%	6.0%	7.1%
Siemens	234.2	116.8	81.9	3,108	8.0%	8.4%	9.0%	6.5%
Sun	142.1	125.1	.0	6,364	4.9%	9.0%	.0%	13.4%
Mentor Graphics	120.7	33.9	50.7	1,196	4.1%	2.4%	5.6%	2.5%
McDonnell Douglas	96.0	49.5	37.0	1,110	3.3%	3.6%	4.1%	2.3%
Digital	79.1	57.3	.0	2,640	2.7%	4.1%	.0%	5.5%
Matra Datavision	68.1	30.7	27.3	743	2.3%	2.2%	3.0%	1.6%
IBM	57.3	34.9	12.0	1,486	2.0%	2.5%	1.3%	3.1%
Schlumberger	55.0	18.8	20.7	470	1.9%	1.4%	2.3%	1.0%
Dazix	44.9	7.2	18.0	331	1.5%	.5%	2.0%	.7%
Valid	39.6	2.7	23.8	204	1.4%	.2%	2.6%	.4%
STI-Straessle	39.6	9.1	21.8	370	1.4%	.7%	2.4%	.8%
Control Data	38.7	26.3	6.6	900	1.3%	1.9%	.7%	1.9%
Racal-Redac	34.5	1.6	27.3	181	1.2%	.1%	3.0%	.4%
Silicon Graphics	31.7	27.9	.0	713	1.1%	2.0%	.0%	1.5%
ItalCad	30.0	14.1	7.2	280	1.0%	1.0%	.8%	.6%
Cisigraph	28.0	9.8	9.8	226	1.0%	.7%	1.1%	.5%
Cadence	27.5	.0	20.4	0	.9%	.0%	2.2%	.0%
ISICAD	27.2	14.2	8.2	300	.9%	1.0%	.9%	.6%
Norsk Data	25.4	14.7	5.1	316	.9%	1.1%	.6%	.7%
ICL	22.9	13.5	7.8	629	.8%	1.0%	.9%	1.3%
Kewill Systems	22.5	6.8	12.4	474	.8%	.5%	1.4%	1.0%
Ferranti	21.8	8.1	10.0	201	.7%	.6%	1.1%	.4%
Dassault*	21.7	.0	18.5	0	.7%	.0%	2.0%	.0%
SDRC	21.0	.0	21.0	0	.7%	.0%	2.3%	.0%
PAFEC	20.5	.0	20.5	0	.7%	.0%	2.3%	.0%
Mannesmann PROCAD	15.7	8.0	4.4	218	.5%	.6%	.5%	.5%
ISYKON Software	15.4	7.7	5.4	220	.5%	.6%	.6%	.5%
ABB Cade International	15.2	8.9	4.6	66	.5%	.6%	.5%	.1%
Landmark Graphics	14.6	7.1	4.4	89	.5%	.5%	.5%	.2%
Calay	14.4	4.5	8.3	234	.5%	.3%	.9%	.5%

(Continued)

TABLE NUMBER: 2
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mahn & Kolb	13.9	8.3	4.2	190	.5%	.6%	.5%	.4%
Delcam International	13.1	4.6	6.6	218	.4%	.3%	.7%	.5%
Gerber Systems	12.4	6.1	4.1	178	.4%	.4%	.5%	.4%
CAD Centre	12.1	.0	6.4	0	.4%	.0%	.7%	.0%
Star Informatic	12.0	10.5	3.1	550	.4%	.8%	.3%	1.2%
Auto-Trol	11.8	4.7	4.1	138	.4%	.3%	.5%	.3%
CAD Lab	11.0	.0	8.8	0	.4%	.0%	1.0%	.0%
Cimline	10.3	2.1	6.2	197	.4%	.1%	.7%	.4%
ESRI	8.9	.0	7.8	0	.3%	.0%	.9%	.0%
Radan Computational	8.8	3.1	4.4	296	.3%	.2%	.5%	.6%
Moss Systems	8.3	.0	7.4	0	.3%	.0%	.8%	.0%
Cimatron	8.2	3.7	3.7	241	.3%	.3%	.4%	.5%
Kockums Computer Systems	8.1	2.0	4.5	400	.3%	.1%	.5%	.8%
Laser-Scan	7.9	2.0	4.0	25	.3%	.1%	.4%	.1%
Scientific Calc.	7.8	.8	4.3	25	.3%	.1%	.5%	.1%
Unisys	7.6	3.9	2.7	119	.3%	.3%	.3%	.3%
Framasoft	7.6	.0	4.6	0	.3%	.0%	.5%	.0%
VLSI Technology	7.5	.2	6.2	22	.3%	.0%	.7%	.0%
Albert Nestler	7.4	2.4	3.2	95	.3%	.2%	.3%	.2%
Engineering Computer Services*	7.4	3.0	2.5	116	.3%	.2%	.3%	.2%
t2 Solutions	7.1	3.6	2.6	136	.2%	.3%	.3%	.3%
Microway	6.7	4.5	2.3	57	.2%	.3%	.2%	.1%
Autodesk	6.7	.0	6.7	0	.2%	.0%	.7%	.0%
DATAID Technologies*	6.3	.0	1.3	0	.2%	.0%	.1%	.0%
Spectrum Graphics	6.3	1.9	3.1	58	.2%	.1%	.3%	.1%
PDA Engineering	5.9	.0	5.9	0	.2%	.0%	.6%	.0%
Alias Research	5.7	.0	5.7	0	.2%	.0%	.6%	.0%
Wiechers Datentechnik	5.7	4.5	1.1	80	.2%	.3%	.1%	.2%
Technische Computer Systeme	5.4	1.1	4.3	137	.2%	.1%	.5%	.3%
Parametric Technology	5.3	.0	4.9	0	.2%	.0%	.5%	.0%
DECISA*	4.4	2.5	1.3	68	.1%	.2%	.1%	.1%
CIMTEK*	4.3	2.2	1.6	37	.1%	.2%	.2%	.1%
Clemessy	4.2	3.4	.6	4	.1%	.2%	.1%	.0%

(Continued)

TABLE NUMBER: 2
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
MacNeal-Schwendler	4.1	.0	3.9	0	.1%	.0%	.4%	.0%
debis Systemhaus	4.0	1.0	2.3	127	.1%	.1%	.3%	.3%
Sysscan	4.0	1.7	1.0	27	.1%	.1%	.1%	.1%
AnaCAD	3.9	.0	3.9	0	.1%	.0%	.4%	.0%
Zycad	3.7	2.9	.0	31	.1%	.2%	.0%	.1%
EEsof	3.5	.0	3.0	5	.1%	.0%	.3%	.0%
Aucotec	3.5	1.2	1.9	55	.1%	.1%	.2%	.1%
Marcus Computer Systeme	3.4	1.8	1.1	105	.1%	.1%	.1%	.2%
rottring euroCAD	3.3	2.2	1.1	96	.1%	.2%	.1%	.2%
Exapt	3.3	1.6	1.1	107	.1%	.1%	.1%	.2%
LSI Logic	3.3	.3	2.5	8	.1%	.0%	.3%	.0%
Genrad	3.3	.6	2.2	29	.1%	.0%	.2%	.1%
Synercom	3.2	.0	1.5	0	.1%	.0%	.2%	.0%
Complansoft CAD	3.1	1.5	1.5	216	.1%	.1%	.2%	.5%
Nemetschek	3.1	1.2	1.9	33	.1%	.1%	.2%	.1%
Teradyne	3.1	.0	2.6	0	.1%	.0%	.3%	.0%
Data Technology/DATECH*	3.1	.0	2.8	0	.1%	.0%	.3%	.0%
Swanson Analysis	3.0	.0	3.0	0	.1%	.0%	.3%	.0%
XAO Industrie	3.0	1.1	1.8	108	.1%	.1%	.2%	.2%
Genasys II	2.9	1.0	1.8	10	.1%	.1%	.2%	.0%
ISKA	2.9	1.3	1.2	53	.1%	.1%	.1%	.1%
Silvar-Lisco	2.9	.0	1.8	0	.1%	.0%	.2%	.0%
Logic Automation	2.9	.0	2.9	0	.1%	.0%	.3%	.0%
Alper Systems	2.7	1.3	.7	18	.1%	.1%	.1%	.0%
Gable CAD Systems	2.6	1.0	1.2	32	.1%	.1%	.1%	.1%
Ikos Systems	2.5	2.5	.0	11	.1%	.2%	.0%	.0%
Catalpa	2.2	.8	1.1	18	.1%	.1%	.1%	.0%
ICAD	2.1	.0	1.7	0	.1%	.0%	.2%	.0%
Eptisa*	2.1	.0	1.6	1	.1%	.0%	.2%	.0%
CADAM	2.0	.0	1.7	0	.1%	.0%	.2%	.0%
Fides Industrielle Automation	2.0	.2	1.8	32	.1%	.0%	.2%	.1%
ADRA Systems	1.9	.9	.9	45	.1%	.1%	.1%	.1%
Synopsys	1.9	.0	1.7	0	.1%	.0%	.2%	.0%

(Continued)

TABLE NUMBER: 2
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
RIB/RZB	1.9	.2	1.5	8	.1%	.0%	.2%	.0%
Sinus Software	1.9	.9	.9	36	.1%	.1%	.1%	.1%
Caroline Informatique	1.8	.4	1.3	25	.1%	.0%	.1%	.1%
CANTEK	1.8	.0	1.5	0	.1%	.0%	.2%	.0%
Aplein*	1.7	1.6	.1	20	.1%	.1%	.0%	.0%
NCS	1.5	.0	1.4	0	.1%	.0%	.1%	.0%
Assigraph	1.4	.0	1.1	11	.0%	.0%	.1%	.0%
MARC	1.4	.0	1.4	0	.0%	.0%	.2%	.0%
MEDESIGN	1.4	.4	.5	15	.0%	.0%	.1%	.0%
Viewlogic Systems	1.3	.0	1.1	0	.0%	.0%	.1%	.0%
DECAD	1.3	.2	.8	4	.0%	.0%	.1%	.0%
Smallworld Systems	1.3	.5	.8	36	.0%	.0%	.1%	.1%
DAPCO	1.2	.0	.8	0	.0%	.0%	.1%	.0%
Condisco Systems	1.2	.0	1.1	0	.0%	.0%	.1%	.0%
Test Systems Strategies	1.1	.0	.9	0	.0%	.0%	.1%	.0%
Macao Systems	1.1	.6	.4	11	.0%	.0%	.0%	.0%
FEA Limited	1.0	.3	.3	19	.0%	.0%	.0%	.0%
Vantage Analysis Systems	1.0	.0	1.0	0	.0%	.0%	.1%	.0%
Soft*	1.0	.0	.9	0	.0%	.0%	.1%	.0%
Academi Systems	.9	.1	.7	4	.0%	.0%	.1%	.0%
Accugraph	.9	.4	.4	24	.0%	.0%	.0%	.1%
Micrograph*	.8	.5	.3	18	.0%	.0%	.0%	.0%
ERDAS	.8	.2	.6	4	.0%	.0%	.1%	.0%
Dynamic Graphics	.8	.0	.6	0	.0%	.0%	.1%	.0%
Mechanical Dynamics	.7	.0	.6	0	.0%	.0%	.1%	.0%
Solbourne	.6	.6	.0	45	.0%	.0%	.0%	.1%
FEGS	.6	.0	.5	0	.0%	.0%	.1%	.0%
Lamp Software	.6	.3	.4	34	.0%	.0%	.0%	.1%
ARKTEC	.4	.3	.2	18	.0%	.0%	.0%	.0%
LEICA	.4	.0	.3	0	.0%	.0%	.0%	.0%
Asicom*	.4	.0	.3	11	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 2 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
CAD TECH Iberica*	.3	.2	.1	14	.0%	.0%	.0%	.0%
Whesoe Computing Systems	.3	.0	.3	0	.0%	.0%	.0%	.0%
Serbi	.3	.0	.3	0	.0%	.0%	.0%	.0%
ACTEL	.2	.0	.2	0	.0%	.0%	.0%	.0%
CADMATIC	.2	.0	.2	2	.0%	.0%	.0%	.0%
Data I/O	.2	.0	.2	0	.0%	.0%	.0%	.0%
Xilinx	.2	.0	.2	0	.0%	.0%	.0%	.0%
Computational Mechanics	.2	.0	.2	0	.0%	.0%	.0%	.0%
Inca	.2	.0	.2	0	.0%	.0%	.0%	.0%
Masta Corporation	.2	.0	.2	1	.0%	.0%	.0%	.0%
Microsim	.2	.0	.2	0	.0%	.0%	.0%	.0%
ETAK	.2	.0	.2	0	.0%	.0%	.0%	.0%
Everex Systems	.1	.1	.0	15	.0%	.0%	.0%	.0%
CADKEY	.1	.0	.0	3	.0%	.0%	.0%	.0%
TOOL Software	.0	.0	.0	1	.0%	.0%	.0%	.0%
Dolphin Integration	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Companies	2,921.2	1,383.2	911.1	47,598	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	2,069.7	1,051.0	526.9	36,587	70.9%	76.0%	57.8%	76.9%
All Asian-Based Companies	.9	.4	.5	7	.0%	.0%	.1%	.0%
All European-Based Companies	850.5	331.9	383.7	11,005	29.1%	24.0%	42.1%	23.1%
All Hardware Companies	407.2	340.0	.0	17,963	13.9%	24.6%	.0%	37.7%
All Turnkey & SW Companies	2,514.0	1,043.3	911.1	29,635	86.1%	75.4%	100.0%	62.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 3
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	510.7	306.4	112.4	6,740	38.7%	37.9%	47.6%	37.1%
Digital	280.7	204.9	.0	0	21.3%	25.3%	.0%	.0%
Computervision	61.8	27.0	13.9	1,793	4.7%	3.3%	5.9%	9.9%
Intergraph	52.9	26.4	8.5	475	4.0%	3.3%	3.6%	2.6%
Control Data	52.3	24.4	6.0	301	4.0%	3.0%	2.5%	1.7%
Dassault*	45.9	.0	39.0	0	3.5%	.0%	16.5%	.0%
Sun	35.0	29.1	.0	1,084	2.7%	3.6%	.0%	6.0%
McDonnell Douglas	28.9	14.7	11.4	989	2.2%	1.8%	4.8%	5.4%
Norsk Data	24.3	10.6	3.7	178	1.8%	1.3%	1.5%	1.0%
Siemens	24.2	13.8	9.2	391	1.8%	1.7%	3.9%	2.2%
Schlumberger	22.8	8.9	7.7	350	1.7%	1.1%	3.3%	1.9%
MacNeal-Schwendler	12.5	.0	12.0	0	.9%	.0%	5.1%	.0%
Exapt	9.0	4.4	3.1	104	.7%	.5%	1.3%	.6%
Fides Industrielle Automation	8.0	.9	7.2	43	.6%	.1%	3.0%	.2%
Sysscan	7.7	3.4	2.0	76	.6%	.4%	.8%	.4%
Hewlett-Packard	6.8	5.7	.0	340	.5%	.7%	.0%	1.9%
ESRI	5.3	.0	4.7	0	.4%	.0%	2.0%	.0%
Cadence	3.8	.0	2.8	0	.3%	.0%	1.2%	.0%
DATAID Technologies*	3.1	.0	.6	0	.2%	.0%	.3%	.0%
SDRC	3.1	.0	3.1	0	.2%	.0%	1.3%	.0%
Cisigraph	3.1	1.1	1.0	62	.2%	.1%	.4%	.3%
Teradyne	2.9	.0	2.4	0	.2%	.0%	1.0%	.0%
PDA Engineering	2.9	.0	2.9	0	.2%	.0%	1.2%	.0%
Swanson Analysis	2.8	.0	2.8	0	.2%	.0%	1.2%	.0%
Solbourne	2.6	2.6	.0	192	.2%	.3%	.0%	1.1%
Kewill Systems	2.5	.8	1.4	26	.2%	.1%	.6%	.1%
Unisys	2.3	1.1	.8	32	.2%	.1%	.3%	.2%
CADAM	2.1	.0	1.8	0	.2%	.0%	.8%	.0%
ABB Engineering Automation	2.1	.0	2.1	0	.2%	.0%	.9%	.0%
Synopsys	2.0	.0	1.8	0	.2%	.0%	.8%	.0%
Synercom	1.9	.0	.9	0	.1%	.0%	.4%	.0%
Scientific Calc.	1.7	.3	1.3	9	.1%	.0%	.6%	.0%
Assigraph	1.4	.0	1.1	11	.1%	.0%	.5%	.1%

(Continued)

TABLE NUMBER: 3
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
MARC	1.4	.0	1.4	0	.1%	.0%	.6%	.0%
MCS	1.1	.0	1.0	0	.1%	.0%	.4%	.0%
Clemessy	1.1	.9	.1	6	.1%	.1%	.1%	.0%
Zycad	.9	.9	.0	7	.1%	.1%	.0%	.0%
Laser-Scan	.9	.2	.4	4	.1%	.0%	.2%	.0%
Framasoft	.9	.0	.5	0	.1%	.0%	.2%	.0%
CINTEK*	.7	.4	.2	6	.1%	.1%	.1%	.0%
Macao Systems	.7	.4	.3	6	.1%	.1%	.1%	.0%
Silicon Graphics	.6	.5	.0	11	.0%	.1%	.0%	.1%
Whesoe Computing Systems	.6	.0	.6	0	.0%	.0%	.3%	.0%
debis Systemhaus	.6	.2	.4	13	.0%	.0%	.2%	.1%
DECISA*	.6	.4	.2	6	.0%	.0%	.1%	.0%
FEGS	.5	.0	.4	0	.0%	.0%	.2%	.0%
Computational Mechanics	.5	.0	.5	0	.0%	.0%	.2%	.0%
EEsof	.4	.0	.4	0	.0%	.0%	.1%	.0%
Genrad	.4	.1	.3	4	.0%	.0%	.1%	.0%
LSI Logic	.4	.0	.3	1	.0%	.0%	.1%	.0%
Olivetti	.3	.3	.0	7	.0%	.0%	.0%	.0%
Mechanical Dynamics	.3	.0	.3	0	.0%	.0%	.1%	.0%
Dynamic Graphics	.3	.0	.2	0	.0%	.0%	.1%	.0%
FEA Limited	.3	.1	.1	5	.0%	.0%	.0%	.0%
ETAX	.2	.0	.2	1	.0%	.0%	.1%	.0%
Hochtief	.2	.0	.1	1	.0%	.0%	.1%	.0%
Nasta Corporation	.2	.0	.1	0	.0%	.0%	.0%	.0%
Test Systems Strategies	.1	.0	.1	0	.0%	.0%	.1%	.0%
CADKEY	.1	.1	.0	2	.0%	.0%	.0%	.0%
Data I/O	.1	.0	.1	0	.0%	.0%	.0%	.0%
Lamp Software	.1	.0	.0	2	.0%	.0%	.0%	.0%
VLSI Technology	.1	.0	.0	0	.0%	.0%	.0%	.0%
Logic Automation	.1	.0	.1	0	.0%	.0%	.0%	.0%
Microsim	.1	.0	.1	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 3 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
DECAD	.0	.0	.0	1	.0%	.0%	.0%	.0%
Accugraph	.0	.0	.0	1	.0%	.0%	.0%	.0%
Other Companies	74.7	117.6	.0	4,911	5.7%	14.5%	.0%	27.0%
All Companies	1,318.3	808.5	236.2	18,187	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	1,185.5	771.4	164.9	17,252	89.9%	95.4%	69.8%	94.9%
All Asian-Based Companies	.1	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	132.8	37.1	71.3	934	10.1%	4.6%	30.2%	5.1%
All Hardware Companies	461.9	367.9	.0	6,612	35.0%	45.5%	.0%	36.4%
All Turnkey & SW Companies	856.5	440.6	236.2	11,575	65.0%	54.5%	100.0%	63.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 4
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Compaq	197.7	197.7	.0	32,937	20.3%	31.8%	.0%	29.0%
IBM	83.5	79.3	.0	18,660	8.6%	12.8%	.0%	16.5%
Hewlett-Packard	75.3	60.3	.0	11,560	7.8%	9.7%	.0%	10.2%
Autodesk	74.2	.0	74.2	0	7.6%	.0%	24.6%	.0%
Apple Computer	59.0	51.9	.0	11,340	6.1%	8.4%	.0%	10.0%
Data Technology/DATECH*	30.9	6.2	21.6	981	3.2%	1.0%	7.2%	.9%
Nemetschek	27.8	11.1	16.7	467	2.9%	1.8%	5.5%	.4%
Investronica SA	25.5	20.4	2.6	1,018	2.6%	3.3%	.8%	.9%
Ziegler	18.4	.0	18.4	0	1.9%	.0%	6.1%	.0%
Vero International Software	18.2	.0	16.6	0	1.9%	.0%	5.5%	.0%
Wiechers Datentechnik	14.6	11.7	2.9	414	1.5%	1.9%	1.0%	.4%
Research Machines	14.3	14.3	.0	2,200	1.5%	2.3%	.0%	1.9%
Caditron	13.0	6.5	5.2	200	1.3%	1.0%	1.7%	.2%
CADAM	11.9	7.0	4.2	1,000	1.2%	1.1%	1.4%	.9%
Intergraph	10.5	.0	9.9	0	1.1%	.0%	3.3%	.0%
LPKF	9.9	6.4	2.5	400	1.0%	1.0%	.8%	.4%
Soft-Tech Software Technologie	9.0	.9	7.2	225	.9%	.1%	2.4%	.2%
Tebis	8.4	1.3	5.9	42	.9%	.2%	2.0%	.0%
Computervision	8.1	.4	7.6	77	.8%	.1%	2.5%	.1%
DAT Standard Information syste	7.6	.0	7.2	0	.8%	.0%	2.4%	.0%
Micrograph*	7.6	4.5	2.3	157	.8%	.7%	.8%	.1%
ISICAD	7.1	.0	7.1	0	.7%	.0%	2.3%	.0%
Aucotec	7.0	2.5	3.9	112	.7%	.4%	1.3%	.1%
BATISOFT	7.0	1.1	3.5	225	.7%	.2%	1.2%	.2%
Kloekner-Moeller	6.8	4.1	2.4	107	.7%	.7%	.8%	.1%
Club Informatico SA*	6.7	3.0	3.3	260	.7%	.5%	1.1%	.2%
Ground Modelling Systems	6.4	4.3	3.2	36	.7%	.7%	1.1%	.0%
Engineering Computer Services*	6.3	2.5	2.1	99	.6%	.4%	.7%	.1%
Racal-Redac	5.2	.0	4.9	0	.5%	.0%	1.6%	.0%
Serbi	4.9	.0	4.9	0	.5%	.0%	1.6%	.0%
Olivetti	4.7	4.0	.0	793	.5%	.6%	.0%	.7%
Computer Services Consultants	4.5	.0	4.5	0	.5%	.0%	1.5%	.0%
RIB/R2B	4.3	.4	3.5	22	.4%	.1%	1.1%	.0%

(Continued)

TABLE NUMBER: 4
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
FHECOR*	4.0	.0	4.0	0	.4%	.0%	1.3%	.0%
EEsof	3.9	.0	3.5	0	.4%	.0%	1.2%	.0%
Intercad	3.9	2.0	1.1	189	.4%	.3%	.4%	.2%
Hochtief	3.8	.6	2.7	33	.4%	.1%	.9%	.0%
Microway	3.8	2.6	1.3	38	.4%	.4%	.4%	.0%
Orcad	3.7	.0	3.7	0	.4%	.0%	1.2%	.0%
Robocom	3.5	.0	3.5	0	.4%	.0%	1.2%	.0%
Cimatron	3.5	1.6	1.6	103	.4%	.3%	.5%	.1%
Datagraphic	3.4	1.7	1.4	55	.4%	.3%	.5%	.0%
Pathtrace	3.3	.9	2.2	46	.3%	.1%	.7%	.0%
rotring euroCAD	3.1	1.7	1.4	74	.3%	.3%	.4%	.1%
Cadtronic	2.8	1.6	1.3	84	.3%	.3%	.4%	.1%
Dell Computer	2.8	2.8	.0	698	.3%	.5%	.0%	.6%
Asicom*	2.8	.3	2.5	89	.3%	.0%	.8%	.1%
Xilinx	2.7	.0	2.5	0	.3%	.0%	.8%	.0%
ALS Design	2.6	.0	2.6	0	.3%	.0%	.9%	.0%
PAFEC	2.4	.0	2.4	0	.2%	.0%	.8%	.0%
Superdraft	2.3	1.1	1.1	123	.2%	.2%	.4%	.1%
Anilam Electronics	2.2	.7	1.3	28	.2%	.1%	.4%	.0%
BETRONEX	2.2	.0	2.2	0	.2%	.0%	.7%	.0%
Whesoe Computing Systems	2.2	.0	2.2	0	.2%	.0%	.7%	.0%
CINTEK*	2.1	.8	1.2	24	.2%	.1%	.4%	.0%
Elstree Computing	1.8	.8	1.0	50	.2%	.1%	.3%	.0%
Viewlogic Systems	1.8	.0	1.5	0	.2%	.0%	.5%	.0%
CAD-UL	1.7	.0	1.7	0	.2%	.0%	.6%	.0%
Micrografx	1.7	.0	1.7	0	.2%	.0%	.6%	.0%
Hahn & Kolb	1.5	.9	.5	30	.2%	.1%	.2%	.0%
Moda CAD	1.5	.4	1.0	13	.2%	.1%	.3%	.0%
Microsim	1.4	.0	1.3	0	.1%	.0%	.4%	.0%
ESRI	1.4	.0	1.4	0	.1%	.0%	.5%	.0%
Academ Systems	1.4	.1	1.1	6	.1%	.0%	.4%	.0%
Everex Systems	1.4	1.4	.0	443	.1%	.2%	.0%	.4%
ACTEL	1.4	.0	1.2	0	.1%	.0%	.4%	.0%

(Continued)

TABLE NUMBER: 4
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
CADKEY	1.4	.9	.4	145	.1%	.1%	.1%	.1%
Teradyne	1.3	.0	1.1	0	.1%	.0%	.4%	.0%
Data I/O	1.3	.0	1.3	0	.1%	.0%	.4%	.0%
FEA Limited	1.3	.3	.3	24	.1%	.0%	.1%	.0%
CAD Software	1.3	.0	1.1	0	.1%	.0%	.4%	.0%
CNC Software	1.2	.0	1.2	0	.1%	.0%	.4%	.0%
Lamp Software	1.2	.2	.7	51	.1%	.0%	.2%	.0%
ETAK	1.1	.1	1.1	3	.1%	.0%	.4%	.0%
Integer	1.1	.0	.9	0	.1%	.0%	.3%	.0%
Foresight Resources	1.1	.0	1.0	0	.1%	.0%	.3%	.0%
DATAID Technologies*	1.0	.0	.2	0	.1%	.0%	.1%	.0%
Marcus Computer Systeme	1.0	.5	.3	31	.1%	.1%	.1%	.0%
Aucos elektronische Gerate	1.0	.3	.7	100	.1%	.0%	.2%	.1%
ARKTEC	1.0	.2	.8	22	.1%	.0%	.3%	.0%
DELTA CAD*	1.0	.4	.4	12	.1%	.1%	.1%	.0%
DECISA*	1.0	.6	.3	30	.1%	.1%	.1%	.0%
CENTUNION*	.9	.2	.5	12	.1%	.0%	.2%	.0%
Eptisa*	.9	.0	.7	1	.1%	.0%	.2%	.0%
S.T.L.D. s.r.l.	.8	.0	.8	0	.1%	.0%	.3%	.0%
CAD TECH Iberica*	.8	.4	.3	45	.1%	.1%	.1%	.0%
Number One Systems	.8	.1	.7	20	.1%	.0%	.2%	.0%
CAMTEK	.8	.0	.6	0	.1%	.0%	.2%	.0%
Schlumberger	.8	.2	.3	5	.1%	.0%	.1%	.0%
Vision 3D	.7	.4	.2	6	.1%	.1%	.1%	.0%
Contract Data Research	.7	.0	.5	0	.1%	.0%	.2%	.0%
MCS	.7	.0	.6	0	.1%	.0%	.2%	.0%
Swanson Analysis	.6	.0	.6	0	.1%	.0%	.2%	.0%
debis Systemhaus	.6	.2	.4	40	.1%	.0%	.1%	.0%
ADRA Systems	.6	.0	.5	0	.1%	.0%	.2%	.0%
ACERI SA	.6	.1	.3	3	.1%	.0%	.1%	.0%
CAD-Capture	.5	.0	.1	0	.1%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 4 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
ERDAS	.5	.1	.4	3	.1%	.0%	.1%	.0%
Inca	.5	.0	.5	0	.1%	.0%	.2%	.0%
CADMATIC	.5	.0	.3	3	.0%	.0%	.1%	.0%
Caroline Informatique	.5	.1	.3	5	.0%	.0%	.1%	.0%
CAD Lab	.4	.0	.4	0	.0%	.0%	.1%	.0%
Soft*	.4	.0	.4	0	.0%	.0%	.1%	.0%
Norsk Data	.4	.2	.1	7	.0%	.0%	.0%	.0%
Logic Control*	.4	.2	.1	80	.0%	.0%	.0%	.1%
Genasys II	.3	.1	.2	2	.0%	.0%	.1%	.0%
Masta Corporation	.3	.0	.2	4	.0%	.0%	.1%	.0%
Kontron Instruments	.2	.1	.1	4	.0%	.0%	.0%	.0%
Instrumatic Espanola	.2	.0	.2	0	.0%	.0%	.1%	.0%
Ikos Systems	.2	.2	.0	1	.0%	.0%	.0%	.0%
ESDU International	.2	.0	.2	0	.0%	.0%	.1%	.0%
TOOL Software	.1	.0	.1	3	.0%	.0%	.0%	.0%
Genrad	.1	.0	.1	6	.0%	.0%	.0%	.0%
Accugraph	.1	.0	.1	0	.0%	.0%	.0%	.0%
Radan Computational	.1	.0	.0	4	.0%	.0%	.0%	.0%
Dolphin Integration	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	57.8	91.5	.0	27,294	5.9%	14.7%	.0%	24.1%
All Companies	971.6	621.0	301.0	113,423	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	687.4	513.1	143.2	105,966	70.7%	82.6%	47.6%	93.4%
All Asian-Based Companies	.3	.2	.1	10	.0%	.0%	.0%	.0%
All European-Based Companies	283.9	107.7	157.7	7,447	29.2%	17.3%	52.4%	6.6%
All Hardware Companies	541.9	514.8	.0	106,498	55.8%	82.9%	.0%	93.9%
All Turnkey & SW Companies	429.7	106.2	301.0	6,924	44.2%	17.1%	100.0%	6.1%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 5
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	515.3	321.1	105.7	14,326	17.9%	20.2%	14.1%	16.5%
Computervision	505.8	214.8	126.0	5,208	17.5%	13.5%	16.8%	6.0%
Hewlett-Packard	263.4	186.0	32.2	13,286	9.1%	11.7%	4.3%	15.3%
Digital	194.2	141.8	.0	1,342	6.7%	8.9%	.0%	1.5%
McDonnell Douglas	87.7	45.1	33.9	1,331	3.0%	2.8%	4.5%	1.5%
Control Data	85.9	47.5	11.7	1,103	3.0%	3.0%	1.6%	1.3%
Schlumberger	77.8	27.7	28.5	816	2.7%	1.7%	3.8%	.9%
Sun	70.9	61.3	.0	2,879	2.5%	3.9%	.0%	3.3%
Compaq	70.8	70.8	.0	11,791	2.5%	4.5%	.0%	13.6%
Matra Datavision	68.1	30.7	27.3	743	2.4%	1.9%	3.6%	.9%
Dassault*	62.9	.0	53.5	0	2.2%	.0%	7.1%	.0%
Intergraph	62.6	33.5	12.5	652	2.2%	2.1%	1.7%	.8%
Siemens	52.4	26.2	18.4	696	1.8%	1.7%	2.4%	.8%
Norsk Data	38.0	19.2	6.6	372	1.3%	1.2%	.9%	.4%
Silicon Graphics	31.7	27.9	.0	710	1.1%	1.8%	.0%	.8%
Cisigraph	31.1	10.9	10.8	288	1.1%	.7%	1.4%	.3%
Autodesk	30.7	.0	30.7	0	1.1%	.0%	4.1%	.0%
STI-Straessle	28.8	6.6	15.8	269	1.0%	.4%	2.1%	.3%
Investronica SA	25.5	20.4	2.6	1,018	.9%	1.3%	.3%	1.2%
Apple Computer	24.2	21.3	.0	4,649	.8%	1.3%	.0%	5.4%
SDRC	24.1	.0	24.1	0	.8%	.0%	3.2%	.0%
Ferranti	21.8	8.1	10.0	201	.8%	.5%	1.3%	.2%
Wiechers Datentechnik	20.3	16.2	4.1	494	.7%	1.0%	.5%	.6%
Vero International Software	18.2	.0	16.6	0	.6%	.0%	2.2%	.0%
Data Technology/DATECH*	17.0	3.1	12.2	491	.6%	.2%	1.6%	.6%
PAFEC	15.8	.0	15.8	0	.5%	.0%	2.1%	.0%
MacNeal-Schwendler	15.8	.0	15.1	0	.5%	.0%	2.0%	.0%
Mannesmann PROCAD	15.7	8.0	4.4	218	.5%	.5%	.6%	.3%
Hahn & Kolb	15.4	9.3	4.6	220	.5%	.6%	.6%	.3%
ISICAD	15.4	7.3	5.6	143	.5%	.5%	.7%	.2%
ISYKON Software	15.4	7.7	5.4	220	.5%	.5%	.7%	.3%
Engineering Computer Services*	13.7	5.5	4.7	215	.5%	.3%	.6%	.2%
Delcam International	13.1	4.6	6.6	218	.5%	.3%	.9%	.3%

(Continued)

TABLE NUMBER: 5
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Kewill Systems	12.5	3.8	6.9	250	.4%	.2%	.9%	.3%
Gerber Systems	12.4	6.1	4.1	178	.4%	.4%	.5%	.2%
Exapt	12.3	6.0	4.2	211	.4%	.4%	.6%	.2%
CADAM	12.0	5.3	5.8	750	.4%	.3%	.8%	.9%
Cimatron	11.6	5.2	5.2	344	.4%	.3%	.7%	.4%
CAD Lab	11.5	.0	9.2	0	.4%	.0%	1.2%	.0%
ItalCad	10.8	5.1	2.6	101	.4%	.3%	.3%	.1%
Cimlinc	10.3	2.1	6.2	197	.4%	.1%	.8%	.2%
Fides Industrielle Automation	10.0	1.2	9.0	75	.3%	.1%	1.2%	.1%
Unisys	9.9	5.0	3.5	151	.3%	.3%	.5%	.2%
PDA Engineering	8.8	.0	8.8	0	.3%	.0%	1.2%	.0%
ICL	8.7	5.1	3.0	239	.3%	.3%	.4%	.3%
Framasoft	8.4	.0	5.1	0	.3%	.0%	.7%	.0%
Tebis	8.4	1.3	5.9	42	.3%	.1%	.8%	.0%
Auto-Trol	8.4	3.4	2.9	99	.3%	.2%	.4%	.1%
DATAID Technologies*	8.4	.0	1.7	0	.3%	.0%	.2%	.0%
Caditron	7.8	3.9	3.1	120	.3%	.2%	.4%	.1%
Radan Computational	7.5	2.6	3.8	255	.3%	.2%	.5%	.3%
Albert Nestler	7.4	2.4	3.2	95	.3%	.2%	.4%	.1%
Ziegler	7.4	.0	7.4	0	.3%	.0%	1.0%	.0%
CIMTEK*	7.1	3.4	3.0	67	.2%	.2%	.4%	.1%
Research Machines	6.9	6.9	.0	1,056	.2%	.4%	.0%	1.2%
Swanson Analysis	6.5	.0	6.5	0	.2%	.0%	.9%	.0%
DAT Standard Information system	6.4	.0	6.1	0	.2%	.0%	.8%	.0%
Alias Research	5.7	.0	5.7	0	.2%	.0%	.8%	.0%
rotring euroCAD	5.5	3.4	2.0	147	.2%	.2%	.3%	.2%
Technische Computer Systeme	5.4	1.1	4.3	137	.2%	.1%	.6%	.2%
Parametric Technology	5.3	.0	4.9	0	.2%	.0%	.6%	.0%
Micrograph*	4.6	2.8	1.4	96	.2%	.2%	.2%	.1%
Marcus Computer Systeme	4.4	2.3	1.5	137	.2%	.1%	.2%	.2%
MCS	3.3	.0	2.9	0	.1%	.0%	.4%	.0%
Pathtrace	3.3	.9	2.2	46	.1%	.1%	.3%	.1%
Intercad	3.1	1.6	.9	151	.1%	.1%	.1%	.2%

(Continued)

TABLE NUMBER: 5
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Serbi	3.1	.0	3.1	0	.1%	.0%	.4%	.0%
Whesoe Computing Systems	3.1	.0	3.1	0	.1%	.0%	.4%	.0%
XAO Industrie	3.0	1.1	1.8	108	.1%	.1%	.2%	.1%
Olivetti	2.9	2.4	.0	436	.1%	.2%	.0%	.5%
MARC	2.7	.0	2.7	0	.1%	.0%	.4%	.0%
debis Systemhaus	2.6	.7	1.5	90	.1%	.0%	.2%	.1%
CAMTEK	2.5	.0	2.1	0	.1%	.0%	.3%	.0%
FEA Limited	2.5	.6	.6	48	.1%	.0%	.1%	.1%
ADRA Systems	2.5	.9	1.4	45	.1%	.1%	.2%	.1%
Caroline Informatique	2.3	.5	1.6	30	.1%	.0%	.2%	.0%
Superdraft	2.3	1.1	1.1	123	.1%	.1%	.2%	.1%
Anilam Electronics	2.2	.7	1.3	28	.1%	.0%	.2%	.0%
Catalpa	2.2	.8	1.1	18	.1%	.0%	.1%	.0%
ICAD	2.1	.0	1.7	0	.1%	.0%	.2%	.0%
ISKA	2.0	.9	.8	37	.1%	.1%	.1%	.0%
Asicom*	1.9	.2	1.7	60	.1%	.0%	.2%	.1%
Robocom	1.6	.0	1.6	0	.1%	.0%	.2%	.0%
CADKEY	1.5	1.0	.5	150	.1%	.1%	.1%	.2%
CAD Centre	1.5	.0	.8	0	.1%	.0%	.1%	.0%
CNC Software	1.2	.0	1.2	0	.0%	.0%	.2%	.0%
Mentor Graphics	1.2	.4	.5	12	.0%	.0%	.1%	.0%
Dell Computer	1.1	1.1	.0	286	.0%	.1%	.0%	.3%
FEGS	1.1	.0	.9	0	.0%	.0%	.1%	.0%
CAD TECH Iberica*	1.1	.6	.5	59	.0%	.0%	.1%	.1%
Moda CAD	1.1	.3	.7	9	.0%	.0%	.1%	.0%
Mechanical Dynamics	1.0	.0	.9	0	.0%	.0%	.1%	.0%
DELTA CAD*	.9	.4	.4	11	.0%	.0%	.1%	.0%
Club Informatico SA*	.9	.4	.4	34	.0%	.0%	.1%	.0%
S.T.L.D. s.r.l.	.8	.0	.8	0	.0%	.0%	.1%	.0%
Vision 3D	.7	.4	.2	6	.0%	.0%	.0%	.0%
Micrografx	.7	.0	.7	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 5 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company =====					----- Market Share -----			
	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====
Computational Mechanics	.7	.0	.7	0	.0%	.0%	.1%	.0%
FHECOR*	.6	.0	.6	0	.0%	.0%	.1%	.0%
ACERI SA	.6	.1	.3	3	.0%	.0%	.0%	.0%
Aplein*	.5	.5	.0	6	.0%	.0%	.0%	.0%
CENTUNION*	.4	.1	.2	6	.0%	.0%	.0%	.0%
Cadtronic	.4	.2	.2	13	.0%	.0%	.0%	.0%
Foresight Resources	.4	.0	.4	0	.0%	.0%	.1%	.0%
Everex Systems	.4	.4	.0	114	.0%	.0%	.0%	.1%
Logic Control*	.4	.2	.1	80	.0%	.0%	.0%	.1%
Spectrum Graphics	.3	.1	.2	3	.0%	.0%	.0%	.0%
ESDU International	.2	.0	.2	0	.0%	.0%	.0%	.0%
CAD-Capture	.2	.0	.0	0	.0%	.0%	.0%	.0%
DAPCO	.1	.0	.1	0	.0%	.0%	.0%	.0%
Masta Corporation	.1	.0	.1	1	.0%	.0%	.0%	.0%
Solbourne	.1	.1	.0	7	.0%	.0%	.0%	.0%
Lamp Software	.1	.0	.1	4	.0%	.0%	.0%	.0%
Accugraph	.1	.0	.0	2	.0%	.0%	.0%	.0%
Number One Systems	.0	.0	.0	1	.0%	.0%	.0%	.0%
Other Companies	11.6	107.1	.0	16,036	.4%	6.8%	.0%	18.5%
All Companies	2,885.0	1,586.1	750.3	86,707	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	2,243.6	1,355.7	438.1	77,383	77.8%	85.5%	58.4%	89.2%
All Asian-Based Companies	.5	.2	.2	11	.0%	.0%	.0%	.0%
All European-Based Companies	641.0	230.1	312.1	9,313	22.2%	14.5%	41.6%	10.7%
All Hardware Companies	687.6	588.6	.0	57,158	23.8%	37.1%	.0%	65.9%
All Turnkey & SW Companies	2,197.4	997.5	750.3	29,549	76.2%	62.9%	100.0%	34.1%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 6
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	125.2	67.1	25.0	1,309	17.3%	16.2%	12.1%	3.3%
IBM	63.8	44.7	10.0	4,728	8.8%	10.8%	4.8%	12.0%
Hewlett-Packard	47.4	39.0	.0	4,173	6.5%	9.4%	.0%	10.6%
Compaq	43.7	43.7	.0	7,279	6.0%	10.6%	.0%	18.5%
Digital	35.9	26.3	.0	248	5.0%	6.4%	.0%	.6%
Autodesk	35.6	.0	35.6	0	4.9%	.0%	17.2%	.0%
Nemetschek	30.9	12.3	18.5	500	4.3%	3.0%	9.0%	1.3%
Computervision	24.3	9.8	7.0	275	3.4%	2.4%	3.4%	.7%
Apple Computer	23.6	20.8	.0	4,536	3.3%	5.0%	.0%	11.6%
Siemens	23.0	11.5	8.0	305	3.2%	2.8%	3.9%	.8%
ISICAD	18.9	6.9	9.6	157	2.6%	1.7%	4.7%	.4%
McDonnell Douglas	18.6	9.6	7.2	279	2.6%	2.3%	3.5%	.7%
ItalCad	14.4	6.8	3.5	134	2.0%	1.6%	1.7%	.3%
Data Technology/DATECH*	12.6	2.3	9.0	363	1.7%	.6%	4.4%	.9%
Kewill Systems	12.5	3.8	6.9	250	1.7%	.9%	3.3%	.6%
Star Informatic	12.0	10.5	3.1	550	1.7%	2.5%	1.5%	1.4%
CAD Centre	10.6	.0	5.6	0	1.5%	.0%	2.7%	.0%
Microway	9.5	6.4	3.2	86	1.3%	1.5%	1.5%	.2%
Norsk Data	9.0	4.8	1.7	97	1.2%	1.2%	.8%	.2%
Soft-Tech Software Technologie	9.0	.9	7.2	225	1.2%	.2%	3.5%	.6%
Kockums Computer Systems	8.1	2.0	4.5	400	1.1%	.5%	2.2%	1.0%
t2 Solutions	7.1	3.6	2.6	136	1.0%	.9%	1.2%	.3%
Sun	7.1	6.2	.0	308	1.0%	1.5%	.0%	.8%
BATISOFT	7.0	1.1	3.5	225	1.0%	.3%	1.7%	.6%
Club Informatico SA*	5.8	2.6	2.9	226	.8%	.6%	1.4%	.6%
RIB/RZB	5.0	.5	4.0	24	.7%	.1%	1.9%	.1%
Dassault*	4.7	.0	4.0	0	.7%	.0%	2.0%	.0%
Computer Services Consultants	4.5	.0	4.5	0	.6%	.0%	2.2%	.0%
Hochtief	4.0	.6	2.8	34	.6%	.1%	1.3%	.1%
Research Machines	3.9	3.9	.0	594	.5%	.9%	.0%	1.5%
Caditron	3.6	1.8	1.5	56	.5%	.4%	.7%	.1%
Datagraphic	3.4	1.7	1.4	55	.5%	.4%	.7%	.1%
FHECOR*	3.4	.0	3.4	0	.5%	.0%	1.6%	.0%

(Continued)

TABLE NUMBER: 6
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Auto-Trol	3.4	1.4	1.2	39	.5%	.3%	.6%	.1%
Complansoft CAD	3.1	1.5	1.5	216	.4%	.4%	.7%	.5%
Gable CAD Systems	2.6	1.0	1.2	32	.4%	.2%	.6%	.1%
CADAM	2.4	1.1	1.2	150	.3%	.3%	.6%	.4%
Ziegler	2.4	.0	2.4	0	.3%	.0%	1.2%	.0%
ABB Engineering Automation	2.1	.0	2.1	0	.3%	.0%	1.0%	.0%
Control Data	2.0	1.1	.3	27	.3%	.3%	.1%	.1%
Sinus Software	1.9	.9	.9	36	.3%	.2%	.5%	.1%
Elstree Computing	1.8	.8	1.0	50	.2%	.2%	.5%	.1%
Lamp Software	1.6	.4	1.1	79	.2%	.1%	.5%	.2%
Robocom	1.6	.0	1.6	0	.2%	.0%	.8%	.0%
Olivetti	1.5	1.3	.0	254	.2%	.3%	.0%	.6%
ARKTEC	1.4	.4	1.0	40	.2%	.1%	.5%	.1%
PAFEC	1.4	.0	1.4	0	.2%	.0%	.7%	.0%
Soft*	1.4	.0	1.2	0	.2%	.0%	.6%	.0%
MEDESIGN	1.4	.4	.5	15	.2%	.1%	.2%	.0%
Radan Computational	1.3	.5	.7	45	.2%	.1%	.3%	.1%
Ground Modelling Systems	1.3	.9	.7	7	.2%	.2%	.3%	.0%
Aplein*	1.2	1.1	.1	14	.2%	.3%	.0%	.0%
Dell Computer	1.1	1.1	.0	279	.2%	.3%	.0%	.7%
Integer	1.1	.0	.9	0	.1%	.0%	.4%	.0%
Serbi	1.0	.0	1.0	0	.1%	.0%	.5%	.0%
Cadtronic	1.0	.6	.5	29	.1%	.1%	.2%	.1%
Micrografx	1.0	.0	1.0	0	.1%	.0%	.5%	.0%
Spectrum Graphics	.9	.3	.5	9	.1%	.1%	.2%	.0%
Accugraph	.9	.4	.4	23	.1%	.1%	.2%	.1%
Micrograph*	.8	.5	.3	18	.1%	.1%	.1%	.0%
Asicom*	.8	.1	.7	25	.1%	.0%	.3%	.1%
CADMATiC	.7	.1	.5	4	.1%	.0%	.2%	.0%
Everex Systems	.6	.6	.0	169	.1%	.1%	.0%	.4%
Moda CAD	.5	.1	.3	4	.1%	.0%	.2%	.0%

(Continued)

TABLE NUMBER: 6 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Market Share			
					Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
CENTUNION*	.4	.1	.2	6	.1%	.0%	.1%	.0%
Foresight Resources	.4	.0	.4	0	.1%	.0%	.2%	.0%
DAT Standard Information syste	.4	.0	.4	0	.1%	.0%	.2%	.0%
Masta Corporation	.4	.0	.3	2	.1%	.0%	.1%	.0%
DAPCO	.2	.0	.2	0	.0%	.0%	.1%	.0%
CAD-Capture	.2	.0	.0	0	.0%	.0%	.0%	.0%
TOOL Software	.2	.1	.1	4	.0%	.0%	.0%	.0%
DELTA CAD*	.1	.0	.0	1	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	2	.0%	.0%	.0%	.0%
Other Companies	27.8	46.1	.0	10,111	3.8%	11.1%	.0%	25.8%
All Companies	723.9	413.7	206.5	39,244	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	512.6	332.6	102.2	34,750	70.8%	80.4%	49.5%	88.5%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	211.3	81.1	104.3	4,495	29.2%	19.6%	50.5%	11.5%
All Hardware Companies	234.3	210.6	.0	32,274	32.4%	50.9%	.0%	82.2%
All Turnkey & SW Companies	489.6	203.1	206.5	6,970	67.6%	49.1%	100.0%	17.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 7
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	162.0	86.7	32.4	1,691	25.2%	24.8%	17.6%	8.6%
Siemens	151.4	77.4	53.7	2,079	23.6%	22.2%	29.2%	10.6%
Digital	39.6	28.9	.0	273	6.2%	8.3%	.0%	1.4%
IBM	36.7	26.9	5.0	3,435	5.7%	7.7%	2.7%	17.5%
Compaq	28.6	28.6	.0	4,759	4.4%	8.2%	.0%	24.3%
McDonnell Douglas	18.7	9.5	7.3	490	2.9%	2.7%	4.0%	2.5%
ESRI	15.7	.0	13.9	0	2.4%	.0%	7.5%	.0%
Landmark Graphics	14.6	7.1	4.4	89	2.3%	2.0%	2.4%	.5%
ICL	13.5	8.0	4.6	371	2.1%	2.3%	2.5%	1.9%
Sysscan	11.6	5.1	3.0	103	1.8%	1.5%	1.6%	.5%
Computervision	11.4	5.6	2.4	165	1.8%	1.6%	1.3%	.8%
STI-Straessle	10.8	2.5	6.0	101	1.7%	.7%	3.2%	.5%
Laser-Scan	8.8	2.2	4.4	29	1.4%	.6%	2.4%	.1%
Moss Systems	8.3	.0	7.4	0	1.3%	.0%	4.0%	.0%
Autodesk	8.1	.0	8.1	0	1.3%	.0%	4.4%	.0%
Sun	7.1	6.1	.0	293	1.1%	1.8%	.0%	1.5%
Apple Computer	6.5	5.7	.0	1,247	1.0%	1.6%	.0%	6.4%
PAFEC	5.7	.0	5.7	0	.9%	.0%	3.1%	.0%
Clemessy	5.2	4.2	.8	10	.8%	1.2%	.4%	.0%
Ground Modelling Systems	5.1	3.4	2.6	29	.8%	1.0%	1.4%	.1%
Synercom	5.1	.0	2.4	0	.8%	.0%	1.3%	.0%
Spectrum Graphics	5.0	1.5	2.5	46	.8%	.4%	1.4%	.2%
ItalCad	4.8	2.3	1.2	45	.7%	.6%	.6%	.2%
Hewlett-Packard	3.9	3.1	.0	336	.6%	.9%	.0%	1.7%
Genasys II	3.2	1.1	1.9	11	.5%	.3%	1.0%	.1%
Data Technology/DATECH*	3.1	.6	2.2	88	.5%	.2%	1.2%	.5%
Norsk Data	3.0	1.6	.5	32	.5%	.5%	.3%	.2%
Control Data	3.0	2.0	.5	71	.5%	.6%	.3%	.4%
Eptisa*	2.9	.1	2.3	2	.5%	.0%	1.3%	.0%
Alper Systems	2.7	1.3	.7	18	.4%	.4%	.4%	.1%
DATAID Technologies*	2.1	.0	.4	0	.3%	.0%	.2%	.0%
Ziegler	2.0	.0	2.0	0	.3%	.0%	1.1%	.0%
Macao Systems	1.8	1.0	.7	17	.3%	.3%	.4%	.1%

(Continued)

TABLE NUMBER: 7
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
ETAK	1.5	.1	1.5	4	.2%	.0%	.8%	.0%
Cadtronic	1.4	.8	.6	42	.2%	.2%	.3%	.2%
ERDAS	1.3	.2	1.0	7	.2%	.1%	.5%	.0%
Smallworld Systems	1.3	.5	.8	36	.2%	.1%	.4%	.2%
RIB/R2B	1.2	.1	1.0	6	.2%	.0%	.5%	.0%
Microway	1.1	.7	.4	9	.2%	.2%	.2%	.0%
Micrograph*	1.0	.6	.3	21	.2%	.2%	.2%	.1%
Dynamic Graphics	1.0	.0	.9	0	.2%	.0%	.5%	.0%
Research Machines	1.0	1.0	.0	154	.2%	.3%	.0%	.8%
DAPCO	.7	.0	.5	0	.1%	.0%	.3%	.0%
Contract Data Research	.7	.0	.5	0	.1%	.0%	.2%	.0%
Silicon Graphics	.6	.6	.0	15	.1%	.2%	.0%	.1%
Olivetti	.6	.5	.0	93	.1%	.1%	.0%	.5%
Solbourne	.5	.5	.0	36	.1%	.1%	.0%	.2%
LEICA	.4	.0	.3	0	.1%	.0%	.2%	.0%
Asicom*	.3	.0	.3	10	.0%	.0%	.2%	.1%
Robocom	.3	.0	.3	0	.0%	.0%	.2%	.0%
Caditron	.3	.1	.1	4	.0%	.0%	.1%	.0%
Dell Computer	.2	.2	.0	49	.0%	.1%	.0%	.2%
CAD-Capture	.2	.0	.0	0	.0%	.0%	.0%	.0%
Lamp Software	.1	.0	.1	4	.0%	.0%	.0%	.0%
Everex Systems	.1	.1	.0	23	.0%	.0%	.0%	.1%
Foresight Resources	.1	.0	.1	0	.0%	.0%	.0%	.0%
Accugraph	.0	.0	.0	1	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 7 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	15.5	20.6	.0	3,236	2.4%	5.9%	.0%	16.5%
All Companies	642.9	349.1	184.1	19,580	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	394.0	234.9	83.9	16,352	61.3%	67.3%	45.6%	83.5%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	248.9	114.2	100.1	3,227	38.7%	32.7%	54.4%	16.5%
All Hardware Companies	124.3	109.7	.0	13,607	19.3%	31.4%	.0%	69.5%
All Turnkey & SW Companies	518.5	239.4	184.1	5,973	80.7%	68.6%	100.0%	30.5%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 8
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	119.5	33.5	50.2	1,184	12.5%	7.2%	16.3%	3.5%
Hewlett-Packard	95.0	69.4	6.1	6,542	9.9%	15.0%	2.0%	19.4%
Sun	92.2	80.5	.0	3,968	9.6%	17.3%	.0%	11.8%
Digital	90.1	65.3	.0	776	9.4%	14.1%	.0%	2.3%
Compaq	54.6	54.6	.0	9,107	5.7%	11.8%	.0%	27.0%
Dazix	44.9	7.2	18.0	331	4.7%	1.5%	5.8%	1.0%
Racal-Redac	39.7	1.6	32.2	181	4.1%	.4%	10.5%	.5%
Valid	39.6	2.7	23.8	204	4.1%	.6%	7.8%	.6%
IBM	35.6	27.8	3.8	4,397	3.7%	6.0%	1.2%	13.1%
Computervision	34.0	14.0	8.3	278	3.5%	3.0%	2.7%	.8%
Siemens	31.5	15.5	11.0	418	3.3%	3.3%	3.6%	1.2%
Cadence	31.3	.0	23.3	0	3.3%	.0%	7.6%	.0%
Intergraph	18.4	8.9	3.2	194	1.9%	1.9%	1.0%	.6%
ABB Cade International	15.2	8.9	4.6	66	1.6%	1.9%	1.5%	.2%
Calay	14.4	4.5	8.3	234	1.5%	1.0%	2.7%	.7%
Aucotec	10.5	3.7	5.8	167	1.1%	.8%	1.9%	.5%
LPKF	9.9	6.4	2.5	400	1.0%	1.4%	.8%	1.2%
Scientific Calc.	9.5	1.2	5.6	34	1.0%	.3%	1.8%	.1%
EEsof	7.8	.0	6.8	5	.8%	.0%	2.2%	.0%
VLSI Technology	7.6	.2	6.3	22	.8%	.0%	2.0%	.1%
Teradyne	7.3	.0	6.0	0	.8%	.0%	2.0%	.0%
Kloekner-Moeller	6.8	4.1	2.4	107	.7%	.9%	.8%	.3%
Ziegler	6.6	.0	6.6	0	.7%	.0%	2.2%	.0%
Autodesk	6.5	.0	6.5	0	.7%	.0%	2.1%	.0%
DECISA*	5.9	3.4	1.8	104	.6%	.7%	.6%	.3%
Apple Computer	4.7	4.1	.0	907	.5%	.9%	.0%	2.7%
Zycad	4.6	3.8	.0	38	.5%	.8%	.0%	.1%
Synopsys	3.9	.0	3.5	0	.4%	.0%	1.2%	.0%
AnaCAD	3.9	.0	3.9	0	.4%	.0%	1.3%	.0%
Genrad	3.7	.7	2.5	39	.4%	.2%	.8%	.1%
Orcad	3.7	.0	3.7	0	.4%	.0%	1.2%	.0%
LSI Logic	3.6	.4	2.8	9	.4%	.1%	.9%	.0%
Viewlogic Systems	3.0	.0	2.5	0	.3%	.0%	.8%	.0%

(Continued)

TABLE NUMBER: 8
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Xilinx	3.0	.0	2.7	0	.3%	.0%	.9%	.0%
Logic Automation	3.0	.0	3.0	0	.3%	.0%	1.0%	.0%
Silvar-Lisco	2.9	.0	1.8	0	.3%	.0%	.6%	.0%
Assigraph	2.8	.0	2.2	21	.3%	.0%	.7%	.1%
Ikos Systems	2.7	2.7	.0	12	.3%	.6%	.0%	.0%
debis Systemhaus	2.6	.7	1.5	90	.3%	.1%	.5%	.3%
Solbourne	2.6	2.6	.0	192	.3%	.6%	.0%	.6%
ALS Design	2.6	.0	2.6	0	.3%	.0%	.8%	.0%
Research Machines	2.6	2.6	.0	396	.3%	.6%	.0%	1.2%
Academi Systems	2.3	.2	1.8	9	.2%	.0%	.6%	.0%
BETRONEX	2.2	.0	2.2	0	.2%	.0%	.7%	.0%
Micrograph*	1.9	1.2	.6	40	.2%	.3%	.2%	.1%
CAD-UL	1.7	.0	1.7	0	.2%	.0%	.6%	.0%
Microsim	1.7	.0	1.6	0	.2%	.0%	.5%	.0%
Data I/O	1.6	.0	1.6	0	.2%	.0%	.5%	.0%
ACTEL	1.6	.0	1.4	0	.2%	.0%	.5%	.0%
CADAM	1.6	.7	.8	100	.2%	.2%	.3%	.3%
Data Technology/DATECH*	1.4	.2	1.0	39	.1%	.1%	.3%	.1%
DECAD	1.3	.2	.8	5	.1%	.0%	.3%	.0%
Caditron	1.3	.6	.5	20	.1%	.1%	.2%	.1%
CAD Software	1.3	.0	1.1	0	.1%	.0%	.3%	.0%
Test Systems Strategies	1.2	.0	1.0	0	.1%	.0%	.3%	.0%
Comdisco Systems	1.2	.0	1.1	0	.1%	.0%	.3%	.0%
Serbi	1.0	.0	1.0	0	.1%	.0%	.3%	.0%
Aucos elektronische Gerate	1.0	.3	.7	100	.1%	.1%	.2%	.3%
Vantage Analysis Systems	1.0	.0	1.0	0	.1%	.0%	.3%	.0%
rottring euroCAD	1.0	.5	.4	23	.1%	.1%	.1%	.1%
ISKA	.9	.4	.4	16	.1%	.1%	.1%	.0%
MacNeal-Schwendler	.8	.0	.8	0	.1%	.0%	.3%	.0%
Schlumberger	.8	.2	.2	8	.1%	.0%	.1%	.0%
Intercad	.8	.4	.2	38	.1%	.1%	.1%	.1%

(Continued)

TABLE NUMBER: 8 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
-----	-----	-----	-----	-----	-----	-----	-----	-----
DAT Standard Information syste	.8	.0	.7	0	.1%	.0%	.2%	.0%
Number One Systems	.8	.1	.7	19	.1%	.0%	.2%	.1%
Inca	.7	.0	.7	0	.1%	.0%	.2%	.0%
ICL	.7	.4	.2	19	.1%	.1%	.1%	.1%
Everex Systems	.5	.5	.0	151	.1%	.1%	.0%	.4%
Dell Computer	.3	.3	.0	84	.0%	.1%	.0%	.2%
Kontron Instruments	.2	.1	.1	4	.0%	.0%	.0%	.0%
Instrumatic Espanola	.2	.0	.2	0	.0%	.0%	.1%	.0%
Asicom*	.2	.0	.2	5	.0%	.0%	.0%	.0%
Foresight Resources	.2	.0	.2	0	.0%	.0%	.0%	.0%
DAPCO	.1	.0	.1	0	.0%	.0%	.0%	.0%
Masta Corporation	.1	.0	.1	1	.0%	.0%	.0%	.0%
Olivetti	.1	.1	.0	17	.0%	.0%	.0%	.1%
Dolphin Integration	.1	.0	.1	0	.0%	.0%	.0%	.0%
Robocom	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	34.8	26.6	7.0	2,555	3.6%	5.7%	2.3%	7.6%
All Companies	959.3	463.9	307.4	33,677	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	792.4	412.3	210.9	31,320	82.6%	88.9%	68.6%	93.0%
All Asian-Based Companies	.8	.4	.4	5	.1%	.1%	.1%	.0%
All European-Based Companies	166.1	51.3	96.1	2,352	17.3%	11.0%	31.3%	7.0%
All Hardware Companies	364.7	313.8	.0	28,035	38.0%	67.6%	.0%	83.2%
All Turnkey & SW Companies	594.6	150.1	307.4	5,642	62.0%	32.4%	100.0%	16.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 9
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	72.4	21.0	30.4	718	13.5%	8.0%	16.9%	3.2%
Hewlett-Packard	67.6	52.5	3.5	4,921	12.6%	19.9%	1.9%	22.0%
Sun	42.5	37.1	.0	1,815	7.9%	14.1%	.0%	8.1%
Compaq	38.5	38.5	.0	6,423	7.2%	14.6%	.0%	28.8%
Digital	36.0	26.3	.0	311	6.7%	10.0%	.0%	1.4%
Dazix	26.9	5.4	10.8	198	5.0%	2.0%	6.0%	.9%
Valid	23.0	1.6	13.8	118	4.3%	.6%	7.7%	.5%
Siemens	19.6	9.8	6.9	261	3.7%	3.7%	3.8%	1.2%
IBM	15.9	15.1	.0	3,545	3.0%	5.7%	.0%	15.9%
Racal-Redac	13.2	.7	10.7	60	2.4%	.3%	5.9%	.3%
Cadence	12.8	.0	9.5	0	2.4%	.0%	5.3%	.0%
Computervision	11.3	4.8	2.8	96	2.1%	1.8%	1.5%	.4%
ABB Cade International	10.6	6.4	3.2	46	2.0%	2.4%	1.8%	.2%
Aucotec	10.5	3.7	5.8	167	2.0%	1.4%	3.2%	.7%
Intergraph	9.2	5.0	1.6	95	1.7%	1.9%	.9%	.4%
EEsof	7.8	.0	6.8	5	1.5%	.0%	3.8%	.0%
Teradyne	7.3	.0	6.0	0	1.4%	.0%	3.4%	.0%
Kloekner-Moeller	6.8	4.1	2.4	107	1.3%	1.6%	1.3%	.5%
Autodesk	5.7	.0	5.7	0	1.1%	.0%	3.2%	.0%
VLSI Technology	4.6	.2	3.8	13	.9%	.1%	2.1%	.1%
Zycad	4.6	3.8	.0	38	.9%	1.4%	.0%	.2%
Synopsys	3.9	.0	3.5	0	.7%	.0%	2.0%	.0%
AnaCAD	3.9	.0	3.9	0	.7%	.0%	2.2%	.0%
Genrad	3.7	.7	2.5	39	.7%	.3%	1.4%	.2%
Ziegler	3.7	.0	3.7	0	.7%	.0%	2.1%	.0%
LSI Logic	3.2	.3	2.5	8	.6%	.1%	1.4%	.0%
Viewlogic Systems	3.0	.0	2.5	0	.6%	.0%	1.4%	.0%
Xilinx	3.0	.0	2.7	0	.6%	.0%	1.5%	.0%
Logic Automation	3.0	.0	3.0	0	.5%	.0%	1.6%	.0%
Calay	2.9	.9	1.7	47	.5%	.3%	.9%	.2%
Assigraph	2.8	.0	2.2	21	.5%	.0%	1.2%	.1%
Ikos Systems	2.7	2.7	.0	12	.5%	1.0%	.0%	.1%
Orcad	2.6	.0	2.6	0	.5%	.0%	1.5%	.0%

(Continued)

TABLE NUMBER: 9
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
=====	=====	=====	=====	=====	=====	=====	=====	=====
debis Systemhaus	2.6	.7	1.5	90	.5%	.2%	.9%	.4%
DECISA*	2.4	1.4	.7	39	.4%	.5%	.4%	.2%
Apple Computer	2.4	2.1	.0	454	.4%	.8%	.0%	2.0%
ALS Design	1.9	.0	1.9	0	.4%	.0%	1.1%	.0%
Microsim	1.7	.0	1.6	0	.3%	.0%	.9%	.0%
Data I/O	1.6	.0	1.6	0	.3%	.0%	.9%	.0%
ACTEL	1.6	.0	1.4	0	.3%	.0%	.8%	.0%
Research Machines	1.6	1.6	.0	242	.3%	.6%	.0%	1.1%
Caditron	1.3	.6	.5	20	.2%	.2%	.3%	.1%
Test Systems Strategies	1.2	.0	1.0	0	.2%	.0%	.6%	.0%
Condisco Systems	1.2	.0	1.1	0	.2%	.0%	.6%	.0%
Serbi	1.0	.0	1.0	0	.2%	.0%	.6%	.0%
Micrograph*	1.0	.6	.3	21	.2%	.2%	.2%	.1%
Aucos elektronische Gerate	1.0	.3	.7	100	.2%	.1%	.4%	.4%
Vantage Analysis Systems	1.0	.0	1.0	0	.2%	.0%	.6%	.0%
rottring euroCAD	1.0	.5	.4	23	.2%	.2%	.2%	.1%
ISKA	.9	.4	.4	16	.2%	.1%	.2%	.1%
MacNeal-Schwendler	.8	.0	.8	0	.2%	.0%	.4%	.0%
Intercad	.8	.4	.2	38	.1%	.2%	.1%	.2%
DAT Standard Information syste	.8	.0	.7	0	.1%	.0%	.4%	.0%
Inca	.7	.0	.7	0	.1%	.0%	.4%	.0%
Data Technology/DATECH*	.7	.1	.5	20	.1%	.0%	.3%	.1%
Solbourne	.6	.6	.0	47	.1%	.2%	.0%	.2%
Scientific Calc.	.5	.1	.3	2	.1%	.0%	.2%	.0%
CAD Software	.3	.0	.3	0	.1%	.0%	.2%	.0%
Everex Systems	.3	.3	.0	87	.1%	.1%	.0%	.4%
Dell Computer	.2	.2	.0	42	.0%	.1%	.0%	.2%
Asicom*	.2	.0	.2	5	.0%	.0%	.1%	.0%
DAPCO	.1	.0	.1	0	.0%	.0%	.0%	.0%
Number One Systems	.1	.0	.1	3	.0%	.0%	.1%	.0%
Foresight Resources	.1	.0	.1	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 9 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
Dolphin Integration	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	20.7	13.5	6.4	2,013	3.9%	5.1%	3.6%	9.0%
All Companies	537.4	263.9	179.8	22,325	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	449.6	233.7	131.1	21,084	83.7%	88.6%	72.9%	94.4%
All Asian-Based Companies	.1	.0	.1	1	.0%	.0%	.0%	.0%
All European-Based Companies	87.8	30.1	48.7	1,241	16.3%	11.4%	27.1%	5.6%
All Hardware Companies	206.0	180.5	.0	19,349	38.3%	68.4%	.0%	86.7%
All Turnkey & SW Companies	331.4	83.3	179.8	2,976	61.7%	31.6%	100.0%	13.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 10
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: IC Layout
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Sun	28.4	24.8	.0	1,230	28.3%	50.8%	.0%	54.7%
Mentor Graphics	19.3	5.6	8.1	191	19.3%	11.4%	27.5%	8.5%
Cadence	17.9	.0	13.3	0	17.8%	.0%	44.8%	.0%
Digital	14.4	10.5	.0	124	14.4%	21.6%	.0%	5.5%
Hewlett-Packard	5.4	4.6	.0	490	5.4%	9.4%	.0%	21.8%
Valid	4.8	.3	2.9	24	4.7%	.7%	9.7%	1.1%
VLSI Technology	3.0	.1	2.5	9	3.0%	.2%	8.4%	.4%
Silvar-Lisco	2.9	.0	1.8	0	2.9%	.0%	5.9%	.0%
Solbourne	1.4	1.4	.0	104	1.4%	2.9%	.0%	4.6%
DECISA*	1.2	.7	.4	18	1.2%	1.5%	1.2%	.8%
Micrograph*	.9	.6	.3	19	.9%	1.1%	.9%	.9%
LSI Logic	.4	.0	.3	1	.4%	.1%	1.0%	.0%
Everex Systems	.1	.1	.0	23	.1%	.2%	.0%	1.0%
Dolphin Integration	.0	.0	.0	0	.0%	.0%	.1%	.0%
Other Companies	.2	.1	.1	15	.2%	.2%	.4%	.7%
All Companies	100.3	48.8	29.6	2,249	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	100.0	48.6	29.4	2,247	99.7%	99.8%	99.5%	99.9%
All Asian-Based Companies	.3	.1	.1	2	.3%	.2%	.4%	.1%
All European-Based Companies	.0	.0	.0	0	.0%	.0%	.1%	.0%
All Hardware Companies	50.9	42.6	.0	2,021	50.8%	87.3%	.0%	89.8%
All Turnkey & SW Companies	49.4	6.2	29.6	229	49.2%	12.7%	100.0%	10.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 11
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Digital	39.6	28.4	.0	342	12.3%	18.8%	.0%	3.8%
Mentor Graphics	27.8	6.9	11.7	275	8.6%	4.6%	11.9%	3.0%
Racal-Redac	26.5	.9	21.5	121	8.2%	.6%	21.9%	1.3%
Computervision	22.7	9.2	5.5	182	7.1%	6.1%	5.6%	2.0%
Hewlett-Packard	22.0	12.3	2.7	1,131	6.9%	8.2%	2.7%	12.4%
Sun	21.3	18.6	.0	922	6.6%	12.3%	.0%	10.1%
IBM	19.8	12.7	3.8	852	6.1%	8.4%	3.8%	9.4%
Dazix	18.0	1.8	7.2	132	5.6%	1.2%	7.3%	1.5%
Compaq	16.1	16.1	.0	2,684	5.0%	10.6%	.0%	29.5%
Valid	11.9	.8	7.2	61	3.7%	.5%	7.3%	.7%
Siemens	11.9	5.7	4.2	158	3.7%	3.7%	4.2%	1.7%
Calay	11.5	3.6	6.7	187	3.6%	2.4%	6.8%	2.1%
LPKF	9.9	6.4	2.5	400	3.1%	4.2%	2.5%	4.4%
Intergraph	9.2	3.9	1.6	99	2.9%	2.6%	1.7%	1.1%
Scientific Calc.	9.0	1.1	5.3	32	2.8%	.7%	5.4%	.4%
ABB Cade International	4.6	2.5	1.4	20	1.4%	1.7%	1.4%	.2%
Ziegler	2.9	.0	2.9	0	.9%	.0%	3.0%	.0%
DECISA*	2.4	1.3	.7	47	.7%	.8%	.7%	.5%
Apple Computer	2.4	2.1	.0	454	.7%	1.4%	.0%	5.0%
Academi Systems	2.3	.2	1.8	9	.7%	.1%	1.9%	.1%
BETRONEX	2.2	.0	2.2	0	.7%	.0%	2.2%	.0%
CAD-UL	1.7	.0	1.7	0	.5%	.0%	1.7%	.0%
CADAM	1.6	.7	.8	100	.5%	.5%	.8%	1.1%
DECAD	1.3	.2	.8	5	.4%	.1%	.8%	.1%
Orcad	1.1	.0	1.1	0	.3%	.0%	1.1%	.0%
Research Machines	1.0	1.0	.0	154	.3%	.7%	.0%	1.7%
CAD Software	.9	.0	.8	0	.3%	.0%	.8%	.0%
Autodesk	.8	.0	.8	0	.2%	.0%	.8%	.0%
Schlumberger	.8	.2	.2	8	.2%	.1%	.2%	.1%
ICL	.7	.4	.2	19	.2%	.3%	.2%	.2%
Data Technology/DATECH*	.7	.1	.5	20	.2%	.1%	.5%	.2%
ALS Design	.6	.0	.6	0	.2%	.0%	.7%	.0%

(Continued)

TABLE NUMBER: 11 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Number One Systems	.6	.0	.6	16	.2%	.0%	.6%	.2%
Cadence	.6	.0	.5	0	.2%	.0%	.5%	.0%
Solbourne	.5	.6	.0	40	.2%	.4%	.0%	.4%
Kontron Instruments	.2	.1	.1	4	.1%	.1%	.1%	.0%
Instrumatic Espanola	.2	.0	.2	0	.1%	.0%	.2%	.0%
Dell Computer	.2	.2	.0	42	.1%	.1%	.0%	.5%
Everex Systems	.1	.1	.0	41	.0%	.1%	.0%	.5%
Olivetti	.1	.1	.0	17	.0%	.0%	.0%	.2%
Masta Corporation	.1	.0	.0	1	.0%	.0%	.0%	.0%
Foresight Resources	.1	.0	.1	0	.0%	.0%	.1%	.0%
Robocom	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	13.8	13.0	.5	527	4.3%	8.6%	.5%	5.8%
All Companies	321.6	151.3	98.1	9,102	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	242.8	130.0	50.4	7,988	75.5%	85.9%	51.4%	87.8%
All Asian-Based Companies	.4	.2	.2	3	.1%	.1%	.2%	.0%
All European-Based Companies	78.3	21.2	47.4	1,111	24.4%	14.0%	48.3%	12.2%
All Hardware Companies	107.8	90.8	.0	6,665	33.5%	60.0%	.0%	73.2%
All Turnkey & SW Companies	213.8	60.6	98.1	2,437	66.5%	40.0%	100.0%	26.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 12
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	51.2	32.8	9.9	1,963	15.8%	17.5%	13.4%	16.4%
Intergraph	40.5	21.6	8.1	423	12.5%	11.5%	10.9%	3.5%
Digital	36.0	26.2	.0	264	11.1%	14.0%	.0%	2.2%
Computervision	33.6	14.2	8.5	346	10.4%	7.6%	11.5%	2.9%
Hewlett-Packard	26.1	19.1	2.3	1,593	8.0%	10.2%	3.1%	13.3%
Mentor Graphics	13.2	3.7	5.5	130	4.1%	2.0%	7.5%	1.1%
Sun	12.4	10.8	.0	521	3.8%	5.7%	.0%	4.4%
Compaq	11.9	11.9	.0	1,976	3.7%	6.3%	.0%	16.5%
McDonnell Douglas	9.7	5.0	3.7	149	3.0%	2.7%	5.1%	1.2%
Siemens	6.0	3.1	2.1	82	1.8%	1.6%	2.9%	.7%
Apple Computer	5.3	4.7	.0	1,021	1.6%	2.5%	.0%	8.5%
Autodesk	4.9	.0	4.9	0	1.5%	.0%	6.6%	.0%
Control Data	4.4	2.5	.6	58	1.3%	1.3%	.8%	.5%
Racal-Redac	2.9	.1	2.3	13	.9%	.1%	3.1%	.1%
Schlumberger	2.8	1.0	1.0	29	.9%	.5%	1.4%	.2%
Silicon Graphics	2.3	2.0	.0	51	.7%	1.1%	.0%	.4%
Dazix	2.3	.4	.9	17	.7%	.2%	1.2%	.1%
Data Technology/DATECH*	2.1	.4	1.4	59	.6%	.2%	1.9%	.5%
Norsk Data	1.5	.8	.3	15	.5%	.4%	.4%	.1%
Star Informatic	1.5	1.3	.4	69	.5%	.7%	.5%	.6%
ESRI	1.4	.0	1.2	0	.4%	.0%	1.7%	.0%
Matra Datavision	1.4	.6	.6	14	.4%	.3%	.7%	.1%
Dassault*	1.4	.0	1.2	0	.4%	.0%	1.6%	.0%
Kewill Systems	1.2	.4	.7	25	.4%	.2%	.9%	.2%
SDRC	1.2	.0	1.2	0	.4%	.0%	1.6%	.0%
Valid	1.2	.1	.7	6	.4%	.0%	1.0%	.1%
Investronica SA	1.2	.9	.1	46	.4%	.5%	.1%	.4%
Gerber Systems	1.1	.6	.4	15	.3%	.3%	.5%	.1%
Wiechers Datentechnik	1.0	.8	.2	20	.3%	.4%	.3%	.2%
Calay	1.0	.3	.6	16	.3%	.2%	.8%	.1%
VLSI Technology	1.0	.0	.8	3	.3%	.0%	1.1%	.0%
Intercad	1.0	.5	.3	47	.3%	.3%	.4%	.4%
Scientific Calc.	.9	.1	.6	3	.3%	.1%	.8%	.0%

(Continued)

TABLE NUMBER: 12
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Parametric Technology	.9	.0	.8	0	.3%	.0%	1.1%	.0%
MacNeal-Schwendler	.8	.0	.8	0	.2%	.0%	1.1%	.0%
Cisigraph	.8	.3	.3	7	.2%	.1%	.4%	.1%
Vero International Software	.7	.0	.7	0	.2%	.0%	.9%	.0%
Research Machines	.7	.7	.0	110	.2%	.4%	.0%	.9%
Kockums Computer Systems	.7	.2	.4	32	.2%	.1%	.5%	.3%
Cimline	.6	.1	.4	12	.2%	.1%	.5%	.1%
PAFEC	.6	.0	.6	0	.2%	.0%	.8%	.0%
Aucotec	.5	.2	.3	8	.2%	.1%	.4%	.1%
Framasoft	.5	.0	.3	0	.2%	.0%	.4%	.0%
Exapt	.5	.3	.2	8	.2%	.1%	.2%	.1%
Unisys	.5	.3	.2	7	.2%	.1%	.2%	.1%
Viewlogic Systems	.5	.0	.4	0	.1%	.0%	.5%	.0%
Ferranti	.4	.2	.2	4	.1%	.1%	.3%	.0%
Hochtief	.4	.1	.3	4	.1%	.0%	.4%	.0%
Genasys II	.4	.1	.2	1	.1%	.1%	.3%	.0%
Delcam International	.4	.1	.2	7	.1%	.1%	.3%	.1%
DAT Standard Information syste	.3	.0	.3	0	.1%	.0%	.4%	.0%
Olivetti	.3	.3	.0	50	.1%	.1%	.0%	.4%
Robocom	.3	.0	.3	0	.1%	.0%	.4%	.0%
Ziegler	.3	.0	.3	0	.1%	.0%	.4%	.0%
PDA Engineering	.3	.0	.3	0	.1%	.0%	.4%	.0%
Silver-Lisco	.3	.0	.2	0	.1%	.0%	.2%	.0%
Moss Systems	.3	.0	.2	0	.1%	.0%	.3%	.0%
Aucos elektronische Gerate	.2	.1	.1	20	.1%	.0%	.2%	.2%
Radan Computational	.2	.1	.1	6	.1%	.0%	.1%	.1%
XAO Industrie	.2	.1	.1	6	.1%	.0%	.1%	.1%
Cimatron	.2	.1	.1	5	.1%	.0%	.1%	.0%
Technische Computer Systeme	.2	.0	.1	4	.0%	.0%	.2%	.0%
Catalpa	.2	.1	.1	1	.0%	.0%	.1%	.0%
Pathtrace	.2	.0	.1	2	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 12 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
t2 Solutions	.1	.1	.1	3	.0%	.0%	.1%	.0%
ALS Design	.1	.0	.1	0	.0%	.0%	.2%	.0%
CAD-UL	.1	.0	.1	0	.0%	.0%	.2%	.0%
Serbi	.1	.0	.1	0	.0%	.0%	.1%	.0%
MEDESIGN	.1	.0	.0	1	.0%	.0%	.0%	.0%
CAMTEK	.1	.0	.1	0	.0%	.0%	.1%	.0%
Lamp Software	.1	.0	.1	4	.0%	.0%	.1%	.0%
LEICA	.1	.0	.1	0	.0%	.0%	.1%	.0%
Solbourne	.1	.1	.0	5	.0%	.0%	.0%	.0%
RIB/RZB	.1	.0	.1	0	.0%	.0%	.1%	.0%
Zycad	.1	.0	.0	0	.0%	.0%	.0%	.0%
BETRONEX	.0	.0	.0	0	.0%	.0%	.1%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
MCS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
BATISOFT	.0	.0	.0	1	.0%	.0%	.0%	.0%
debis Systemhaus	.0	.0	.0	1	.0%	.0%	.0%	.0%
Vision 3D	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	25.0	18.7	4.5	2,670	7.7%	10.0%	6.0%	22.3%
All Companies	324.3	187.6	73.9	11,973	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	294.5	176.1	59.4	11,334	90.8%	93.9%	80.4%	94.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	29.8	11.5	14.5	639	9.2%	6.1%	19.6%	5.3%
All Hardware Companies	108.5	92.5	.0	9,229	33.5%	49.3%	.0%	77.1%
All Turnkey & SW Companies	215.8	95.1	73.9	2,744	66.5%	50.7%	100.0%	22.9%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 13
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	33.5	18.7	6.0	371	19.6%	22.0%	12.8%	12.2%
Computervision	29.3	12.6	7.1	235	17.2%	14.8%	15.0%	7.8%
Hewlett-Packard	20.9	14.9	2.3	859	12.3%	17.6%	4.9%	28.3%
Mentor Graphics	13.2	3.7	5.5	130	7.7%	4.4%	11.7%	4.3%
Sun	10.0	8.8	.0	445	5.8%	10.3%	.0%	14.7%
McDonnell Douglas	8.1	4.2	3.1	93	4.7%	4.9%	6.6%	3.1%
Digital	7.9	5.7	.0	264	4.6%	6.7%	.0%	8.7%
Siemens	5.1	2.6	1.8	68	3.0%	3.0%	3.8%	2.3%
IBM	4.6	2.8	1.0	118	2.7%	3.3%	2.0%	3.9%
Racal-Redac	2.5	.1	2.0	13	1.5%	.1%	4.2%	.4%
Dazix	2.3	.4	.9	17	1.3%	.4%	1.9%	.5%
Silicon Graphics	2.2	2.0	.0	50	1.3%	2.3%	.0%	1.6%
Schlumberger	1.9	.7	.7	16	1.1%	.8%	1.5%	.5%
Control Data	1.9	1.3	.3	43	1.1%	1.5%	.7%	1.4%
Star Informatic	1.5	1.3	.4	69	.9%	1.5%	.8%	2.3%
Matra Datavision	1.4	.6	.6	14	.8%	.7%	1.2%	.5%
Valid	1.2	.1	.7	6	.7%	.1%	1.5%	.2%
Gerber Systems	1.1	.6	.4	15	.7%	.6%	.8%	.5%
Kewill Systems	1.1	.3	.6	24	.7%	.4%	1.3%	.8%
SDRC	1.1	.0	1.1	0	.6%	.0%	2.2%	.0%
Calay	1.0	.3	.6	16	.6%	.4%	1.3%	.5%
VLSI Technology	1.0	.0	.8	3	.6%	.0%	1.7%	.1%
Parametric Technology	.9	.0	.8	0	.5%	.0%	1.8%	.0%
ESRI	.8	.0	.7	0	.5%	.0%	1.5%	.0%
Scientific Calc.	.8	.1	.4	3	.5%	.1%	.9%	.1%
Cisigraph	.7	.3	.3	6	.4%	.3%	.5%	.2%
Norsk Data	.7	.4	.1	9	.4%	.5%	.3%	.3%
Kockums Computer Systems	.7	.2	.4	32	.4%	.2%	.8%	1.1%
Cimlinc	.6	.1	.4	12	.4%	.1%	.8%	.4%
PAFEC	.5	.0	.5	0	.3%	.0%	1.1%	.0%
Framasoft	.5	.0	.3	0	.3%	.0%	.6%	.0%
Ferranti	.4	.2	.2	4	.3%	.2%	.4%	.1%
Dassault*	.4	.0	.4	0	.3%	.0%	.8%	.0%

(Continued)

TABLE NUMBER: 13
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical, Workstation
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Autodesk	.4	.0	.4	0	.2%	.0%	.8%	.0%
Delcam International	.4	.1	.2	7	.2%	.2%	.4%	.2%
Unisys	.4	.2	.1	5	.2%	.2%	.3%	.2%
Genasys II	.4	.1	.2	1	.2%	.2%	.5%	.0%
Wiechers Datentechnik	.3	.2	.1	3	.2%	.3%	.1%	.1%
Silver-Lisco	.3	.0	.2	0	.2%	.0%	.3%	.0%
Moss Systems	.3	.0	.2	0	.1%	.0%	.5%	.0%
MacNeal-Schwendler	.2	.0	.2	0	.1%	.0%	.4%	.0%
Viewlogic Systems	.2	.0	.2	0	.1%	.0%	.3%	.0%
Data Technology/DATECH*	.2	.0	.2	0	.1%	.0%	.3%	.0%
PDA Engineering	.2	.0	.2	0	.1%	.0%	.4%	.0%
Radan Computational	.2	.1	.1	6	.1%	.1%	.2%	.2%
XAO Industrie	.2	.1	.1	6	.1%	.1%	.2%	.2%
Aucotec	.2	.1	.1	3	.1%	.1%	.2%	.1%
Technische Computer Systeme	.2	.0	.1	4	.1%	.0%	.3%	.1%
Catalpa	.2	.1	.1	1	.1%	.1%	.1%	.0%
t2 Solutions	.1	.1	.1	3	.1%	.1%	.1%	.1%
Exapt	.1	.1	.1	4	.1%	.1%	.1%	.1%
Cimatron	.1	.1	.1	4	.1%	.1%	.1%	.1%
MEDESIGN	.1	.0	.0	1	.0%	.0%	.1%	.0%
LEICA	.1	.0	.1	0	.0%	.0%	.1%	.0%
CAMTEK	.1	.0	.0	0	.0%	.0%	.1%	.0%
Zycad	.0	.0	.0	0	.0%	.0%	.0%	.0%
debis Systemhaus	.0	.0	.0	1	.0%	.0%	.0%	.0%
Lamp Software	.0	.0	.0	2	.0%	.0%	.0%	.1%
MCS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
RIB/RZB	.0	.0	.0	0	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	1	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 13 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Market Share			
					Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	6.5	1.1	4.0	25	3.8%	1.3%	8.5%	.8%
All Companies	170.7	85.0	47.1	3,032	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	151.8	77.9	37.8	2,731	88.9%	91.6%	80.3%	90.1%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	18.9	7.1	9.3	301	11.1%	8.4%	19.7%	9.9%
All Hardware Companies	30.5	25.2	.0	1,362	17.9%	29.7%	.0%	44.9%
All Turnkey & SW Companies	140.2	59.8	47.1	1,670	82.1%	70.3%	100.0%	55.1%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 14
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	40.8	24.5	9.0	538	40.6%	38.0%	60.7%	41.8%
Digital	28.1	20.5	.0	0	27.9%	31.8%	.0%	.0%
Intergraph	5.8	2.9	.9	52	5.8%	4.5%	6.4%	4.1%
Computervision	3.6	1.6	.8	104	3.6%	2.5%	5.5%	8.1%
Control Data	2.5	1.2	.3	14	2.5%	1.8%	2.0%	1.1%
Sun	2.5	2.0	.0	76	2.4%	3.1%	.0%	5.9%
McDonnell Douglas	1.6	.8	.6	56	1.6%	1.3%	4.3%	4.3%
Dassault*	.9	.0	.8	0	.9%	.0%	5.3%	.0%
Siemens	.9	.5	.3	14	.8%	.7%	2.2%	1.1%
Norsk Data	.8	.4	.1	6	.8%	.5%	.8%	.5%
Schlumberger	.8	.3	.3	12	.8%	.5%	1.8%	1.0%
MacNeal-Schwendler	.6	.0	.6	0	.6%	.0%	4.0%	.0%
Hewlett-Packard	.5	.4	.0	27	.5%	.7%	.0%	2.1%
ESRI	.5	.0	.4	0	.5%	.0%	2.8%	.0%
Exapt	.4	.2	.1	4	.4%	.3%	.8%	.3%
Scientific Calc.	.2	.0	.1	1	.2%	.1%	.9%	.1%
SDRC	.2	.0	.2	0	.2%	.0%	1.1%	.0%
Kewill Systems	.1	.0	.1	1	.1%	.1%	.4%	.1%
Unisys	.1	.1	.0	1	.1%	.1%	.3%	.1%
PDA Engineering	.1	.0	.1	0	.1%	.0%	.6%	.0%
Cisigraph	.1	.0	.0	2	.1%	.0%	.2%	.1%
Framasoft	.1	.0	.0	0	.0%	.0%	.2%	.0%
Solbourne	.1	.1	.0	4	.0%	.1%	.0%	.3%
Silicon Graphics	.0	.0	.0	1	.0%	.1%	.0%	.1%
Hochtief	.0	.0	.0	0	.0%	.0%	.1%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.1%	.0%
Olivetti	.0	.0	.0	0	.0%	.0%	.0%	.0%
MCS	.0	.0	.0	0	.0%	.0%	.1%	.0%
VLSI Technology	.0	.0	.0	0	.0%	.0%	.0%	.0%
Zycad	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 14 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	9.3	8.9	.0	375	9.3%	13.8%	.0%	29.1%
All Companies	100.4	64.4	14.8	1,288	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	97.2	63.3	13.3	1,256	96.8%	98.3%	90.0%	97.5%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	3.3	1.1	1.5	32	3.2%	1.7%	10.0%	2.5%
All Hardware Companies	41.0	32.2	.0	480	40.9%	50.1%	.0%	37.2%
All Turnkey & SW Companies	59.4	32.1	14.8	809	59.1%	49.9%	100.0%	62.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 15
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Compaq	11.9	11.9	.0	1,976	22.3%	31.0%	.0%	25.8%
IBM	5.9	5.6	.0	1,306	11.0%	14.5%	.0%	17.1%
Apple Computer	5.3	4.7	.0	1,021	10.0%	12.2%	.0%	13.3%
Hewlett-Packard	4.6	3.7	.0	708	8.7%	9.7%	.0%	9.2%
Autodesk	4.5	.0	4.5	0	8.4%	.0%	36.8%	.0%
Data Technology/DATECH*	1.9	.4	1.3	59	3.5%	1.0%	10.4%	.8%
Intergraph	1.2	.0	1.1	0	2.2%	.0%	8.9%	.0%
Investronica SA	1.2	.9	.1	46	2.2%	2.4%	.9%	.6%
Intercad	1.0	.5	.3	47	1.8%	1.3%	2.2%	.6%
Vero International Software	.7	.0	.7	0	1.4%	.0%	5.4%	.0%
Wiechers Datentechnik	.7	.6	.2	17	1.4%	1.5%	1.2%	.2%
Research Machines	.7	.7	.0	110	1.3%	1.9%	.0%	1.4%
Computervision	.7	.0	.7	7	1.3%	.1%	5.4%	.1%
Hochtief	.4	.1	.3	4	.8%	.2%	2.4%	.0%
Racal-Redac	.4	.0	.4	0	.7%	.0%	3.0%	.0%
Aucotec	.4	.1	.2	6	.7%	.3%	1.7%	.1%
DAT Standard Information syste	.3	.0	.3	0	.6%	.0%	2.5%	.0%
Olivetti	.3	.2	.0	49	.5%	.6%	.0%	.6%
Robocom	.3	.0	.3	0	.5%	.0%	2.3%	.0%
Ziegler	.3	.0	.3	0	.5%	.0%	2.3%	.0%
Viewlogic Systems	.3	.0	.2	0	.5%	.0%	1.8%	.0%
Aucos elektronische Gerate	.2	.1	.1	20	.4%	.2%	1.2%	.3%
Pathtrace	.2	.0	.1	2	.3%	.1%	.8%	.0%
ALS Design	.1	.0	.1	0	.2%	.0%	1.1%	.0%
CAD-UL	.1	.0	.1	0	.2%	.0%	1.1%	.0%
ESRI	.1	.0	.1	0	.2%	.0%	1.0%	.0%
Serbi	.1	.0	.1	0	.2%	.0%	.8%	.0%
PAFEC	.1	.0	.1	0	.1%	.0%	.5%	.0%
Cimatron	.1	.0	.0	2	.1%	.1%	.2%	.0%
Lamp Software	.1	.0	.0	3	.1%	.0%	.2%	.0%
BETRONEX	.0	.0	.0	0	.1%	.0%	.3%	.0%
Genasys II	.0	.0	.0	0	.1%	.0%	.2%	.0%

(Continued)

TABLE NUMBER: 15 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
RIB/RZB	.0	.0	.0	0	.1%	.0%	.3%	.0%
Schlumberger	.0	.0	.0	0	.1%	.0%	.1%	.0%
BATISOFT	.0	.0	.0	1	.0%	.0%	.1%	.0%
CAMTEK	.0	.0	.0	0	.0%	.0%	.2%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.2%	.0%
Norsk Data	.0	.0	.0	0	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.1%	.0%
MCS	.0	.0	.0	0	.0%	.0%	.1%	.0%
Vision 3D	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	9.2	8.7	.5	2,270	17.3%	22.8%	4.5%	29.7%
All Companies	53.1	38.2	12.1	7,653	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	45.5	34.9	8.4	7,347	85.6%	91.4%	69.1%	96.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	7.7	3.3	3.8	306	14.4%	8.6%	30.9%	4.0%
All Hardware Companies	37.0	35.1	.0	7,387	69.6%	91.8%	.0%	96.5%
All Turnkey & SW Companies	16.1	3.1	12.1	266	30.4%	8.2%	100.0%	3.5%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 16
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	40.9	25.4	8.5	1,073	23.6%	24.5%	23.1%	18.9%
Computervision	29.5	12.5	7.5	304	17.0%	12.1%	20.4%	5.3%
Digital	19.4	14.2	.0	134	11.2%	13.7%	.0%	2.4%
Hewlett-Packard	15.9	11.3	1.9	823	9.1%	10.9%	5.1%	14.5%
McDonnell Douglas	8.8	4.5	3.4	133	5.0%	4.4%	9.3%	2.3%
Intergraph	6.9	3.7	1.4	72	4.0%	3.6%	3.8%	1.3%
Sun	5.0	4.3	.0	202	2.9%	4.1%	.0%	3.5%
Compaq	4.3	4.3	.0	707	2.4%	4.1%	.0%	12.4%
Control Data	4.1	2.3	.6	53	2.4%	2.2%	1.5%	.9%
Schlumberger	2.7	1.0	1.0	29	1.6%	.9%	2.7%	.5%
Silicon Graphics	2.2	2.0	.0	50	1.3%	1.9%	.0%	.9%
Apple Computer	2.2	1.9	.0	418	1.3%	1.8%	.0%	7.4%
Autodesk	1.8	.0	1.8	0	1.1%	.0%	5.0%	.0%
Norsk Data	1.5	.8	.3	15	.9%	.7%	.7%	.3%
Matra Datavision	1.4	.6	.6	14	.8%	.6%	1.5%	.3%
Dassault*	1.3	.0	1.1	0	.7%	.0%	2.9%	.0%
SDRC	1.2	.0	1.2	0	.7%	.0%	3.3%	.0%
Investronica SA	1.2	.9	.1	46	.7%	.9%	.3%	.8%
Gerber Systems	1.1	.6	.4	15	.6%	.5%	1.0%	.3%
Data Technology/DATECH*	1.0	.2	.7	29	.6%	.2%	2.0%	.5%
Wiechers Datentechnik	1.0	.8	.2	20	.6%	.8%	.5%	.3%
Parametric Technology	.9	.0	.8	0	.5%	.0%	2.3%	.0%
Cisigraph	.8	.3	.3	7	.5%	.3%	.8%	.1%
MacNeal-Schwendler	.8	.0	.8	0	.5%	.0%	2.1%	.0%
Intercad	.8	.4	.2	38	.4%	.4%	.6%	.7%
Vero International Software	.7	.0	.7	0	.4%	.0%	1.8%	.0%
Cimlinc	.6	.1	.4	12	.4%	.1%	1.0%	.2%
Kewill Systems	.6	.2	.3	13	.4%	.2%	.9%	.2%
Framasoft	.5	.0	.3	0	.3%	.0%	.8%	.0%
Exapt	.5	.3	.2	8	.3%	.2%	.5%	.1%
Unisys	.5	.3	.2	7	.3%	.3%	.5%	.1%
Ferranti	.4	.2	.2	4	.3%	.2%	.5%	.1%

(Continued)

TABLE NUMBER: 16 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					Market Share			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
PAFEC	.4	.0	.4	0	.2%	.0%	1.1%	.0%
Delcam International	.4	.1	.2	7	.2%	.1%	.5%	.1%
Research Machines	.3	.3	.0	53	.2%	.3%	.0%	.9%
DAT Standard Information syste	.3	.0	.3	0	.2%	.0%	.8%	.0%
PDA Engineering	.3	.0	.3	0	.2%	.0%	.7%	.0%
XAO Industrie	.2	.1	.1	6	.1%	.1%	.3%	.1%
Cimatron	.2	.1	.1	5	.1%	.1%	.2%	.1%
Olivetti	.2	.1	.0	26	.1%	.1%	.0%	.5%
Technische Computer Systeme	.2	.0	.1	4	.1%	.0%	.4%	.1%
Catalpa	.2	.1	.1	1	.1%	.1%	.2%	.0%
Pathtrace	.2	.0	.1	2	.1%	.0%	.3%	.0%
Radan Computational	.2	.1	.1	5	.1%	.0%	.2%	.1%
Mentor Graphics	.1	.0	.1	1	.1%	.0%	.2%	.0%
Robocom	.1	.0	.1	0	.1%	.0%	.4%	.0%
Ziegler	.1	.0	.1	0	.1%	.0%	.3%	.0%
CAMTEK	.1	.0	.1	0	.0%	.0%	.2%	.0%
Serbi	.1	.0	.1	0	.0%	.0%	.2%	.0%
MCS	.0	.0	.0	0	.0%	.0%	.1%	.0%
debis Systemhaus	.0	.0	.0	0	.0%	.0%	.0%	.0%
Vision 3D	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	9.6	9.8	.0	1,345	5.6%	9.5%	.0%	23.6%
All Companies	173.5	103.4	36.5	5,691	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	159.9	98.1	30.4	5,416	92.2%	94.9%	83.1%	95.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	13.6	5.3	6.2	275	7.8%	5.1%	16.9%	4.8%
All Hardware Companies	53.2	44.9	.0	4,030	30.7%	43.4%	.0%	70.8%
All Turnkey & SW Companies	120.3	58.6	36.5	1,661	69.3%	56.6%	100.0%	29.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 17
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	13.8	7.4	2.8	144	30.6%	25.6%	30.3%	5.3%
IBM	5.4	3.7	.9	343	11.9%	12.8%	9.8%	12.7%
Digital	3.6	2.6	.0	25	8.0%	9.1%	.0%	.9%
Hewlett-Packard	2.9	2.4	.0	254	6.4%	8.2%	.0%	9.4%
Compaq	2.6	2.6	.0	437	5.8%	9.1%	.0%	16.1%
Autodesk	2.1	.0	2.1	0	4.8%	.0%	23.5%	.0%
Apple Computer	2.1	1.9	.0	408	4.7%	6.5%	.0%	15.1%
Star Informatic	1.5	1.3	.4	69	3.3%	4.6%	4.3%	2.5%
Computervision	1.5	.6	.4	16	3.2%	2.1%	4.8%	.6%
Data Technology/DATECH*	.8	.1	.5	22	1.7%	.5%	5.8%	.8%
McDonnell Douglas	.7	.4	.3	11	1.6%	1.3%	3.2%	.4%
Siemens	.7	.4	.2	9	1.5%	1.2%	2.6%	.3%
Kockums Computer Systems	.7	.2	.4	32	1.4%	.6%	4.0%	1.2%
Kewill Systems	.6	.2	.3	13	1.4%	.7%	3.7%	.5%
Sun	.5	.4	.0	22	1.1%	1.5%	.0%	.8%
Hochtief	.4	.1	.3	4	1.0%	.2%	3.3%	-.1%
Research Machines	.2	.2	.0	30	.4%	.7%	.0%	1.1%
t2 Solutions	.1	.1	.1	3	.3%	.2%	.7%	.1%
Robocom	.1	.0	.1	0	.3%	.0%	1.4%	.0%
Olivetti	.1	.1	.0	18	.2%	.3%	.0%	.7%
Control Data	.1	.1	.0	1	.2%	.2%	.2%	.0%
Dassault*	.1	.0	.1	0	.2%	.0%	.9%	.0%
MEDESIGN	.1	.0	.0	1	.2%	.1%	.3%	.0%
Lamp Software	.1	.0	.1	4	.2%	.1%	.5%	.1%
Masta Corporation	.0	.0	.0	0	.1%	.0%	.3%	.0%
RIB/RZB	.0	.0	.0	0	.1%	.0%	.4%	.0%
Ziegler	.0	.0	.0	0	.1%	.0%	.4%	.0%
PAFEC	.0	.0	.0	0	.1%	.0%	.3%	.0%
Radan Computational	.0	.0	.0	1	.1%	.0%	.1%	.0%
BATISOFT	.0	.0	.0	1	.0%	.0%	.1%	.0%
Serbi	.0	.0	.0	0	.0%	.0%	.2%	.0%
DAT Standard Information syste	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 17 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	4.0	4.1	.0	833	9.0%	14.4%	.0%	30.7%
All Companies	45.0	28.8	9.1	2,710	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	40.1	26.3	6.9	2,527	89.0%	91.4%	76.2%	93.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	4.9	2.5	2.2	183	11.0%	8.6%	23.8%	6.8%
All Hardware Companies	17.3	15.4	.0	2,301	38.5%	53.6%	.0%	84.9%
All Turnkey & SW Companies	27.7	13.3	9.1	409	61.5%	46.4%	100.0%	15.1%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 18
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	17.8	9.5	3.6	186	44.6%	41.9%	38.8%	14.7%
Siemens	5.3	2.7	1.9	73	13.3%	11.9%	20.4%	5.8%
Digital	4.0	2.9	.0	27	9.9%	12.7%	.0%	2.2%
IBM	2.6	1.9	.4	240	6.4%	8.3%	3.8%	19.0%
Compaq	1.7	1.7	.0	286	4.3%	7.5%	.0%	22.6%
ESRI	1.4	.0	1.2	0	3.5%	.0%	13.5%	.0%
Computervision	.7	.3	.1	10	1.7%	1.4%	1.5%	.8%
Apple Computer	.6	.5	.0	112	1.5%	2.2%	.0%	8.9%
Sun	.5	.4	.0	21	1.2%	1.9%	.0%	1.6%
Autodesk	.5	.0	.5	0	1.2%	.0%	5.2%	.0%
Genasys II	.4	.1	.2	1	1.0%	.6%	2.6%	.1%
Hewlett-Packard	.3	.2	.0	21	.6%	.9%	.0%	1.7%
Moss Systems	.3	.0	.2	0	.6%	.0%	2.4%	.0%
Data Technology/DATECH*	.2	.0	.1	5	.5%	.1%	1.3%	.4%
McDonnell Douglas	.2	.1	.1	5	.5%	.4%	.8%	.4%
Control Data	.1	.1	.0	3	.4%	.4%	.2%	.3%
PAFEC	.1	.0	.1	0	.4%	.0%	1.5%	.0%
LEICA	.1	.0	.1	0	.2%	.0%	.7%	.0%
Research Machines	.1	.1	.0	8	.1%	.2%	.0%	.6%
Silicon Graphics	.0	.0	.0	1	.1%	.2%	.0%	.1%
Ziegler	.0	.0	.0	0	.1%	.0%	.3%	.0%
Robocom	.0	.0	.0	0	.1%	.0%	.2%	.0%
RIB/RZB	.0	.0	.0	0	.0%	.0%	.1%	.0%
Solbourne	.0	.0	.0	1	.0%	.0%	.0%	.1%

(Continued)

TABLE NUMBER: 18 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	3.2	2.1	.6	257	7.9%	9.2%	6.5%	20.3%
All Companies	39.9	22.8	9.2	1,265	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	34.0	20.0	6.8	1,177	85.3%	87.9%	74.4%	93.1%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	5.9	2.8	2.4	88	14.7%	12.1%	25.6%	6.9%
All Hardware Companies	9.7	8.4	.0	944	24.4%	36.9%	.0%	74.6%
All Turnkey & SW Companies	30.2	14.4	9.2	321	75.6%	63.1%	100.0%	25.4%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 19
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	13.0	3.7	5.5	129	19.8%	11.2%	28.6%	5.6%
Digital	9.0	6.5	.0	78	13.7%	20.0%	.0%	3.4%
Hewlett-Packard	7.1	5.2	.4	495	10.8%	16.0%	2.3%	21.4%
Sun	6.5	5.6	.0	278	9.8%	17.2%	.0%	12.0%
Compaq	3.3	3.3	.0	546	5.0%	10.0%	.0%	23.7%
Racal-Redac	2.9	.1	2.3	13	4.3%	.4%	12.1%	.6%
IBM	2.3	1.8	.2	305	3.5%	5.6%	1.1%	13.2%
Dazix	2.3	.4	.9	17	3.4%	1.1%	4.6%	.7%
Intergraph	2.0	1.0	.4	21	3.1%	3.0%	1.9%	.9%
Computervision	2.0	.8	.5	16	3.0%	2.5%	2.5%	.7%
Valid	1.2	.1	.7	6	1.8%	.2%	3.8%	.3%
Celay	1.0	.3	.6	16	1.5%	.9%	3.1%	.7%
VLSI Technology	1.0	.0	.8	3	1.5%	.1%	4.2%	.1%
Scientific Calc.	.9	.1	.6	3	1.4%	.4%	2.9%	.1%
Aucotec	.5	.2	.3	8	.8%	.6%	1.5%	.4%
Viewlogic Systems	.5	.0	.4	0	.7%	.0%	2.0%	.0%
Apple Computer	.4	.4	.0	82	.6%	1.2%	.0%	3.5%
Autodesk	.4	.0	.4	0	.6%	.0%	2.0%	.0%
Silvar-Lisco	.3	.0	.2	0	.4%	.0%	.8%	.0%
Aucos elektronische Gerate	.2	.1	.1	20	.3%	.2%	.7%	.9%
Intercad	.2	.1	.1	9	.3%	.3%	.3%	.4%
ALS Design	.1	.0	.1	0	.2%	.0%	.7%	.0%
CAD-UL	.1	.0	.1	0	.2%	.0%	.7%	.0%
Research Machines	.1	.1	.0	20	.2%	.4%	.0%	.9%
Ziegler	.1	.0	.1	0	.2%	.0%	.5%	.0%
Data Technology/DATECH*	.1	.0	.0	2	.1%	.1%	.2%	.1%
Solbourne	.1	.1	.0	4	.1%	.2%	.0%	.2%
Zycad	.1	.0	.0	0	.1%	.1%	.0%	.0%
BETRONEX	.0	.0	.0	0	.1%	.0%	.2%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.2%	.0%
Olivetti	.0	.0	.0	6	.0%	.1%	.0%	.2%
Schlumberger	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 19 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
MacNeal-Schwendler	.0	.0	.0	0	.0%	.0%	.1%	.0%
Serbi	.0	.0	.0	0	.0%	.0%	.1%	.0%
debi Systemhaus	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	8.2	2.7	4.4	229	12.4%	8.2%	22.8%	9.9%
All Companies	65.8	32.6	19.1	2,308	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	60.4	31.7	15.3	2,215	91.8%	97.2%	79.9%	96.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	5.4	.9	3.8	93	8.2%	2.8%	20.1%	4.0%
All Hardware Companies	28.2	23.8	.0	1,954	42.9%	73.0%	.0%	84.7%
All Turnkey & SW Companies	37.6	8.8	19.1	353	57.1%	27.0%	100.0%	15.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 20
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	7.9	2.3	3.3	78	22.0%	12.6%	30.7%	5.1%
Hewlett-Packard	5.0	3.9	.3	369	14.0%	21.5%	2.3%	24.0%
Digital	3.6	2.6	.0	31	10.0%	14.4%	.0%	2.0%
Sun	3.0	2.6	.0	127	8.3%	14.3%	.0%	8.2%
Compaq	2.3	2.3	.0	385	6.4%	12.7%	.0%	25.0%
Dazix	1.4	.3	.5	10	3.8%	1.4%	5.0%	.6%
IBM	1.1	1.1	.0	248	3.1%	5.8%	.0%	16.1%
Intergraph	1.0	.6	.2	10	2.8%	3.1%	1.7%	.7%
Racal-Redac	1.0	.1	.8	4	2.6%	.3%	7.1%	.3%
Valid	.7	.1	.4	4	1.9%	.3%	3.8%	.2%
Computervision	.7	.3	.2	6	1.8%	1.5%	1.5%	.4%
VLSI Technology	.6	.0	.5	2	1.7%	.1%	4.5%	.1%
Aucotec	.5	.2	.3	8	1.4%	1.0%	2.7%	.5%
Viewlogic Systems	.5	.0	.4	0	1.3%	.0%	3.5%	.0%
Autodesk	.3	.0	.3	0	.9%	.0%	3.2%	.0%
Apple Computer	.2	.2	.0	41	.6%	1.0%	.0%	2.6%
Aucos elektronische Gerate	.2	.1	.1	20	.6%	.3%	1.3%	1.3%
Calay	.2	.1	.1	3	.6%	.3%	1.1%	.2%
Intercad	.2	.1	.1	9	.6%	.5%	.5%	.6%
ALS Design	.1	.0	.1	0	.3%	.0%	.9%	.0%
Research Machines	.1	.1	.0	12	.2%	.4%	.0%	.8%
Ziegler	.1	.0	.1	0	.2%	.0%	.6%	.0%
Zycad	.1	.0	.0	0	.1%	.2%	.0%	.0%
Data Technology/DATECH*	.0	.0	.0	1	.1%	.1%	.2%	.1%
Scientific Calc.	.0	.0	.0	0	.1%	.0%	.3%	.0%
Inca	.0	.0	.0	0	.1%	.0%	.3%	.0%
MacNeal-Schwendler	.0	.0	.0	0	.1%	.0%	.2%	.0%
Serbi	.0	.0	.0	0	.1%	.0%	.2%	.0%
debis Systemhaus	.0	.0	.0	0	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	1	.0%	.1%	.0%	.1%

(Continued)

TABLE NUMBER: 20 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	5.2	1.5	3.1	169	14.4%	8.0%	28.5%	11.0%
All Companies	35.9	18.2	10.8	1,541	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	33.6	17.7	9.2	1,483	93.4%	97.0%	85.3%	96.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	2.4	.5	1.6	58	6.6%	3.0%	14.7%	3.8%
All Hardware Companies	15.5	13.4	.0	1,340	43.1%	73.4%	.0%	87.0%
All Turnkey & SW Companies	20.4	4.9	10.8	201	56.9%	26.6%	100.0%	13.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 21
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: IC Layout
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	2.1	.6	.9	21	25.1%	15.5%	34.6%	12.5%
Sun	2.0	1.7	.0	86	23.7%	44.0%	.0%	51.6%
Digital	1.4	1.1	.0	12	17.2%	26.7%	.0%	7.5%
Hewlett-Packard	.4	.4	.0	39	5.1%	9.4%	.0%	23.5%
VLSI Technology	.4	.0	.3	1	4.7%	.3%	12.5%	.7%
Silvar-Lisco	.3	.0	.2	0	3.1%	.0%	6.2%	.0%
Valid	.1	.0	.1	1	1.7%	.3%	3.5%	.4%
Solbourne	.0	.0	.0	2	.4%	1.0%	.0%	1.3%
Other Companies	1.6	.1	1.1	4	19.1%	2.8%	43.2%	2.5%
All Companies	8.4	3.9	2.6	167	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	8.4	3.9	2.6	167	100.0%	100.0%	100.0%	100.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Hardware Companies	4.0	3.3	.0	144	47.5%	83.5%	.0%	86.1%
All Turnkey & SW Companies	4.4	.7	2.6	23	52.5%	16.5%	100.0%	13.9%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 22
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Digital	4.0	2.9	.0	34	18.4%	27.1%	.0%	5.7%
Mentor Graphics	3.0	.8	1.3	30	14.1%	7.2%	21.9%	5.0%
Racal-Redac	1.9	.1	1.6	9	8.9%	.7%	26.8%	1.5%
Hewlett-Packard	1.6	.9	.2	86	7.6%	8.9%	3.3%	14.4%
Sun	1.5	1.3	.0	65	6.9%	12.4%	.0%	10.8%
Computervision	1.3	.5	.3	11	6.1%	5.0%	5.5%	1.8%
IBM	1.2	.8	.2	57	5.6%	7.4%	3.8%	9.5%
Intergraph	1.0	.4	.2	11	4.7%	4.1%	3.1%	1.8%
Compaq	1.0	1.0	.0	161	4.5%	9.2%	.0%	26.8%
Dazix	.9	.1	.4	7	4.2%	.9%	6.0%	1.1%
Scientific Calc.	.9	.1	.5	3	4.2%	1.1%	9.2%	.5%
Calay	.8	.3	.5	13	3.7%	2.4%	8.1%	2.2%
Valid	.4	.0	.2	2	1.7%	.2%	3.8%	.3%
Apple Computer	.2	.2	.0	41	1.0%	1.8%	.0%	6.8%
CAD-UL	.1	.0	.1	0	.6%	.0%	2.2%	.0%
Autodesk	.1	.0	.1	0	.2%	.0%	.9%	.0%
Research Machines	.1	.1	.0	8	.2%	.5%	.0%	1.3%
BETRONEX	.0	.0	.0	0	.2%	.0%	.7%	.0%
Data Technology/DATECH*	.0	.0	.0	1	.2%	.1%	.3%	.2%
Ziegler	.0	.0	.0	0	.2%	.0%	.7%	.0%
ALS Design	.0	.0	.0	0	.1%	.0%	.5%	.0%
Olivetti	.0	.0	.0	6	.1%	.2%	.0%	.9%
Schlumberger	.0	.0	.0	0	.1%	.0%	.0%	.0%
Solbourne	.0	.0	.0	1	.0%	.1%	.0%	.1%

(Continued)

TABLE NUMBER: 22 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Benelux
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	1.4	1.1	.2	56	6.4%	10.7%	3.1%	9.3%
All Companies	21.5	10.5	5.8	600	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	18.5	10.1	3.5	565	85.9%	96.3%	61.0%	94.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	3.0	.4	2.3	35	14.1%	3.7%	39.0%	5.8%
All Hardware Companies	8.8	7.2	.0	470	40.7%	68.5%	.0%	78.4%
All Turnkey & SW Companies	12.8	3.3	5.8	130	59.3%	31.5%	100.0%	21.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 23
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Computervision	132.1	56.2	32.8	1,360	16.7%	13.0%	16.0%	4.5%
IBM	90.1	59.1	16.6	4,270	11.4%	13.6%	8.1%	14.2%
Digital	61.2	44.6	.0	449	7.7%	10.3%	.0%	1.5%
Intergraph	53.4	28.4	10.6	558	6.7%	6.6%	5.2%	1.9%
Hewlett-Packard	47.4	34.3	4.5	2,786	6.0%	7.9%	2.2%	9.3%
Compaq	45.5	45.5	.0	7,575	5.7%	10.5%	.0%	25.3%
Sun	33.6	29.3	.0	1,415	4.2%	6.8%	.0%	4.7%
Matra Datavision	30.0	13.5	12.0	315	3.8%	3.1%	5.9%	1.1%
Cisgraph	23.0	8.1	8.0	213	2.9%	1.9%	3.9%	.7%
Mentor Graphics	19.3	5.4	8.1	191	2.4%	1.3%	4.0%	.6%
Dassault*	18.9	.0	16.1	0	2.4%	.0%	7.9%	.0%
McDonnell Douglas	14.8	7.6	5.7	236	1.9%	1.8%	2.8%	.8%
Apple Computer	14.7	13.0	.0	2,835	1.9%	3.0%	.0%	9.5%
Valid	13.5	.9	8.1	69	1.7%	.2%	4.0%	.2%
Control Data	12.6	7.0	1.7	167	1.6%	1.6%	.9%	.6%
Ferranti	10.7	4.0	4.9	93	1.3%	.9%	2.4%	.3%
DATAID Technologies*	9.6	.0	1.9	0	1.2%	.0%	.9%	.0%
Autodesk	8.8	.0	8.8	0	1.1%	.0%	4.3%	.0%
Silicon Graphics	8.1	7.1	.0	181	1.0%	1.6%	.0%	.6%
Dazix	8.1	1.3	3.2	60	1.0%	.3%	1.6%	.2%
Schlumberger	8.0	2.8	2.9	84	1.0%	.7%	1.4%	.3%
BATISOFT	5.6	.8	2.8	180	.7%	.2%	1.4%	.6%
Framasoft	5.3	.0	3.2	0	.7%	.0%	1.6%	.0%
Clemessy	5.2	4.2	.8	10	.7%	1.0%	.4%	.0%
Racal-Redac	5.2	.2	4.2	24	.7%	.0%	2.1%	.1%
Vero International Software	4.7	.0	4.3	0	.6%	.0%	2.1%	.0%
Serbi	3.9	.0	3.9	0	.5%	.0%	1.9%	.0%
SDRC	3.6	.0	3.6	0	.5%	.0%	1.8%	.0%
Unisys	3.6	1.8	1.2	49	.4%	.4%	.6%	.2%
Star Informatic	3.4	2.9	.9	154	.4%	.7%	.4%	.5%
Datagraphic	3.1	1.5	1.2	50	.4%	.4%	.6%	.2%
ESRI	2.9	.0	2.6	0	.4%	.0%	1.2%	.0%
Assigraph	2.8	.0	2.2	21	.3%	.0%	1.1%	.1%

(Continued)

TABLE NUMBER: 23
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
XAO Industrie	2.7	.9	1.6	97	.3%	.2%	.8%	.3%
ICL	2.5	1.5	.8	68	.3%	.3%	.4%	.2%
Parametric Technology	2.1	.0	2.0	0	.3%	.0%	1.0%	.0%
MacNeal-Schwendler	2.1	.0	2.0	0	.3%	.0%	1.0%	.0%
VLSI Technology	2.1	.1	1.7	6	.3%	.0%	.8%	.0%
Catalpa	1.9	.6	1.0	15	.2%	.1%	.5%	.1%
PAFEC	1.8	.0	1.8	0	.2%	.0%	.9%	.0%
Caroline Informatique	1.7	.3	1.2	23	.2%	.1%	.6%	.1%
Norsk Data	1.5	.8	.3	15	.2%	.2%	.1%	.0%
Siemens	1.5	.8	.5	21	.2%	.2%	.3%	.1%
Scientific Calc.	1.4	.2	.8	5	.2%	.0%	.4%	.0%
Academi Systems	1.3	.1	1.1	5	.2%	.0%	.5%	.0%
Macao Systems	1.3	.8	.5	13	.2%	.2%	.2%	.0%
DECAD	1.2	.2	.7	5	.2%	.0%	.4%	.0%
Investronica SA	1.1	.9	.1	44	.1%	.2%	.1%	.1%
ALS Design	1.0	.0	1.0	0	.1%	.0%	.5%	.0%
Wiechers Datentechnik	1.0	.8	.2	25	.1%	.2%	.1%	.1%
Olivetti	1.0	.8	.0	154	.1%	.2%	.0%	.5%
Delcam International	.9	.3	.5	15	.1%	.1%	.2%	.1%
Zycad	.9	.8	.0	8	.1%	.2%	.0%	.0%
Fides Industrielle Automation	.9	.1	.8	7	.1%	.0%	.4%	.0%
CAD Lab	.8	.0	.7	0	.1%	.0%	.3%	.0%
PDA Engineering	.6	.0	.6	0	.1%	.0%	.3%	.0%
Silvar-Lisco	.6	.0	.4	0	.1%	.0%	.2%	.0%
Calay	.6	.2	.3	9	.1%	.0%	.2%	.0%
Albert Nestler	.5	.2	.2	7	.1%	.0%	.1%	.0%
ISYKON Software	.5	.2	.2	7	.1%	.1%	.1%	.0%
Vision 3D	.5	.2	.1	4	.1%	.1%	.1%	.0%
Cimlinc	.4	.1	.2	8	.1%	.0%	.1%	.0%
Gerber Systems	.4	.2	.1	5	.0%	.0%	.1%	.0%
Kockums Computer Systems	.3	.1	.2	16	.0%	.0%	.1%	.1%

(Continued)

TABLE NUMBER: 23 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Anilam Electronics	.3	.1	.2	4	.0%	.0%	.1%	.0%
Solbourne	.3	.3	.0	24	.0%	.1%	.0%	.1%
LPKF	.3	.2	.1	12	.0%	.0%	.0%	.0%
Moss Systems	.3	.0	.3	0	.0%	.0%	.1%	.0%
Viewlogic Systems	.3	.0	.2	0	.0%	.0%	.1%	.0%
Ziegler	.3	.0	.3	0	.0%	.0%	.1%	.0%
Superdraft	.3	.1	.1	15	.0%	.0%	.1%	.0%
Tebis	.3	.0	.2	1	.0%	.0%	.1%	.0%
BETRONEX	.2	.0	.2	0	.0%	.0%	.1%	.0%
Laser-Scan	.2	.0	.1	1	.0%	.0%	.0%	.0%
MCS	.2	.0	.2	0	.0%	.0%	.1%	.0%
CAMTEK	.1	.0	.1	0	.0%	.0%	.0%	.0%
Masta Corporation	.1	.0	.1	1	.0%	.0%	.0%	.0%
Robocom	.1	.0	.1	0	.0%	.0%	.1%	.0%
Radan Computational	.1	.0	.1	3	.0%	.0%	.0%	.0%
Inca	.1	.0	.1	0	.0%	.0%	.0%	.0%
Kloeckner-Moeller	.1	.1	.0	1	.0%	.0%	.0%	.0%
Pathtrace	.1	.0	.1	1	.0%	.0%	.0%	.0%
Dolphin Integration	.1	.0	.1	0	.0%	.0%	.0%	.0%
DAT Standard Information syste	.0	.0	.0	0	.0%	.0%	.0%	.0%
FECS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	39.6	42.0	3.3	5,991	5.0%	9.7%	1.6%	20.0%
All Companies	793.1	433.6	204.3	29,989	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	641.9	387.8	124.1	28,343	80.9%	89.5%	60.7%	94.5%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	151.2	45.7	80.2	1,646	19.1%	10.5%	39.3%	5.5%
All Hardware Companies	247.6	216.9	.0	24,042	31.2%	50.0%	.0%	80.2%
All Turnkey & SW Companies	545.4	216.7	204.3	5,947	68.8%	50.0%	100.0%	19.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 24
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Computervision	116.3	49.9	28.1	933	25.7%	23.9%	20.3%	13.6%
Intergraph	44.2	24.6	7.9	489	9.8%	11.8%	5.7%	7.2%
Hewlett-Packard	38.7	27.3	4.5	1,547	8.5%	13.1%	3.3%	22.6%
Matra Datavision	30.0	13.5	12.0	315	6.6%	6.5%	8.7%	4.6%
Sun	27.0	23.8	.0	1,209	6.0%	11.4%	.0%	17.7%
Cisigraph	20.7	7.3	7.3	168	4.6%	3.5%	5.2%	2.5%
Mentor Graphics	19.3	5.4	8.1	191	4.3%	2.6%	5.9%	2.8%
Valid	13.5	.9	8.1	69	3.0%	.4%	5.8%	1.0%
Digital	13.5	9.7	.0	449	3.0%	4.7%	.0%	6.6%
McDonnell Douglas	11.9	6.1	4.6	137	2.6%	2.9%	3.3%	2.0%
Ferranti	10.7	4.0	4.9	93	2.4%	1.9%	3.5%	1.4%
Dazix	8.1	1.3	3.2	60	1.8%	.6%	2.3%	.9%
Silicon Graphics	7.9	7.0	.0	178	1.8%	3.3%	.0%	2.6%
IBM	7.5	4.6	1.6	195	1.7%	2.2%	1.1%	2.9%
Dassault*	6.1	.0	5.2	0	1.3%	.0%	3.7%	.0%
DATAID Technologies*	5.8	.0	1.2	0	1.3%	.0%	.8%	.0%
Schlumberger	5.6	1.9	2.1	48	1.2%	.9%	1.5%	.7%
Control Data	5.4	3.7	.9	125	1.2%	1.8%	.7%	1.8%
Framasoft	4.8	.0	2.9	0	1.0%	.0%	2.1%	.0%
Racal-Redac	4.5	.2	3.6	24	1.0%	.1%	2.6%	.3%
Clemessy	4.2	3.4	.6	4	.9%	1.6%	.5%	.1%
Star Informatique	3.4	2.9	.9	154	.7%	1.4%	.6%	2.3%
SDRC	3.2	.0	3.2	0	.7%	.0%	2.3%	.0%
Unisys	2.7	1.4	1.0	39	.6%	.7%	.7%	.6%
XAO Industrie	2.7	.9	1.6	97	.6%	.5%	1.2%	1.4%
JCL	2.5	1.5	.8	68	.5%	.7%	.6%	1.0%
Parametric Technology	2.1	.0	2.0	0	.5%	.0%	1.4%	.0%
VLSI Technology	2.0	.1	1.7	6	.4%	.0%	1.2%	.1%
Catalpa	1.9	.6	1.0	15	.4%	.3%	.7%	.2%
ESRI	1.7	.0	1.4	0	.4%	.0%	1.0%	.0%
PAFEC	1.6	.0	1.6	0	.4%	.0%	1.2%	.0%
Assigraph	1.4	.0	1.1	11	.3%	.0%	.8%	.2%
Caroline Informatique	1.4	.3	1.0	19	.3%	.1%	.7%	.3%

(Continued)

TABLE NUMBER: 24
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Siemens	1.3	.6	.5	17	.3%	.3%	.3%	.2%
DECAD	1.2	.2	.7	4	.3%	.1%	.5%	.1%
Scientific Calc.	1.2	.1	.6	4	.3%	.1%	.5%	.1%
Delcam International	.9	.3	.5	15	.2%	.2%	.3%	.2%
Macao Systems	.8	.4	.3	8	.2%	.2%	.2%	.1%
CAD Lab	.8	.0	.6	0	.2%	.0%	.4%	.0%
Autodesk	.7	.0	.7	0	.2%	.0%	.5%	.0%
Zycad	.7	.6	.0	6	.2%	.3%	.0%	.1%
Norsk Data	.7	.4	.1	9	.2%	.2%	.1%	.1%
Silvar-Lisco	.6	.0	.4	0	.1%	.0%	.3%	.0%
Calay	.6	.2	.3	9	.1%	.1%	.2%	.1%
Academi Systems	.5	.1	.4	2	.1%	.0%	.3%	.0%
MacNeal-Schwendler	.5	.0	.5	0	.1%	.0%	.4%	.0%
Albert Nestler	.5	.2	.2	7	.1%	.1%	.2%	.1%
ISYKON Software	.5	.2	.2	7	.1%	.1%	.1%	.1%
Cimlinc	.4	.1	.2	8	.1%	.0%	.2%	.1%
PDA Engineering	.4	.0	.4	0	.1%	.0%	.3%	.0%
Gerber Systems	.4	.2	.1	5	.1%	.1%	.1%	.1%
Kockums Computer Systems	.3	.1	.2	16	.1%	.0%	.1%	.2%
Moss Systems	.3	.0	.3	0	.1%	.0%	.2%	.0%
Wiechers Datentechnik	.3	.2	.1	4	.1%	.1%	.0%	.1%
Serbi	.2	.0	.2	0	.1%	.0%	.2%	.0%
Fides Industrielle Automation	.2	.0	.2	3	.0%	.0%	.1%	.0%
Laser-Scan	.2	.0	.1	1	.0%	.0%	.1%	.0%
Viewlogic Systems	.1	.0	.1	0	.0%	.0%	.1%	.0%
CAHTEK	.1	.0	.1	0	.0%	.0%	.1%	.0%
MCS	.1	.0	.1	0	.0%	.0%	.1%	.0%
Radan Computational	.1	.0	.1	3	.0%	.0%	.0%	.0%
Solbourne	.1	.1	.0	5	.0%	.0%	.0%	.1%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
Dolphin Integration	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 24 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
FEGS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	6.5	2.4	6.5	49	1.4%	1.2%	4.7%	.7%
All Companies	453.1	208.6	138.5	6,833	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	348.0	171.0	89.2	5,761	76.8%	82.0%	64.4%	84.3%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	105.2	37.5	49.3	1,072	23.2%	18.0%	35.6%	15.7%
All Hardware Companies	66.8	56.0	.0	2,891	14.7%	26.8%	.0%	42.3%
All Turnkey & SW Companies	386.3	152.6	138.5	3,942	85.3%	73.2%	100.0%	57.7%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 25
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	68.4	41.1	15.1	903	35.0%	33.9%	45.2%	33.0%
Digital	47.7	34.9	.0	0	24.4%	28.8%	.0%	.0%
Computervision	14.2	6.2	3.2	412	7.3%	5.1%	9.6%	15.1%
Dassault*	12.9	.0	10.9	0	6.6%	.0%	32.8%	.0%
Intergraph	7.7	3.8	1.2	69	3.9%	3.2%	3.7%	2.5%
Control Data	7.3	3.4	.8	42	3.7%	2.8%	2.5%	1.5%
Sun	6.7	5.5	.0	206	3.4%	4.6%	.0%	7.5%
DATAID Technologies*	2.9	.0	.6	0	1.5%	.0%	1.7%	.0%
McDonnell Douglas	2.9	1.5	1.1	99	1.5%	1.2%	3.4%	3.6%
Schlumberger	2.3	.9	.8	36	1.2%	.7%	2.3%	1.3%
Cisigraph	2.3	.8	.8	46	1.2%	.7%	2.3%	1.7%
MacNeal-Schwendler	1.6	.0	1.5	0	.8%	.0%	4.6%	.0%
Assigraph	1.4	.0	1.1	11	.7%	.0%	3.3%	.4%
Clemessy	1.1	.9	.1	6	.5%	.7%	.4%	.2%
ESRI	1.0	.0	.9	0	.5%	.0%	2.6%	.0%
Hewlett-Packard	.9	.8	.0	47	.5%	.7%	.0%	1.7%
Unisys	.8	.4	.3	10	.4%	.3%	.8%	.4%
Norsk Data	.8	.4	.1	6	.4%	.3%	.4%	.2%
Fides Industrielle Automation	.7	.1	.6	4	.4%	.1%	1.9%	.1%
Framasoft	.5	.0	.3	0	.3%	.0%	1.0%	.0%
Macao Systems	.5	.3	.2	4	.3%	.3%	.6%	.2%
SDRC	.5	.0	.5	0	.2%	.0%	1.4%	.0%
Scientific Calc.	.3	.1	.2	1	.1%	.0%	.6%	.0%
Solbourne	.3	.3	.0	19	.1%	.2%	.0%	.7%
Siemens	.2	.2	.1	4	.1%	.1%	.3%	.1%
PDA Engineering	.2	.0	.2	0	.1%	.0%	.6%	.0%
Zycad	.2	.2	.0	1	.1%	.1%	.0%	.0%
Silicon Graphics	.2	.1	.0	3	.1%	.1%	.0%	.1%
Olivetti	.1	.1	.0	1	.0%	.0%	.0%	.1%
MCS	.1	.0	.1	0	.0%	.0%	.2%	.0%
DECAD	.0	.0	.0	1	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 25 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Laser-Scan	.0	.0	.0	0	.0%	.0%	.0%	.0%
VLSI Technology	.0	.0	.0	0	.0%	.0%	.1%	.0%
FECS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	9.1	19.3	.0	804	4.6%	15.9%	.0%	29.4%
All Companies	195.7	121.0	33.3	2,733	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	175.1	118.4	19.0	2,652	89.5%	97.8%	56.9%	97.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	20.6	2.7	14.4	82	10.5%	2.2%	43.1%	3.0%
All Hardware Companies	77.7	61.8	.0	1,086	39.7%	51.1%	.0%	39.7%
All Turnkey & SW Companies	118.0	59.2	33.3	1,648	60.3%	48.9%	100.0%	60.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 26
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Compaq	45.5	45.5	.0	7,575	31.5%	43.7%	.0%	37.1%
Apple Computer	14.7	13.0	.0	2,835	10.2%	12.5%	.0%	13.9%
IBM	14.2	13.5	.0	3,172	9.8%	13.0%	.0%	15.5%
Autodesk	8.1	.0	8.1	0	5.6%	.0%	24.8%	.0%
Hewlett-Packard	7.8	6.2	.0	1,193	5.4%	6.0%	.0%	5.8%
BATISOFT	5.6	.8	2.8	180	3.9%	.8%	8.6%	.9%
Vero International Software	4.7	.0	4.3	0	3.3%	.0%	13.3%	.0%
Serbi	3.7	.0	3.7	0	2.5%	.0%	11.3%	.0%
Datagraphic	3.1	1.5	1.2	50	2.1%	1.5%	3.8%	.2%
Computervision	1.6	.1	1.5	15	1.1%	.1%	4.6%	.1%
Intergraph	1.5	.0	1.4	0	1.0%	.0%	4.4%	.0%
Investronica SA	1.1	.9	.1	44	.8%	.8%	.3%	.2%
ALS Design	1.0	.0	1.0	0	.7%	.0%	3.2%	.0%
DATAID Technologies*	1.0	.0	.2	0	.7%	.0%	.6%	.0%
Olivetti	.9	.8	.0	152	.6%	.7%	.0%	.7%
Academi Systems	.8	.1	.6	3	.6%	.1%	2.0%	.0%
Wiechers Datentechnik	.7	.6	.2	21	.5%	.6%	.5%	.1%
Racal-Redac	.7	.0	.6	0	.5%	.0%	2.0%	.0%
Vision 3D	.5	.2	.1	4	.3%	.2%	.3%	.0%
Caroline Informatique	.3	.1	.2	4	.2%	.1%	.7%	.0%
Anilam Electronics	.3	.1	.2	4	.2%	.1%	.6%	.0%
LPKF	.3	.2	.1	12	.2%	.2%	.2%	.1%
Ziegler	.3	.0	.3	0	.2%	.0%	.9%	.0%
Superdraft	.3	.1	.1	15	.2%	.1%	.4%	.1%
ESRI	.3	.0	.3	0	.2%	.0%	.8%	.0%
Tebis	.3	.0	.2	1	.2%	.0%	.5%	.0%
BETRONEX	.2	.0	.2	0	.2%	.0%	.7%	.0%
PAFEC	.2	.0	.2	0	.1%	.0%	.6%	.0%
Viewlogic Systems	.2	.0	.1	0	.1%	.0%	.4%	.0%
Robocom	.1	.0	.1	0	.1%	.0%	.3%	.0%
Schlumberger	.1	.0	.0	1	.1%	.0%	.1%	.0%
Kloeckner-Moeller	.1	.1	.0	1	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 26 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Pathtrace	.1	.0	.1	1	.0%	.0%	.2%	.0%
Inca	.1	.0	.1	0	.0%	.0%	.2%	.0%
CAMTEK	.0	.0	.0	0	.0%	.0%	.1%	.0%
Masta Corporation	.0	.0	.0	1	.0%	.0%	.1%	.0%
CAD Lab	.0	.0	.0	0	.0%	.0%	.1%	.0%
DAT Standard Information syste	.0	.0	.0	0	.0%	.0%	.1%	.0%
MCS	.0	.0	.0	0	.0%	.0%	.1%	.0%
Dolphin Integration	.0	.0	.0	0	.0%	.0%	.1%	.0%
Morsk Data	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	24.1	20.2	4.3	5,139	16.7%	19.4%	13.3%	25.2%
All Companies	144.3	104.0	32.5	20,422	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	118.9	98.4	16.0	19,930	82.4%	94.7%	49.1%	97.6%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	25.4	5.5	16.6	492	17.6%	5.3%	50.9%	2.4%
All Hardware Companies	103.2	99.1	.0	20,065	71.5%	95.3%	.0%	98.3%
All Turnkey & SW Companies	41.1	4.9	32.5	357	28.5%	4.7%	100.0%	1.7%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 27
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Computervision	116.1	49.4	28.8	1,196	24.6%	19.3%	24.1%	8.3%
IBM	68.3	43.0	13.7	2,153	14.5%	16.8%	11.5%	14.9%
Digital	33.0	24.1	.0	228	7.0%	9.4%	.0%	1.6%
Hewlett-Packard	31.5	22.3	3.8	1,614	6.7%	8.7%	3.2%	11.2%
Matra Datavision	30.0	13.5	12.0	315	6.3%	5.3%	10.0%	2.2%
Cisigraph	23.0	8.1	8.0	213	4.9%	3.2%	6.7%	1.5%
Dassault*	17.6	.0	15.0	0	3.7%	.0%	12.5%	.0%
Compaq	16.3	16.3	.0	2,712	3.4%	6.4%	.0%	18.8%
Sun	13.5	11.6	.0	547	2.8%	4.5%	.0%	3.8%
Control Data	11.9	6.6	1.6	153	2.5%	2.6%	1.4%	1.1%
McDonnell Douglas	11.4	5.9	4.4	173	2.4%	2.3%	3.7%	1.2%
Ferranti	10.7	4.0	4.9	93	2.3%	1.5%	4.1%	.6%
Intergraph	9.1	4.9	1.8	95	1.9%	1.9%	1.5%	.7%
Schlumberger	7.9	2.8	2.9	83	1.7%	1.1%	2.4%	.6%
Silicon Graphics	7.9	7.0	.0	177	1.7%	2.7%	.0%	1.2%
DATAID Technologies*	7.5	.0	1.5	0	1.6%	.0%	1.3%	.0%
Apple Computer	6.0	5.3	.0	1,162	1.3%	2.1%	.0%	8.1%
Framasoft	5.3	.0	3.2	0	1.1%	.0%	2.7%	.0%
Vero International Software	4.7	.0	4.3	0	1.0%	.0%	3.6%	.0%
SDRC	3.6	.0	3.6	0	.8%	.0%	3.0%	.0%
Unisys	3.6	1.8	1.2	49	.8%	.7%	1.0%	.3%
Autodesk	3.3	.0	3.3	0	.7%	.0%	2.8%	.0%
XAO Industrie	2.7	.9	1.6	97	.6%	.4%	1.4%	.7%
Serbi	2.3	.0	2.3	0	.5%	.0%	2.0%	.0%
Parametric Technology	2.1	.0	2.0	0	.5%	.0%	1.6%	.0%
MacNeal-Schwendler	2.0	.0	2.0	0	.4%	.0%	1.6%	.0%
Catalpa	1.9	.6	1.0	15	.4%	.2%	.8%	.1%
Caroline Informatique	1.7	.3	1.2	23	.4%	.1%	1.0%	.2%
Norsk Data	1.5	.8	.3	15	.3%	.3%	.2%	.1%
PAFEC	1.3	.0	1.3	0	.3%	.0%	1.1%	.0%
JCL	1.1	.7	.4	31	.2%	.3%	.3%	.2%
Investronica SA	1.1	.9	.1	44	.2%	.3%	.1%	.3%
Wiechers Datentechnik	1.0	.8	.2	25	.2%	.3%	.2%	.2%

(Continued)

TABLE NUMBER: 27
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Delcam International	.9	.3	.5	15	.2%	.1%	.4%	.1%
Fides Industrielle Automation	.9	.1	.8	7	.2%	.0%	.7%	.0%
CAD Lab	.8	.0	.7	0	.2%	.0%	.5%	.0%
PDA Engineering	.6	.0	.6	0	.1%	.0%	.5%	.0%
Olivetti	.6	.5	.0	92	.1%	.2%	.0%	.6%
Albert Nestler	.5	.2	.2	7	.1%	.1%	.2%	.0%
ISYKON Software	.5	.2	.2	7	.1%	.1%	.1%	.0%
Vision 3D	.5	.2	.1	4	.1%	.1%	.1%	.0%
Cimlinc	.4	.1	.2	8	.1%	.0%	.2%	.1%
Gerber Systems	.4	.2	.1	5	.1%	.1%	.1%	.0%
Anilam Electronics	.3	.1	.2	4	.1%	.0%	.2%	.0%
Superdraft	.3	.1	.1	15	.1%	.1%	.1%	.1%
Tebis	.3	.0	.2	1	.1%	.0%	.1%	.0%
Mentor Graphics	.2	.1	.1	2	.0%	.0%	.1%	.0%
NCS	.2	.0	.2	0	.0%	.0%	.1%	.0%
CAMTEK	.1	.0	.1	0	.0%	.0%	.1%	.0%
Ziegler	.1	.0	.1	0	.0%	.0%	.1%	.0%
Pathtrace	.1	.0	.1	1	.0%	.0%	.0%	.0%
Radan Computational	.1	.0	.0	3	.0%	.0%	.0%	.0%
Robocom	.1	.0	.1	0	.0%	.0%	.0%	.0%
Mesta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
DAT Standard Information syste	.0	.0	.0	0	.0%	.0%	.0%	.0%
FEGS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	1	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 27 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	3.6	22.2	.0	3,031	.8%	8.7%	.0%	21.0%
All Companies	472.5	256.0	119.6	14,420	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	360.6	223.5	60.6	13,395	76.3%	87.3%	50.7%	92.9%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	111.9	32.5	59.0	1,025	23.7%	12.7%	49.3%	7.1%
All Hardware Companies	120.7	104.3	.0	10,372	25.5%	40.7%	.0%	71.9%
All Turnkey & SW Companies	351.8	151.7	119.6	4,048	74.5%	59.3%	100.0%	28.1%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 28
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	18.2	9.7	3.6	190	19.6%	16.3%	19.3%	2.9%
IBM	11.3	7.9	1.8	810	12.2%	13.2%	9.5%	12.2%
Compaq	10.1	10.1	.0	1,674	10.9%	16.8%	.0%	25.3%
Digital	6.1	4.5	.0	42	6.6%	7.5%	.0%	.6%
Apple Computer	5.9	5.2	.0	1,134	6.4%	8.7%	.0%	17.1%
BATISOFT	5.6	.8	2.8	180	6.1%	1.4%	14.9%	2.7%
Computervision	5.5	2.3	1.6	63	6.0%	3.8%	8.3%	.9%
Autodesk	3.9	.0	3.9	0	4.2%	.0%	20.6%	.0%
Star Informatic	3.4	2.9	.9	154	3.6%	4.9%	4.7%	2.3%
Hewlett-Packard	3.2	2.6	.0	280	3.4%	4.4%	.0%	4.2%
Datagraphic	3.1	1.5	1.2	50	3.3%	2.6%	6.5%	.7%
McDonnell Douglas	2.2	1.2	.9	33	2.4%	1.9%	4.6%	.5%
Sun	1.3	1.2	.0	59	1.4%	2.0%	.0%	.9%
Dassault*	1.3	.0	1.1	0	1.4%	.0%	5.9%	.0%
Serbi	.8	.0	.8	0	.8%	.0%	4.1%	.0%
Olivetti	.4	.3	.0	58	.4%	.5%	.0%	.9%
Kockums Computer Systems	.3	.1	.2	16	.3%	.1%	1.0%	.2%
Control Data	.3	.2	.0	4	.3%	.3%	.2%	.1%
PAFEC	.1	.0	.1	0	.1%	.0%	.6%	.0%
Masta Corporation	.1	.0	.1	0	.1%	.0%	.3%	.0%
Robocom	.1	.0	.1	0	.1%	.0%	.3%	.0%
Ziegler	.0	.0	.0	0	.0%	.0%	.2%	.0%
Radan Computational	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 28 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	9.4	9.3	.0	1,871	10.1%	15.6%	.0%	28.2%
All Companies	92.4	59.7	18.9	6,625	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	77.3	54.0	11.6	6,166	83.7%	90.5%	61.5%	93.1%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	15.1	5.7	7.3	459	16.3%	9.5%	38.5%	6.9%
All Hardware Companies	39.3	35.9	.0	5,811	42.6%	60.2%	.0%	87.7%
All Turnkey & SW Companies	53.1	23.8	18.9	815	57.4%	39.8%	100.0%	12.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 29
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	23.5	12.6	4.7	245	33.5%	28.4%	33.3%	8.0%
Digital	6.7	4.9	.0	46	9.6%	11.1%	.0%	1.5%
Compaq	6.6	6.6	.0	1,095	9.4%	14.9%	.0%	35.5%
IBM	5.3	4.0	.7	571	7.6%	9.1%	4.6%	18.5%
Clemessy	5.2	4.2	.8	10	7.5%	9.5%	5.5%	.3%
ESRI	2.9	.0	2.6	0	4.1%	.0%	18.1%	.0%
Computervision	2.6	1.3	.6	38	3.7%	2.9%	4.0%	1.2%
DATAID Technologies*	2.1	.0	.4	0	3.0%	.0%	3.0%	.0%
Apple Computer	1.6	1.4	.0	312	2.3%	3.2%	.0%	10.1%
Siemens	1.5	.8	.5	21	2.2%	1.8%	3.8%	.7%
ICL	1.4	.8	.5	37	1.9%	1.8%	3.3%	1.2%
Sun	1.4	1.2	.0	56	1.9%	2.6%	.0%	1.8%
Macao Systems	1.3	.8	.5	13	1.9%	1.7%	3.5%	.4%
McDonnell Douglas	1.1	.6	.4	29	1.6%	1.3%	3.1%	1.0%
Autodesk	.9	.0	.9	0	1.3%	.0%	6.2%	.0%
PAFEC	.5	.0	.5	0	.7%	.0%	3.3%	.0%
Control Data	.4	.3	.1	10	.6%	.6%	.5%	.3%
Moss Systems	.3	.0	.3	0	.4%	.0%	1.8%	.0%
Hewlett-Packard	.3	.2	.0	23	.4%	.5%	.0%	.7%
Laser-Scan	.2	.0	.1	1	.3%	.1%	.6%	.0%
Silicon Graphics	.2	.1	.0	4	.2%	.3%	.0%	.1%
Solbourne	.1	.1	.0	4	.1%	.1%	.0%	.1%
Ziegler	.0	.0	.0	0	.0%	.0%	.2%	.0%
Robocom	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 29 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	4.1	4.4	.7	568	5.9%	9.9%	5.2%	18.4%
All Companies	70.1	44.2	14.1	3,081	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	59.7	37.6	11.0	3,000	85.2%	85.1%	77.9%	97.4%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	10.4	6.6	3.1	81	14.8%	14.9%	22.1%	2.6%
All Hardware Companies	22.9	20.4	.0	2,631	32.6%	46.2%	.0%	85.4%
All Turnkey & SW Companies	47.2	23.8	14.1	450	67.4%	53.8%	100.0%	14.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 30
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	19.1	5.4	8.0	189	12.1%	7.3%	15.5%	3.2%
Sun	17.5	15.3	.0	754	11.1%	20.8%	.0%	12.9%
Digital	15.3	11.1	.0	132	9.7%	15.1%	.0%	2.3%
Valid	13.5	.9	8.1	69	8.5%	1.2%	15.6%	1.2%
Compaq	12.6	12.6	.0	2,095	7.9%	17.0%	.0%	35.7%
Hewlett-Packard	12.5	9.2	.8	869	7.9%	12.4%	1.5%	14.8%
Dazix	8.1	1.3	3.2	60	5.1%	1.7%	6.2%	1.0%
Computervision	7.8	3.2	1.9	64	5.0%	4.4%	3.7%	1.1%
IBM	5.2	4.2	.5	736	3.3%	5.7%	.9%	12.5%
Racal-Redac	5.2	.2	4.2	24	3.3%	.3%	8.1%	.4%
Assigraph	2.8	.0	2.2	21	1.7%	.0%	4.2%	.4%
Intergraph	2.7	1.3	.5	28	1.7%	1.7%	.9%	.5%
VLSI Technology	2.1	.1	1.7	6	1.3%	.1%	3.3%	.1%
Scientific Calc.	1.4	.2	.8	5	.9%	.2%	1.6%	.1%
Academi Systems	1.3	.1	1.1	5	.8%	.2%	2.0%	.1%
DECAD	1.2	.2	.7	5	.8%	.3%	1.4%	.1%
Apple Computer	1.2	1.0	.0	227	.7%	1.4%	.0%	3.9%
ALS Design	1.0	.0	1.0	0	.7%	.0%	2.0%	.0%
Zycad	.9	.8	.0	8	.6%	1.0%	.0%	.1%
Serbi	.8	.0	.8	0	.5%	.0%	1.5%	.0%
Autodesk	.7	.0	.7	0	.4%	.0%	1.4%	.0%
Silver-Lisco	.6	.0	.4	0	.4%	.0%	.7%	.0%
Calay	.6	.2	.3	9	.4%	.2%	.6%	.2%
LPKF	.3	.2	.1	12	.2%	.3%	.1%	.2%
Viewlogic Systems	.3	.0	.2	0	.2%	.0%	.4%	.0%
Solbourne	.3	.3	.0	19	.2%	.4%	.0%	.3%
BETRONEX	.2	.0	.2	0	.2%	.0%	.5%	.0%
Ziegler	.1	.0	.1	0	.1%	.0%	.2%	.0%
MacNeal-Schwendler	.1	.0	.1	0	.1%	.0%	.2%	.0%
Schlumberger	.1	.0	.0	1	.1%	.0%	.0%	.0%
Inca	.1	.0	.1	0	.0%	.0%	.1%	.0%
Kloekner-Moeller	.1	.1	.0	1	.0%	.1%	.0%	.0%

(Continued)

TABLE NUMBER: 30 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Dolphin Integration	.1	.0	.1	0	.0%	.0%	.1%	.0%
Olivetti	.0	.0	.0	4	.0%	.0%	.0%	.1%
Other Companies	22.5	6.0	14.0	521	14.3%	8.2%	27.1%	8.9%
All Companies	158.0	73.7	51.8	5,863	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	144.3	72.7	40.9	5,781	91.3%	98.7%	79.0%	98.6%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	13.7	1.0	10.9	81	8.7%	1.3%	21.0%	1.4%
All Hardware Companies	64.7	56.3	.0	5,228	41.0%	76.4%	.0%	89.2%
All Turnkey & SW Companies	93.3	17.4	51.8	635	59.0%	23.6%	100.0%	10.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 31
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	11.6	3.4	4.9	115	13.5%	8.1%	17.1%	3.0%
Compaq	8.9	8.9	.0	1,477	10.3%	21.4%	.0%	38.0%
Hewlett-Packard	8.8	6.9	.4	646	10.2%	16.6%	1.5%	16.6%
Sun	8.1	7.1	.0	345	9.4%	17.1%	.0%	8.9%
Valid	7.8	.5	4.7	40	9.1%	1.3%	16.5%	1.0%
Digital	6.1	4.5	.0	53	7.1%	10.8%	.0%	1.4%
Dazix	4.9	1.0	1.9	36	5.6%	2.3%	6.8%	.9%
Assigraph	2.8	.0	2.2	21	3.2%	.0%	7.7%	.5%
IBM	2.7	2.6	.0	603	3.1%	6.2%	.0%	15.5%
Computervision	2.6	1.1	.6	22	3.0%	2.7%	2.2%	.6%
Racal-Redac	1.7	.1	1.4	8	2.0%	.2%	4.9%	.2%
Intergraph	1.3	.7	.2	14	1.5%	1.7%	.8%	.4%
VLSI Technology	1.2	.0	1.0	4	1.4%	.1%	3.6%	.1%
Zycad	.9	.8	.0	8	1.1%	1.8%	.0%	.2%
Serbi	.8	.0	.8	0	.9%	.0%	2.7%	.0%
ALS Design	.8	.0	.8	0	.9%	.0%	2.7%	.0%
Autodesk	.6	.0	.6	0	.7%	.0%	2.2%	.0%
Apple Computer	.6	.5	.0	113	.7%	1.3%	.0%	2.9%
Viewlogic Systems	.3	.0	.2	0	.3%	.0%	.8%	.0%
Calay	.1	.0	.1	2	.1%	.1%	.2%	.0%
MacNeal-Schwendler	.1	.0	.1	0	.1%	.0%	.3%	.0%
Scientific Calc.	.1	.0	.1	0	.1%	.0%	.2%	.0%
Inca	.1	.0	.1	0	.1%	.0%	.2%	.0%
Kloeckner-Moeller	.1	.1	.0	1	.1%	.1%	.1%	.0%
Solbourne	.1	.1	.0	5	.1%	.2%	.0%	.1%
Ziegler	.1	.0	.1	0	.1%	.0%	.2%	.0%
Dolphin Integration	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 31 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	13.1	3.2	8.4	376	15.2%	7.8%	29.4%	9.7%
All Companies	86.0	41.3	28.6	3,888	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	79.7	41.1	23.2	3,856	92.6%	99.6%	81.2%	99.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	6.4	.2	5.4	32	7.4%	.4%	18.8%	.8%
All Hardware Companies	36.3	32.2	.0	3,560	42.1%	77.9%	.0%	91.6%
All Turnkey & SW Companies	49.8	9.1	28.6	328	57.9%	22.1%	100.0%	8.4%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 32
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: IC Layout
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Sun	5.4	4.7	.0	234	25.6%	55.3%	.0%	60.7%
Mentor Graphics	3.1	.9	1.3	31	14.7%	10.4%	15.4%	8.0%
Digital	2.5	1.8	.0	21	11.7%	21.0%	.0%	5.5%
Valid	1.6	.1	1.0	8	7.7%	1.3%	11.6%	2.2%
VLSI Technology	.8	.0	.7	2	3.9%	.2%	8.1%	.6%
Hewlett-Packard	.8	.6	.0	70	3.7%	7.5%	.0%	18.1%
Silvar-Lisco	.6	.0	.4	0	2.9%	.0%	4.4%	.0%
Solbourne	.1	.1	.0	10	.7%	1.6%	.0%	2.7%
Dolphin Integration	.0	.0	.0	0	.1%	.0%	.4%	.0%
Other Companies	6.1	.2	5.0	9	29.0%	2.6%	60.1%	2.3%
All Companies	21.0	8.5	8.4	385	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	21.0	8.5	8.4	385	99.9%	100.0%	99.6%	100.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.0	.0	.0	0	.1%	.0%	.4%	.0%
All Hardware Companies	9.0	7.5	.0	343	42.6%	87.7%	.0%	89.1%
All Turnkey & SW Companies	12.1	1.1	8.4	42	57.4%	12.3%	100.0%	10.9%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 33
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Digital	6.7	4.8	.0	58	13.2%	20.2%	.0%	3.7%
Computervision	5.2	2.1	1.3	42	10.2%	8.8%	8.5%	2.6%
Mentor Graphics	4.4	1.1	1.9	44	8.7%	4.6%	12.6%	2.8%
Valid	4.0	.3	2.4	21	7.9%	1.1%	16.4%	1.3%
Sun	4.0	3.5	.0	175	7.9%	14.8%	.0%	11.0%
Compaq	3.7	3.7	.0	617	7.3%	15.5%	.0%	38.8%
Racal-Redac	3.5	.1	2.8	16	6.8%	.5%	18.9%	1.0%
Dazix	3.2	.3	1.3	24	6.3%	1.3%	8.7%	1.5%
Hewlett-Packard	2.9	1.7	.3	153	5.7%	6.9%	2.3%	9.6%
IBM	2.5	1.7	.5	133	4.9%	7.0%	3.0%	8.4%
Scientific Calc.	1.4	.2	.8	5	2.7%	.7%	5.3%	.3%
Intergraph	1.3	.6	.2	14	2.6%	2.3%	1.6%	.9%
Academi Systems	1.3	.1	1.1	5	2.6%	.5%	7.1%	.3%
DECAD	1.2	.2	.7	5	2.4%	.9%	4.9%	.3%
Apple Computer	.6	.5	.0	113	1.2%	2.2%	.0%	7.1%
Calay	.5	.1	.3	7	.9%	.6%	1.8%	.5%
LPKF	.3	.2	.1	12	.6%	.8%	.5%	.8%
ALS Design	.3	.0	.3	0	.5%	.0%	1.8%	.0%
BETRONEX	.2	.0	.2	0	.5%	.0%	1.6%	.0%
Autodesk	.1	.0	.1	0	.2%	.0%	.6%	.0%
Schlumberger	.1	.0	.0	1	.2%	.1%	.1%	.1%
Solbourne	.1	.1	.0	4	.1%	.2%	.0%	.3%
Ziegler	.0	.0	.0	0	.1%	.0%	.3%	.0%
Olivetti	.0	.0	.0	4	.0%	.1%	.0%	.2%

(Continued)

TABLE NUMBER: 33 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: France
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	3.3	2.6	.6	137	6.6%	10.7%	4.0%	8.6%
All Companies	51.0	23.9	14.8	1,590	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	43.7	23.1	9.4	1,541	85.6%	96.6%	63.1%	96.9%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	7.3	.8	5.5	49	14.4%	3.4%	36.9%	3.1%
All Hardware Companies	19.5	16.6	.0	1,325	38.3%	69.6%	.0%	83.4%
All Turnkey & SW Companies	31.5	7.3	14.8	264	61.7%	30.4%	100.0%	16.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 34
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	192.0	123.2	37.1	7,490	11.2%	13.5%	7.5%	14.3%
Siemens	187.2	94.4	65.9	2,526	10.9%	10.3%	13.3%	4.8%
Hewlett-Packard	146.1	104.2	15.6	8,096	8.5%	11.4%	3.1%	15.4%
Computervision	138.2	58.7	34.5	1,422	8.1%	6.4%	6.9%	2.7%
Digital	107.9	78.6	.0	792	6.3%	8.6%	.0%	1.5%
Intergraph	99.4	52.9	19.7	1,038	5.8%	5.8%	4.0%	2.0%
Control Data	51.7	28.8	7.1	683	3.0%	3.2%	1.4%	1.3%
Compaq	49.4	49.4	.0	8,234	2.9%	5.4%	.0%	15.7%
Sun	35.4	30.8	.0	1,490	2.1%	3.4%	.0%	2.8%
Schlumberger	33.6	12.0	12.3	353	2.0%	1.3%	2.5%	.7%
McDonnell Douglas	31.7	16.3	12.3	494	1.9%	1.8%	2.5%	.9%
Mentor Graphics	30.4	8.5	12.8	301	1.8%	.9%	2.6%	.6%
Norsk Data	29.6	15.0	5.2	290	1.7%	1.6%	1.0%	.6%
Nemetschek	25.9	10.4	15.6	420	1.5%	1.1%	3.1%	.8%
STI-Straessle	25.8	5.9	14.2	242	1.5%	.7%	2.9%	.5%
ISICAD	24.4	10.3	10.6	149	1.4%	1.1%	2.1%	.3%
Matra Datavision	21.1	9.5	8.5	222	1.2%	1.0%	1.7%	.4%
Dassault*	17.6	.0	15.0	0	1.0%	.0%	3.0%	.0%
Wiechers Datentechnik	16.4	13.2	3.3	346	1.0%	1.4%	.7%	.7%
Hahn & Kolb	15.4	9.3	4.6	220	.9%	1.0%	.9%	.4%
Autodesk	15.4	.0	15.4	0	.9%	.0%	3.1%	.0%
Ziegler	14.0	.0	14.0	0	.8%	.0%	2.8%	.0%
ISYKON Software	13.9	6.9	4.9	198	.8%	.8%	1.0%	.4%
Racal-Redac	13.9	.6	11.3	63	.8%	.1%	2.3%	.1%
Hannesmann PROCAD	12.6	6.4	3.5	174	.7%	.7%	.7%	.3%
Valid	11.5	.8	6.9	59	.7%	.1%	1.4%	.1%
Dazix	10.8	1.7	4.3	79	.6%	.2%	.9%	.2%
Calay	10.2	3.2	5.9	166	.6%	.3%	1.2%	.3%
Apple Computer	10.0	8.8	.0	1,928	.6%	1.0%	.0%	3.7%
Kewill Systems	10.0	3.0	5.5	200	.6%	.3%	1.1%	.4%
Microway	9.1	6.1	3.1	82	.5%	.7%	.6%	.2%
Exapt	8.7	4.3	3.0	150	.5%	.5%	.6%	.3%
Gerber Systems	8.2	4.0	2.7	110	.5%	.4%	.5%	.2%

(Continued)

TABLE NUMBER: 34
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
===== Silicon Graphics	8.1	7.1	.0	181	.5%	.8%	.0%	.3%
Aucotec	7.7	2.7	4.2	121	.4%	.3%	.8%	.2%
Soft-Tech Software Technologie	7.2	.7	5.7	180	.4%	.1%	1.2%	.3%
Tebis	6.8	1.0	4.8	34	.4%	.1%	1.0%	.1%
Albert Nestler	6.7	2.2	2.9	86	.4%	.2%	.6%	.2%
ABB Cade International	6.5	3.8	2.0	28	.4%	.4%	.4%	.1%
Cisigraph	6.5	2.3	2.3	60	.4%	.3%	.5%	.1%
SDRC	5.6	.0	5.6	0	.3%	.0%	1.1%	.0%
Kloekner-Moeller	5.1	3.1	1.8	80	.3%	.3%	.4%	.2%
debis Systemhaus	5.1	1.3	3.0	176	.3%	.1%	.6%	.3%
RIB/RZB	5.0	.5	4.0	24	.3%	.1%	.8%	.0%
LPKF	4.9	3.2	1.2	200	.3%	.4%	.2%	.4%
DAT Standard Information syste	4.9	.0	4.6	0	.3%	.0%	.9%	.0%
rotring euroCAD	4.8	3.0	1.8	128	.3%	.3%	.4%	.2%
Fides Industrielle Automation	4.6	.5	4.2	35	.3%	.1%	.8%	.1%
ESRI	4.6	.0	4.1	0	.3%	.0%	.8%	.0%
Marcus Computer Systeme	4.0	2.1	1.3	130	.2%	.2%	.3%	.2%
AnaCAD	3.9	.0	3.9	0	.2%	.0%	.8%	.0%
Hochtief	3.4	.5	2.4	29	.2%	.1%	.5%	.1%
Technische Computer Systeme	3.3	.7	2.7	85	.2%	.1%	.5%	.2%
MacNeal-Schwendler	3.1	.0	3.0	0	.2%	.0%	.6%	.0%
Complansoft CAD	3.1	1.5	1.5	216	.2%	.2%	.3%	.4%
ISKA	2.9	1.3	1.2	53	.2%	.1%	.2%	.1%
Cadtronic	2.8	1.6	1.3	84	.2%	.2%	.3%	.2%
Cimlinc	2.6	.5	1.6	49	.2%	.1%	.3%	.1%
Intercad	2.5	1.3	.7	119	.1%	.1%	.1%	.2%
Scientific Calc.	2.4	.3	1.4	8	.1%	.0%	.3%	.0%
PAFEC	2.3	.0	2.3	0	.1%	.0%	.5%	.0%
Zycad	2.3	1.9	.0	19	.1%	.2%	.0%	.0%
PDA Engineering	2.2	.0	2.2	0	.1%	.0%	.5%	.0%
Cimatron	2.2	1.0	1.0	65	.1%	.1%	.2%	.1%
Kockums Computer Systems	2.2	.6	1.2	108	.1%	.1%	.2%	.2%
Ferranti	2.2	.8	1.0	19	.1%	.1%	.2%	.0%

(Continued)

TABLE NUMBER: 34
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					Market Share			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Sinus Software	1.9	.9	.9	36	.1%	.1%	.2%	.1%
Delcam International	1.8	.6	.9	31	.1%	.1%	.2%	.1%
ICL	1.7	1.0	.6	45	.1%	.1%	.1%	.1%
Silvar-Lisco	1.3	.0	.8	0	.1%	.0%	.2%	.0%
CAO-UL	1.2	.0	1.2	0	.1%	.0%	.2%	.0%
Solbourne	1.1	1.1	.0	83	.1%	.1%	.0%	.2%
Framasoft	1.1	.0	.7	0	.1%	.0%	.1%	.0%
MCS	1.1	.0	1.0	0	.1%	.0%	.2%	.0%
Unisys	1.0	.5	.4	14	.1%	.1%	.1%	.0%
VLSI Technology	1.0	.0	.8	3	.1%	.0%	.2%	.0%
Aucos elektronische Gerate	.8	.2	.6	80	.0%	.0%	.1%	.2%
Caditron	.8	.4	.3	12	.0%	.0%	.1%	.0%
Olivetti	.8	.7	.0	127	.0%	.1%	.0%	.2%
Smallworld Systems	.8	.3	.5	22	.0%	.0%	.1%	.0%
Investronica SA	.7	.5	.1	26	.0%	.1%	.0%	.1%
Caroline Informatique	.6	.1	.4	7	.0%	.0%	.1%	.0%
ALS Design	.5	.0	.5	0	.0%	.0%	.1%	.0%
Viewlogic Systems	.5	.0	.4	0	.0%	.0%	.1%	.0%
Moss Systems	.5	.0	.5	0	.0%	.0%	.1%	.0%
MEDESIGN	.5	.1	.2	3	.0%	.0%	.0%	.0%
Ground Modelling Systems	.4	.3	.2	2	.0%	.0%	.0%	.0%
Laser-Scan	.4	.1	.2	1	.0%	.0%	.0%	.0%
Robocom	.4	.0	.4	0	.0%	.0%	.1%	.0%
BETRONEX	.3	.0	.3	0	.0%	.0%	.1%	.0%
Serbi	.3	.0	.3	0	.0%	.0%	.1%	.0%
Academi Systems	.2	.0	.2	1	.0%	.0%	.0%	.0%
BATISOFT	.2	.0	.1	6	.0%	.0%	.0%	.0%
CAMTEK	.1	.0	.1	0	.0%	.0%	.0%	.0%
Parametric Technology	.1	.0	.1	0	.0%	.0%	.0%	.0%
Sysscan	.1	.0	.0	1	.0%	.0%	.0%	.0%
Datagraphic	.1	.1	.0	2	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 34 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Inca	.1	.0	.1	0	.0%	.0%	.0%	.0%
Pathtrace	.1	.0	.1	1	.0%	.0%	.0%	.0%
Radan Computational	.1	.0	.1	3	.0%	.0%	.0%	.0%
Number One Systems	.1	.0	.1	2	.0%	.0%	.0%	.0%
FEGS	.1	.0	.1	0	.0%	.0%	.0%	.0%
Lamp Software	.1	.0	.0	3	.0%	.0%	.0%	.0%
Star Informatic	.1	.1	.0	3	.0%	.0%	.0%	.0%
DECAD	.1	.0	.0	0	.0%	.0%	.0%	.0%
Superdraft	.1	.0	.0	2	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
Vision 3D	.0	.0	.0	0	.0%	.0%	.0%	.0%
Alper Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.0%	.0%
ESDU International	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	119.6	83.1	29.0	11,614	7.0%	9.1%	5.8%	22.1%
All Companies	1,711.3	912.8	497.0	52,468	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	1,152.7	683.6	241.5	44,690	67.4%	74.9%	48.6%	85.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	558.6	229.2	255.5	7,779	32.6%	25.1%	51.4%	14.8%
All Hardware Companies	396.4	341.1	.0	35,769	23.2%	37.4%	.0%	68.2%
All Turnkey & SW Companies	1,314.9	571.7	497.0	16,700	76.8%	62.6%	100.0%	31.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 35
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Siemens	172.7	86.1	60.4	2,292	17.4%	17.9%	19.1%	14.3%
Computervision	121.3	52.1	29.3	973	12.2%	10.8%	9.3%	6.1%
Hewlett-Packard	119.5	82.8	15.6	4,213	12.0%	17.2%	4.9%	26.2%
Intergraph	82.3	45.8	14.8	910	8.3%	9.5%	4.7%	5.7%
Mentor Graphics	30.4	8.5	12.8	301	3.1%	1.8%	4.0%	1.9%
Sun	28.4	25.0	.0	1,273	2.9%	5.2%	.0%	7.9%
McDonnell Douglas	26.1	13.4	10.0	301	2.6%	2.8%	3.2%	1.9%
STI-Straessle	25.8	5.9	14.2	242	2.6%	1.2%	4.5%	1.5%
Digital	23.7	17.2	.0	792	2.4%	3.6%	.0%	4.9%
Schlumberger	23.6	8.1	8.9	201	2.4%	1.7%	2.8%	1.3%
Control Data	22.0	15.0	3.7	512	2.2%	3.1%	1.2%	3.2%
Matra Datavision	21.1	9.5	8.5	222	2.1%	2.0%	2.7%	1.4%
ISICAD	19.7	10.3	5.9	149	2.0%	2.1%	1.9%	.9%
IBM	16.9	10.3	3.6	439	1.7%	2.1%	1.1%	2.7%
Hahn & Kolb	13.9	8.3	4.2	190	1.4%	1.7%	1.3%	1.2%
ISYKON Software	13.9	6.9	4.9	198	1.4%	1.4%	1.5%	1.2%
Norsk Data	13.6	7.9	2.7	170	1.4%	1.6%	.9%	1.1%
Mannesmann PROCAD	12.6	6.4	3.5	174	1.3%	1.3%	1.1%	1.1%
Racal-Redac	12.1	.6	9.5	63	1.2%	.1%	3.0%	.4%
Valid	11.5	.8	6.9	59	1.2%	.2%	2.2%	.4%
Dazix	10.8	1.7	4.3	79	1.1%	.4%	1.4%	.5%
Calay	10.2	3.2	5.9	166	1.0%	.7%	1.9%	1.0%
Kewill Systems	9.0	2.7	5.0	189	.9%	.6%	1.6%	1.2%
Gerber Systems	8.2	4.0	2.7	110	.8%	.8%	.9%	.7%
Silicon Graphics	7.9	7.0	.0	178	.8%	1.5%	.0%	1.1%
Albert Nestler	6.7	2.2	2.9	86	.7%	.5%	.9%	.5%
ABB Cade International	6.5	3.8	2.0	28	.7%	.8%	.6%	.2%
Cisigraph	5.9	2.1	2.1	48	.6%	.4%	.7%	.3%
Microway	5.9	4.0	2.0	50	.6%	.8%	.6%	.3%
Dassault*	5.6	.8	4.8	0	.6%	.0%	1.5%	.0%
SDRC	4.8	.0	4.8	0	.5%	.0%	1.5%	.0%
Wiechers Datentechnik	4.6	3.7	.9	56	.5%	.8%	.3%	.4%
AnaCAD	3.9	.0	3.9	0	.4%	.0%	1.2%	.0%

(Continued)

TABLE NUMBER: 35
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
debis Systemhaus	3.9	1.0	2.3	125	.4%	.2%	.7%	.8%
Technische Computer Systeme	3.3	.7	2.7	85	.3%	.1%	.8%	.5%
Complansoft CAD	3.1	1.5	1.5	216	.3%	.3%	.5%	1.3%
Marcus Computer Systeme	3.1	1.6	1.0	100	.3%	.3%	.3%	.6%
ISKA	2.9	1.3	1.2	53	.3%	.3%	.4%	.3%
ESRI	2.6	.0	2.3	0	.3%	.0%	.7%	.0%
Nemetschek	2.6	1.0	1.6	28	.3%	.2%	.5%	.2%
Cimlinc	2.6	.5	1.6	49	.3%	.1%	.5%	.3%
Aucotec	2.5	.9	1.4	40	.3%	.2%	.4%	.2%
rotring euroCAD	2.5	1.7	.8	72	.3%	.3%	.3%	.4%
Exapt	2.4	1.2	.8	76	.2%	.2%	.3%	.5%
Kockums Computer Systems	2.2	.6	1.2	108	.2%	.1%	.4%	.7%
Ferranti	2.2	.8	1.0	19	.2%	.2%	.3%	.1%
PAFEC	2.1	.0	2.1	0	.2%	.0%	.6%	.0%
Scientific Calc.	2.0	.2	1.1	6	.2%	.0%	.3%	.0%
Sinus Software	1.9	.9	.9	36	.2%	.2%	.3%	.2%
Delcam International	1.8	.6	.9	31	.2%	.1%	.3%	.2%
Zycad	1.8	1.4	.0	15	.2%	.3%	.0%	.1%
ICL	1.7	1.0	.6	45	.2%	.2%	.2%	.3%
Cimatron	1.6	.7	.7	46	.2%	.1%	.2%	.3%
PDA Engineering	1.5	.0	1.5	0	.2%	.0%	.5%	.0%
RIG/RZB	1.5	.1	1.2	6	.1%	.0%	.4%	.0%
Autodesk	1.3	.0	1.3	0	.1%	.0%	.4%	.0%
Silvar-Lisco	1.3	.0	.8	0	.1%	.0%	.2%	.0%
Framasoft	1.0	.0	.6	0	.1%	.0%	.2%	.0%
VLSI Technology	1.0	.0	.8	3	.1%	.0%	.3%	.0%
Fides Industrielle Automation	.9	.1	.8	15	.1%	.0%	.3%	.1%
MacNeal-Schwendler	.8	.0	.8	0	.1%	.0%	.2%	.0%
Unisys	.8	.4	.3	11	.1%	.1%	.1%	.1%
Smallworld Systems	.8	.3	.5	22	.1%	.1%	.1%	.1%
MCS	.5	.0	.5	0	.1%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 35 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Moss Systems	.5	.0	.5	0	.1%	.0%	.1%	.0%
MEDESIGN	.5	.1	.2	5	.0%	.0%	.1%	.0%
Caroline Informatique	.5	.1	.3	6	.0%	.0%	.1%	.0%
Laser-Scan	.3	.1	.2	1	.0%	.0%	.1%	.0%
Solbourne	.2	.2	.0	16	.0%	.0%	.0%	.1%
Viewlogic Systems	.2	.0	.2	0	.0%	.0%	.1%	.0%
Parametric Technology	.1	.0	.1	0	.0%	.0%	.0%	.0%
Academi Systems	.1	.0	.1	0	.0%	.0%	.0%	.0%
CAMTEK	.1	.0	.1	0	.0%	.0%	.0%	.0%
Radan Computational	.1	.0	.1	3	.0%	.0%	.0%	.0%
Star Informatic	.1	.1	.0	3	.0%	.0%	.0%	.0%
DECAD	.1	.0	.0	0	.0%	.0%	.0%	.0%
Sysscan	.0	.0	.0	0	.0%	.0%	.0%	.0%
Alper Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
FECS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
Lamp Software	.0	.0	.0	1	.0%	.0%	.0%	.0%
CADNATIC	.0	.0	.0	0	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
Serbi	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	30.9	6.6	19.2	144	3.1%	1.4%	6.1%	.9%
All Companies	994.6	481.0	315.9	16,050	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	604.6	311.2	153.5	10,735	60.8%	64.7%	48.6%	66.9%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	390.0	169.8	162.4	5,315	39.2%	35.3%	51.4%	33.1%
All Hardware Companies	110.1	91.2	.0	4,782	11.1%	19.0%	.0%	29.8%
All Turnkey & SW Companies	884.5	389.8	315.9	11,269	88.9%	81.0%	100.0%	70.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 36
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	152.5	91.5	33.6	2,013	36.6%	36.1%	45.7%	36.3%
Digital	84.2	61.5	.0	0	20.2%	24.2%	.0%	.0%
Control Data	29.8	13.9	3.4	171	7.1%	5.5%	4.6%	3.1%
Norsk Data	15.7	6.9	2.4	115	3.8%	2.7%	3.2%	2.1%
Computervision	14.8	6.5	3.3	430	3.6%	2.6%	4.6%	7.8%
Siemens	14.5	8.3	5.5	235	3.5%	3.3%	7.5%	4.2%
Intergraph	14.3	7.2	2.3	128	3.4%	2.8%	3.1%	2.3%
Dassault*	11.9	.0	10.2	0	2.9%	.0%	13.8%	.0%
Schlumberger	9.8	3.8	3.3	150	2.3%	1.5%	4.5%	2.7%
Sun	7.0	5.8	.0	217	1.7%	2.3%	.0%	3.9%
Exapt	6.4	3.1	2.2	74	1.5%	1.2%	3.0%	1.3%
McDonnell Douglas	5.7	2.9	2.2	193	1.4%	1.1%	3.0%	3.5%
Fides Industrielle Automation	3.7	.4	3.3	20	.9%	.2%	4.6%	.4%
MacNeal-Schwendler	2.4	.0	2.3	0	.6%	.0%	3.1%	.0%
Hewlett-Packard	2.0	1.7	.0	99	.5%	.7%	.0%	1.8%
ESRI	1.6	.0	1.4	0	.4%	.0%	1.9%	.0%
Kewill Systems	1.0	.3	.6	11	.2%	.1%	.8%	.2%
Solbourne	.9	.9	.0	67	.2%	.4%	.0%	1.2%
PDA Engineering	.7	.0	.7	0	.2%	.0%	1.0%	.0%
SDRC	.7	.0	.7	0	.2%	.0%	1.0%	.0%
Cisigraph	.7	.2	.2	13	.2%	.1%	.3%	.2%
debis Systemhaus	.6	.2	.4	13	.1%	.1%	.5%	.2%
Zycad	.5	.4	.0	3	.1%	.2%	.0%	.1%
Scientific Calc.	.4	.1	.3	2	.1%	.0%	.4%	.0%
MCS	.4	.0	.3	0	.1%	.0%	.4%	.0%
Unisys	.2	.1	.1	3	.1%	.0%	.1%	.1%
Hochtief	.2	.0	.1	1	.0%	.0%	.2%	.0%
Silicon Graphics	.2	.1	.0	3	.0%	.1%	.0%	.0%
Framasoft	.1	.0	.1	0	.0%	.0%	.1%	.0%
Sysscan	.1	.0	.0	1	.0%	.0%	.0%	.0%
Laser-Scan	.0	.0	.0	0	.0%	.0%	.0%	.0%
FECS	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 36 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Olivetti	.0	.0	.0	1	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
VLSI Technology	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	33.3	37.9	.0	1,577	8.0%	14.9%	.0%	28.5%
All Companies	416.3	253.7	73.4	5,539	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	361.3	234.2	48.4	5,057	86.8%	92.3%	66.0%	91.3%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	55.0	19.5	25.0	482	13.2%	7.7%	34.0%	8.7%
All Hardware Companies	140.6	111.6	.0	1,995	33.8%	44.0%	.0%	36.0%
All Turnkey & SW Companies	275.7	142.1	73.4	3,545	66.2%	56.0%	100.0%	64.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 37
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Compaq	49.4	49.4	.0	8,234	16.4%	27.7%	.0%	26.7%
Hewlett-Packard	24.7	19.7	.0	3,784	8.2%	11.1%	.0%	12.3%
Nemetschek	23.3	9.3	14.0	392	7.8%	5.2%	13.0%	1.3%
IBM	22.5	21.4	.0	5,038	7.5%	12.0%	.0%	16.3%
Autodesk	14.1	.0	14.1	0	4.7%	.0%	13.1%	.0%
Ziegler	14.0	.0	14.0	0	4.7%	.0%	13.0%	.0%
Wiechers Datentechnik	11.8	9.5	2.4	290	3.9%	5.3%	2.2%	.9%
Apple Computer	10.0	8.8	.0	1,928	3.3%	5.0%	.0%	6.2%
Soft-Tech Software Technologie	7.2	.7	5.7	180	2.4%	.4%	5.3%	.6%
Tebis	6.8	1.0	4.8	34	2.3%	.6%	4.4%	.1%
Aucotec	5.1	1.8	2.8	81	1.7%	1.0%	2.6%	.3%
Kloeckner-Moeller	5.1	3.1	1.8	80	1.7%	1.7%	1.7%	.3%
LPKF	4.9	3.2	1.2	200	1.6%	1.8%	1.2%	.6%
DAT Standard Information syste	4.9	.0	4.6	0	1.6%	.0%	4.3%	.0%
ISICAD	4.7	.0	4.7	0	1.6%	.0%	4.4%	.0%
RIB/RZB	3.5	.3	2.8	18	1.2%	.2%	2.6%	.1%
Microway	3.2	2.2	1.1	33	1.1%	1.2%	1.0%	.1%
Hochtief	3.2	.5	2.2	28	1.1%	.3%	2.1%	.1%
Cadtronic	2.8	1.6	1.3	84	.9%	.9%	1.2%	.3%
Intergraph	2.8	.0	2.7	0	.9%	.0%	2.5%	.0%
Intercad	2.5	1.3	.7	119	.8%	.7%	.6%	.4%
rotring euroCAD	2.3	1.3	1.0	56	.8%	.7%	.9%	.2%
Computervision	2.0	.1	1.9	19	.7%	.1%	1.7%	.1%
Racal-Redac	1.8	.0	1.7	0	.6%	.0%	1.6%	.0%
Hahn & Kolb	1.5	.9	.5	30	.5%	.5%	.4%	.1%
CAD-UL	1.2	.0	1.2	0	.4%	.0%	1.1%	.0%
Marcus Computer Systeme	.9	.5	.3	30	.3%	.3%	.3%	.1%
Aucos elektronische Gerate	.8	.2	.6	80	.3%	.1%	.5%	.3%
Caditron	.8	.4	.3	12	.3%	.2%	.3%	.0%
Olivetti	.8	.6	.0	126	.2%	.4%	.0%	.4%
Cimatron	.7	.3	.3	20	.2%	.2%	.3%	.1%
Investronica SA	.7	.5	.1	26	.2%	.3%	.1%	.1%
debis Systemhaus	.6	.2	.4	39	.2%	.1%	.3%	.1%

(Continued)

TABLE NUMBER: 37
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
ALS Design	.5	.0	.5	0	.2%	.0%	.5%	.0%
ESRI	.4	.0	.4	0	.1%	.0%	.4%	.0%
Ground Modelling Systems	.4	.3	.2	2	.1%	.1%	.2%	.0%
Robocom	.4	.0	.4	0	.1%	.0%	.3%	.0%
Schlumberger	.3	.1	.1	2	.1%	.1%	.1%	.0%
Norsk Data	.3	.2	.1	5	.1%	.1%	.1%	.0%
Viewlogic Systems	.3	.0	.3	0	.1%	.0%	.2%	.0%
BETRONEX	.3	.0	.3	0	.1%	.0%	.2%	.0%
Serbi	.3	.0	.3	0	.1%	.0%	.2%	.0%
PAFEC	.2	.0	.2	0	.1%	.0%	.2%	.0%
MCS	.2	.0	.2	0	.1%	.0%	.2%	.0%
BATISOFT	.2	.0	.1	6	.1%	.0%	.1%	.0%
Academi Systems	.1	.0	.1	1	.0%	.0%	.1%	.0%
Caroline Informatique	.1	.0	.1	1	.0%	.0%	.1%	.0%
Datagraphic	.1	.1	.0	2	.0%	.0%	.0%	.0%
Pathtrace	.1	.0	.1	1	.0%	.0%	.0%	.0%
Inca	.1	.0	.1	0	.0%	.0%	.1%	.0%
Number One Systems	.1	.0	.1	2	.0%	.0%	.1%	.0%
Superdraft	.1	.0	.0	2	.0%	.0%	.0%	.0%
CAMTEK	.0	.0	.0	0	.0%	.0%	.0%	.0%
Lamp Software	.0	.0	.0	2	.0%	.0%	.0%	.0%
Vision 3D	.0	.0	.0	0	.0%	.0%	.0%	.0%
ESDU International	.0	.0	.0	0	.0%	.0%	.0%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 37 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	55.4	38.6	15.3	9,892	18.4%	21.7%	14.2%	32.0%
All Companies	300.5	178.1	107.8	30,879	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	186.9	138.2	39.6	28,897	62.2%	77.6%	36.7%	93.6%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	113.6	40.0	68.2	1,982	37.8%	22.4%	63.3%	6.4%
All Hardware Companies	145.8	138.4	.0	28,992	48.5%	77.7%	.0%	93.9%
All Turnkey & SW Companies	154.7	39.8	107.8	1,886	51.5%	22.3%	100.0%	6.1%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 38
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company =====					----- Market Share -----			
	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====
IBM	148.8	92.5	30.6	4,009	15.5%	17.4%	12.5%	15.0%
Computervision	121.4	51.6	30.3	1,250	12.7%	9.7%	12.4%	4.7%
Hewlett-Packard	107.3	75.3	13.5	5,282	11.2%	14.2%	5.5%	19.8%
Digital	58.3	42.5	.0	402	6.1%	8.0%	.0%	1.5%
Control Data	48.9	27.0	6.7	627	5.1%	5.1%	2.7%	2.4%
Siemens	48.3	24.1	16.9	640	5.0%	4.5%	6.9%	2.4%
Schlumberger	33.3	11.9	12.2	349	3.5%	2.2%	5.0%	1.3%
Norsk Data	29.6	15.0	5.2	290	3.1%	2.8%	2.1%	1.1%
McDonnell Douglas	25.0	12.8	9.7	379	2.6%	2.4%	3.9%	1.4%
Matra Datavision	21.1	9.5	8.5	222	2.2%	1.8%	3.5%	.8%
STI-Straessle	20.1	4.6	11.1	188	2.1%	.9%	4.5%	.7%
Compaq	17.7	17.7	.0	2,948	1.8%	3.3%	.0%	11.1%
Intergraph	16.9	9.0	3.4	176	1.8%	1.7%	1.4%	.7%
Wiechers Datentechnik	16.4	13.2	3.3	346	1.7%	2.5%	1.3%	1.3%
Dassault*	16.4	.0	13.9	0	1.7%	.0%	5.7%	.0%
Hahn & Kolb	15.4	9.3	4.6	220	1.6%	1.7%	1.9%	.8%
Sun	14.2	12.3	.0	576	1.5%	2.3%	.0%	2.2%
ISYKON Software	13.9	6.9	4.9	198	1.5%	1.3%	2.0%	.7%
Mannesmann PROCAD	12.6	6.4	3.5	174	1.3%	1.2%	1.4%	.7%
ISICAD	12.3	5.9	4.5	85	1.3%	1.1%	1.8%	.3%
Exapt	8.7	4.3	3.0	150	.9%	.8%	1.2%	.6%
Gerber Systems	8.2	4.0	2.7	110	.9%	.8%	1.1%	.4%
Silicon Graphics	7.9	7.0	.0	177	.8%	1.3%	.0%	.7%
Tebis	6.8	1.0	4.8	34	.7%	.2%	1.9%	.1%
Albert Nestler	6.7	2.2	2.9	86	.7%	.4%	1.2%	.3%
Cisigraph	6.5	2.3	2.3	60	.7%	.4%	.9%	.2%
Autodesk	5.8	.0	5.8	0	.6%	.0%	2.4%	.0%
Ziegler	5.6	.0	5.6	0	.6%	.0%	2.3%	.0%
SDRC	5.6	.0	5.6	0	.6%	.0%	2.3%	.0%
Kewill Systems	5.0	1.5	2.8	100	.5%	.3%	1.1%	.4%
Fides Industrielle Automation	4.6	.5	4.2	35	.5%	.1%	1.7%	.1%
Apple Computer	4.1	3.6	.0	790	.4%	.7%	.0%	3.0%
rotring euroCAD	4.1	2.6	1.5	110	.4%	.5%	.6%	.4%

(Continued)

TABLE NUMBER: 38
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Marcus Computer Systeme	4.0	2.1	1.3	130	.4%	.4%	.5%	.5%
DAT Standard Information syste	3.8	.0	3.6	0	.4%	.0%	1.5%	.0%
Technische Computer Systeme	3.3	.7	2.7	85	.3%	.1%	1.1%	.3%
MacNeal-Schwendler	3.0	.0	2.9	0	.3%	.0%	1.2%	.0%
Cimlinc	2.6	.5	1.6	49	.3%	.1%	.6%	.2%
debis Systemhaus	2.5	.7	1.5	88	.3%	.1%	.6%	.3%
PDA Engineering	2.2	.0	2.2	0	.2%	.0%	.9%	.0%
Cimatron	2.2	1.0	1.0	65	.2%	.2%	.4%	.2%
Ferranti	2.2	.8	1.0	19	.2%	.2%	.4%	.1%
ISKA	2.0	.9	.8	37	.2%	.2%	.3%	.1%
Intercad	2.0	1.0	.6	95	.2%	.2%	.2%	.4%
Delcam International	1.8	.6	.9	31	.2%	.1%	.4%	.1%
PAFEC	1.6	.0	1.6	0	.2%	.0%	.6%	.0%
Framasoft	1.1	.0	.7	0	.1%	.0%	.3%	.0%
MCS	1.1	.0	1.0	0	.1%	.0%	.4%	.0%
Unisys	1.0	.5	.4	14	.1%	.1%	.1%	.1%
Caditron	.8	.4	.3	12	.1%	.1%	.1%	.0%
ICL	.7	.4	.2	19	.1%	.1%	.1%	.1%
Investronica SA	.7	.5	.1	26	.1%	.1%	.0%	.1%
Caroline Informatique	.6	.1	.4	7	.1%	.0%	.2%	.0%
Cadtronic	.4	.2	.2	13	.0%	.0%	.1%	.0%
Mentor Graphics	.3	.1	.1	3	.0%	.0%	.1%	.0%
Olivetti	.3	.2	.0	44	.0%	.0%	.0%	.2%
Robocom	.2	.0	.2	0	.0%	.0%	.1%	.0%
Serbi	.2	.0	.2	0	.0%	.0%	.1%	.0%
CAMTEK	.1	.0	.1	0	.0%	.0%	.0%	.0%
Parametric Technology	.1	.0	.1	0	.0%	.0%	.0%	.0%
Pathtrace	.1	.0	.1	1	.0%	.0%	.0%	.0%
Radan Computational	.1	.0	.0	3	.0%	.0%	.0%	.0%
FEGS	.1	.0	.1	0	.0%	.0%	.0%	.0%
Superdraft	.1	.0	.0	2	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 38 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Market Share			
					Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Solbourne	.0	.0	.0	2	.0%	.0%	.0%	.0%
Vision 3D	.0	.0	.0	0	.0%	.0%	.0%	.0%
ESDU International	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	39.0	43.3	.0	5,881	4.1%	8.2%	.0%	22.1%
All Companies	957.7	530.7	244.8	26,642	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	685.0	417.5	128.6	23,110	71.5%	78.7%	52.5%	86.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	272.6	113.2	116.2	3,532	28.5%	21.3%	47.5%	13.3%
All Hardware Companies	206.4	174.9	.0	16,564	21.5%	33.0%	.0%	62.2%
All Turnkey & SW Companies	751.3	355.8	244.8	10,078	78.5%	67.0%	100.0%	37.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 39
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	33.8	18.1	6.8	353	15.2%	15.1%	8.9%	3.4%
Nemetschek	25.9	10.4	15.6	420	11.7%	8.7%	20.6%	4.0%
IBM	16.8	11.8	2.6	1,270	7.6%	9.8%	3.4%	12.2%
Siemens	16.6	8.3	5.8	220	7.5%	6.9%	7.7%	2.1%
ISICAD	12.1	4.4	6.2	64	5.4%	3.7%	8.1%	.6%
Compaq	10.9	10.9	.0	1,820	4.9%	9.1%	.0%	17.5%
Digital	10.8	7.9	.0	75	4.9%	6.6%	.0%	.7%
Microway	8.0	5.4	2.7	73	3.6%	4.5%	3.6%	.7%
Hewlett-Packard	8.0	6.6	.0	707	3.6%	5.5%	.0%	6.8%
Soft-Tech Software Technologie	7.2	.7	5.7	180	3.2%	.6%	7.6%	1.7%
Autodesk	6.8	.0	6.8	0	3.0%	.0%	9.0%	.0%
Computervision	5.9	2.4	1.7	66	2.6%	2.0%	2.2%	.6%
McDonnell Douglas	5.4	2.8	2.1	81	2.4%	2.3%	2.8%	.8%
Kewill Systems	5.0	1.5	2.8	100	2.3%	1.3%	3.7%	1.0%
Apple Computer	4.0	3.5	.0	771	1.8%	2.9%	.0%	7.4%
RIB/RZB	4.0	.4	3.2	19	1.8%	.3%	4.2%	.2%
Hochtief	3.4	.5	2.4	29	1.5%	.4%	3.1%	.3%
Complansoft CAD	3.1	1.5	1.5	216	1.4%	1.3%	2.0%	2.1%
Kockums Computer Systems	2.2	.6	1.2	108	1.0%	.5%	1.6%	1.0%
Sinus Software	1.9	.9	.9	36	.8%	.8%	1.2%	.3%
Ziegler	1.8	.0	1.8	0	.8%	.0%	2.4%	.0%
Sun	1.4	1.2	.0	62	.6%	1.0%	.0%	.6%
Dassault*	1.2	.0	1.1	0	.6%	.0%	1.4%	.0%
Control Data	1.2	.7	.2	15	.5%	.5%	.2%	.1%
Cadtronic	1.0	.6	.5	29	.4%	.5%	.6%	.3%
MEDESIGN	.5	.1	.2	5	.2%	.1%	.2%	.1%
DAT Standard Information syste	.4	.0	.4	0	.2%	.0%	.5%	.0%
Olivetti	.4	.3	.0	61	.2%	.3%	.0%	.6%
BATISOFT	.2	.0	.1	6	.1%	.0%	.1%	.1%
Robocom	.2	.0	.2	0	.1%	.0%	.2%	.0%
PAFEC	.1	.0	.1	0	.1%	.0%	.2%	.0%
Datagraphic	.1	.1	.0	2	.0%	.1%	.1%	.0%

(Continued)

TABLE NUMBER: 39 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Market Share			
					Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Ground Modelling Systems	.1	.1	.0	0	.0%	.0%	.1%	.0%
Lamp Software	.1	.0	.0	3	.0%	.0%	.1%	.0%
Star Informatic	.1	.1	.0	3	.0%	.0%	.0%	.0%
Serbi	.1	.0	.1	0	.0%	.0%	.1%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.0%	.0%
Radan Computational	.0	.0	.0	0	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	1	.0%	.0%	.0%	.0%
Other Companies	21.8	18.2	3.1	3,618	9.8%	15.2%	4.2%	34.7%
All Companies	222.1	119.9	75.5	10,414	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	138.8	88.5	29.3	8,903	62.5%	73.8%	38.8%	85.5%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	83.3	31.5	46.2	1,511	37.5%	26.2%	61.2%	14.5%
All Hardware Companies	58.5	53.0	.0	8,205	26.4%	44.2%	.0%	78.8%
All Turnkey & SW Companies	163.5	67.0	75.5	2,209	73.6%	55.8%	100.0%	21.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 40
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Siemens	90.9	46.5	32.2	1,247	42.5%	40.1%	51.2%	21.7%
Intergraph	43.7	23.4	8.7	457	20.5%	20.2%	13.9%	7.9%
IBM	13.5	9.5	2.1	978	6.3%	8.2%	3.4%	17.0%
Digital	11.9	8.7	.0	82	5.6%	7.5%	.0%	1.4%
Compaq	7.1	7.1	.0	1,190	3.3%	6.2%	.0%	20.7%
STI-Straessle	5.7	1.3	3.1	53	2.7%	1.1%	5.0%	.9%
ESRI	4.6	.0	4.1	0	2.2%	.0%	6.5%	.0%
Computervision	2.7	1.3	.6	40	1.3%	1.2%	.9%	.7%
Control Data	1.7	1.2	.3	41	.8%	1.0%	.4%	.7%
Autodesk	1.5	.0	1.5	0	.7%	.0%	2.4%	.0%
Ziegler	1.5	.0	1.5	0	.7%	.0%	2.4%	.0%
Cadtronic	1.4	.8	.6	42	.7%	.7%	1.0%	.7%
Sun	1.4	1.2	.0	59	.7%	1.1%	.0%	1.0%
McDonnell Douglas	1.3	.7	.5	34	.6%	.6%	.8%	.6%
Apple Computer	1.1	1.0	.0	212	.5%	.8%	.0%	3.7%
Microway	1.1	.7	.4	9	.5%	.6%	.6%	.2%
RIB/RZB	1.0	.1	.8	5	.5%	.1%	1.2%	.1%
Hewlett-Packard	1.0	.8	.0	83	.4%	.7%	.0%	1.4%
ICL	1.0	.6	.3	26	.4%	.5%	.5%	.5%
Smallworld Systems	.8	.3	.5	22	.4%	.3%	.7%	.4%
PAFEC	.6	.0	.6	0	.3%	.0%	.9%	.0%
Moss Systems	.5	.0	.5	0	.2%	.0%	.7%	.0%
Laser-Scan	.4	.1	.2	1	.2%	.1%	.3%	.0%
Ground Modelling Systems	.3	.2	.2	2	.1%	.2%	.2%	.0%
Solbourne	.2	.2	.0	12	.1%	.1%	.0%	.2%
Silicon Graphics	.2	.1	.0	4	.1%	.1%	.0%	.1%
Olivetti	.1	.1	.0	21	.1%	.1%	.0%	.4%
Sysscan	.1	.0	.0	1	.1%	.0%	.0%	.0%
Alper Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
Robocom	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 40 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	16.3	10.0	4.2	1,133	7.6%	8.7%	6.6%	19.7%
All Companies	213.6	115.8	62.9	5,753	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	108.3	65.1	22.0	4,323	50.7%	56.3%	35.1%	75.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	105.3	50.6	40.8	1,429	49.3%	43.7%	64.9%	24.8%
All Hardware Companies	34.2	30.1	.0	3,604	16.0%	26.0%	.0%	62.7%
All Turnkey & SW Companies	179.3	85.7	62.9	2,149	84.0%	74.0%	100.0%	37.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 41
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Siemens	31.5	15.5	11.0	418	9.9%	10.6%	9.7%	4.3%
Mentor Graphics	30.1	8.5	12.7	298	9.5%	5.8%	11.1%	3.1%
Hewlett-Packard	29.8	21.5	2.0	2,024	9.4%	14.7%	1.8%	20.9%
Digital	27.0	19.6	.0	233	8.5%	13.4%	.0%	2.4%
Sun	18.4	16.1	.0	794	5.8%	11.0%	.0%	8.2%
Racal-Redac	13.9	.6	11.3	63	4.4%	.4%	9.9%	.7%
Compaq	13.7	13.7	.0	2,277	4.3%	9.3%	.0%	23.6%
IBM	12.9	9.4	1.7	1,232	4.0%	6.4%	1.5%	12.8%
Valid	11.5	.8	6.9	59	3.6%	.5%	6.1%	.6%
Dazix	10.8	1.7	4.3	79	3.4%	1.2%	3.8%	.8%
Calay	10.2	3.2	5.9	166	3.2%	2.2%	5.2%	1.7%
Computervision	8.2	3.4	2.0	67	2.6%	2.3%	1.7%	.7%
Aucotec	7.7	2.7	4.2	121	2.4%	1.8%	3.7%	1.3%
ABB Cade International	6.5	3.8	2.0	28	2.1%	2.6%	1.7%	.3%
Kloekner-Moeller	5.1	3.1	1.8	80	1.6%	2.1%	1.6%	.8%
Ziegler	5.0	.0	5.0	0	1.6%	.0%	4.4%	.0%
Intergraph	5.0	2.4	.9	52	1.6%	1.6%	.8%	.5%
LPKF	4.9	3.2	1.2	200	1.6%	2.2%	1.1%	2.1%
AnaCAD	3.9	.0	3.9	0	1.2%	.0%	3.4%	.0%
debis Systemhaus	2.5	.7	1.5	88	.8%	.4%	1.3%	.9%
Scientific Calc.	2.4	.3	1.4	8	.7%	.2%	1.2%	.1%
Zycad	2.3	1.9	.0	19	.7%	1.3%	.0%	.2%
Silver-Lisco	1.3	.0	.8	0	.4%	.0%	.7%	.0%
Autodesk	1.2	.0	1.2	0	.4%	.0%	1.1%	.0%
CAD-UL	1.2	.0	1.2	0	.4%	.0%	1.0%	.0%
VLSI Technology	1.0	.0	.8	3	.3%	.0%	.7%	.0%
Solbourne	.9	.9	.0	67	.3%	.6%	.0%	.7%
ISKA	.9	.4	.4	16	.3%	.3%	.3%	.2%
Apple Computer	.8	.7	.0	154	.3%	.5%	.0%	1.6%
Aucos elektronische Gerate	.8	.2	.6	80	.3%	.2%	.5%	.8%
rotring euroCAD	.7	.4	.3	17	.2%	.3%	.3%	.2%
DAT Standard Information syste	.7	.0	.6	0	.2%	.0%	.6%	.0%

(Continued)

TABLE NUMBER: 41 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
ALS Design	.5	.0	.5	0	.2%	.0%	.5%	.0%
Viewlogic Systems	.5	.0	.4	0	.2%	.0%	.4%	.0%
Intercad	.5	.3	.1	24	.2%	.2%	.1%	.2%
Schlumberger	.3	.1	.1	4	.1%	.1%	.1%	.0%
BETRONEX	.3	.0	.3	0	.1%	.0%	.2%	.0%
Academi Systems	.2	.0	.2	1	.1%	.0%	.2%	.0%
MacNeal-Schwendler	.2	.0	.1	0	.0%	.0%	.1%	.0%
Inca	.1	.0	.1	0	.0%	.0%	.1%	.0%
Number One Systems	.1	.0	.1	2	.0%	.0%	.1%	.0%
DECAD	.1	.0	.0	0	.0%	.0%	.0%	.0%
Serbi	.1	.0	.1	0	.0%	.0%	.0%	.0%
Olivetti	.0	.0	.0	1	.0%	.0%	.0%	.0%
Other Companies	42.5	11.5	26.2	983	13.4%	7.9%	23.0%	10.2%
All Companies	318.0	146.4	113.8	9,660	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	220.7	112.4	61.5	8,353	69.4%	76.8%	54.1%	86.5%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	97.4	34.0	52.3	1,307	30.6%	23.2%	45.9%	13.5%
All Hardware Companies	97.3	83.1	.0	7,396	30.6%	56.8%	.0%	76.6%
All Turnkey & SW Companies	220.8	63.3	113.8	2,264	69.4%	43.2%	100.0%	23.4%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 42
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Hewlett-Packard	20.0	15.6	1.0	1,458	11.0%	18.5%	1.5%	22.8%
Siemens	19.6	9.8	6.9	261	10.7%	11.7%	9.9%	4.1%
Mentor Graphics	18.3	5.3	7.7	181	10.0%	6.3%	11.0%	2.8%
Digital	10.8	7.9	.0	93	5.9%	9.4%	.0%	1.5%
Compaq	9.6	9.6	.0	1,606	5.3%	11.5%	.0%	25.1%
Sun	8.5	7.4	.0	363	4.7%	8.8%	.0%	5.7%
Aucotec	7.7	2.7	4.2	121	4.2%	3.2%	6.0%	1.9%
Valid	6.7	.5	4.0	34	3.6%	.5%	5.8%	.5%
Dazix	6.5	1.3	2.6	48	3.5%	1.5%	3.7%	.7%
Kloeckner-Moeller	5.1	3.1	1.8	80	2.8%	3.6%	2.6%	1.3%
Racal-Redac	4.6	.2	3.7	21	2.5%	.3%	5.4%	.3%
ABB Cade International	4.6	2.8	1.4	20	2.5%	3.3%	2.0%	.3%
IBM	4.3	4.1	.0	957	2.3%	4.8%	.0%	15.0%
AnaCAD	3.9	.0	3.9	0	2.1%	.0%	5.6%	.0%
Ziegler	2.8	.0	2.8	0	1.5%	.0%	4.0%	.0%
Computervision	2.7	1.2	.7	23	1.5%	1.4%	.9%	.4%
debis Systemhaus	2.5	.7	1.5	88	1.4%	.8%	2.2%	1.4%
Intergraph	2.5	1.4	.4	26	1.4%	1.6%	.6%	.4%
Zycad	2.3	1.9	.0	19	1.2%	2.2%	.0%	.3%
Calay	2.0	.7	1.2	33	1.1%	.8%	1.7%	.5%
Autodesk	1.1	.0	1.1	0	.6%	.0%	1.6%	.0%
ISKA	.9	.4	.4	16	.5%	.5%	.5%	.2%
Aucos elektronische Gerate	.8	.2	.6	80	.4%	.3%	.8%	1.3%
rotring euroCAD	.7	.4	.3	17	.4%	.5%	.5%	.3%
DAT Standard Information syste	.7	.0	.6	0	.4%	.0%	.9%	.0%
VLSI Technology	.6	.0	.5	2	.3%	.0%	.7%	.0%
Viewlogic Systems	.5	.0	.4	0	.3%	.0%	.6%	.0%
Intercad	.5	.3	.1	24	.3%	.3%	.2%	.4%
Apple Computer	.4	.4	.0	77	.2%	.4%	.0%	1.2%
ALS Design	.4	.0	.4	0	.2%	.0%	.6%	.0%
Solbourne	.2	.2	.0	17	.1%	.3%	.0%	.3%
MacNeal-Schwendler	.2	.0	.1	0	.1%	.0%	.2%	.0%

(Continued)

TABLE NUMBER: 42 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Scientific Calc.	.1	.0	.1	1	.1%	.0%	.1%	.0%
Inca	.1	.0	.1	0	.1%	.0%	.1%	.0%
Serbi	.1	.0	.1	0	.0%	.0%	.1%	.0%
Number One Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	30.6	6.2	21.1	730	16.7%	7.4%	30.3%	11.4%
All Companies	182.8	83.9	69.7	6,395	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	125.8	62.8	39.7	5,633	68.8%	74.8%	57.0%	88.1%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	57.0	21.1	29.9	762	31.2%	25.2%	43.0%	11.9%
All Hardware Companies	54.8	47.8	.0	5,159	30.0%	56.9%	.0%	80.7%
All Turnkey & SW Companies	128.0	36.1	69.7	1,236	70.0%	43.1%	100.0%	19.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 43
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: IC Layout
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Sun	5.7	5.0	.0	246	22.9%	41.7%	.0%	45.8%
Mentor Graphics	4.9	1.4	2.0	48	19.7%	11.8%	28.8%	9.0%
Digital	4.3	3.2	.0	37	17.5%	26.6%	.0%	6.9%
Hewlett-Packard	1.6	1.3	.0	145	6.5%	11.3%	.0%	26.9%
Valid	1.4	.1	.8	7	5.6%	.8%	11.7%	1.3%
Silvar-Lisco	1.3	.0	.8	0	5.1%	.0%	10.6%	.0%
Solbourne	.5	.5	.0	36	2.0%	4.2%	.0%	6.8%
VLSI Technology	.4	.0	.3	1	1.6%	.1%	4.5%	.2%
Other Companies	4.7	.4	3.2	17	19.1%	3.6%	44.4%	3.1%
All Companies	24.7	11.9	7.1	538	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	24.7	11.9	7.1	538	100.0%	100.0%	100.0%	100.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Hardware Companies	12.5	10.3	.0	480	50.6%	86.9%	.0%	89.3%
All Turnkey & SW Companies	12.2	1.6	7.1	57	49.4%	13.1%	100.0%	10.7%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 44
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Digital	11.9	8.5	.0	102	10.8%	16.9%	.0%	3.8%
Siemens	11.9	5.7	4.2	158	10.8%	11.2%	11.2%	5.8%
Racal-Redac	9.3	.3	7.5	42	8.4%	.7%	20.3%	1.6%
IBM	8.6	5.4	1.7	275	7.8%	10.6%	4.6%	10.1%
Calay	8.2	2.5	4.7	133	7.4%	5.0%	12.8%	4.9%
Hewlett-Packard	8.2	4.6	1.0	421	7.4%	9.1%	2.7%	15.4%
Mentor Graphics	7.0	1.8	2.9	69	6.3%	3.5%	7.9%	2.5%
Computervision	5.5	2.2	1.3	44	4.9%	4.4%	3.6%	1.6%
LPKF	4.9	3.2	1.2	200	4.5%	6.4%	3.3%	7.3%
Dazix	4.3	.4	1.7	32	3.9%	.9%	4.7%	1.2%
Sun	4.3	3.7	.0	184	3.9%	7.4%	.0%	6.8%
Compaq	4.0	4.0	.0	671	3.6%	8.0%	.0%	24.6%
Valid	3.5	.2	2.1	18	3.1%	.5%	5.6%	.6%
Intergraph	2.5	1.1	.4	27	2.3%	2.1%	1.2%	1.0%
Scientific Calc.	2.3	.3	1.3	8	2.0%	.5%	3.6%	.3%
Ziegler	2.2	.0	2.2	0	2.0%	.0%	6.0%	.0%
ABB Cade International	2.0	1.1	.6	9	1.8%	2.1%	1.6%	.3%
CAD-UL	1.2	.0	1.2	0	1.1%	.0%	3.2%	.0%
Apple Computer	.4	.4	.0	77	.4%	.7%	.0%	2.8%
Schlumberger	.3	.1	.1	4	.3%	.2%	.3%	.1%
BETROMEX	.3	.0	.3	0	.2%	.0%	.7%	.0%
Academi Systems	.2	.0	.2	1	.2%	.0%	.5%	.0%
Solbourne	.2	.2	.0	14	.2%	.4%	.0%	.5%
Autodesk	.2	.0	.2	0	.1%	.0%	.4%	.0%
ALS Design	.1	.0	.1	0	.1%	.0%	.4%	.0%
Number One Systems	.1	.0	.1	2	.1%	.0%	.2%	.1%
DECAD	.1	.0	.0	0	.0%	.0%	.1%	.0%
Olivetti	.0	.0	.0	1	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 44 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Germany
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	7.2	4.9	1.9	236	6.5%	9.7%	5.1%	8.6%
All Companies	110.5	50.5	37.0	2,727	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	70.1	37.7	14.7	2,182	63.5%	74.6%	39.7%	80.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	40.4	12.8	22.3	545	36.5%	25.4%	60.3%	20.0%
All Hardware Companies	30.0	25.0	.0	1,757	27.1%	49.4%	.0%	64.4%
All Turnkey & SW Companies	80.6	25.6	37.0	970	72.9%	50.6%	100.0%	35.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 45
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	89.1	57.3	17.1	3,559	17.0%	20.4%	12.5%	20.7%
Computervision	85.9	36.6	21.2	885	16.4%	13.0%	15.4%	5.1%
Hewlett-Packard	46.7	33.9	4.4	2,765	8.9%	12.1%	3.2%	16.1%
Digital	39.6	28.9	.0	290	7.5%	10.3%	.0%	1.7%
ItalCad	30.0	14.1	7.2	280	5.7%	5.0%	5.3%	1.6%
Intergraph	26.5	14.1	5.3	277	5.1%	5.0%	3.8%	1.6%
Siemens	21.5	11.0	7.6	294	4.1%	3.9%	5.5%	1.7%
Compaq	13.8	13.8	.0	2,306	2.6%	4.9%	.0%	13.4%
Matra Datavision	10.9	4.9	4.4	115	2.1%	1.8%	3.2%	.7%
Mentor Graphics	10.9	3.0	4.6	108	2.1%	1.1%	3.3%	.6%
CAD Lab	10.4	.0	8.3	0	2.0%	.0%	6.1%	.0%
Dassault*	10.1	.0	8.6	0	1.9%	.0%	6.3%	.0%
Sun	8.9	7.7	.0	372	1.7%	2.7%	.0%	2.2%
Micrograph*	8.4	5.1	2.5	175	1.6%	1.8%	1.8%	1.0%
Vero International Software	6.4	.0	5.8	0	1.2%	.0%	4.2%	.0%
Dazix	6.3	1.0	2.5	46	1.2%	.4%	1.8%	.3%
Spectrum Graphics	6.3	1.9	3.1	58	1.2%	.7%	2.3%	.3%
Sysscan	5.7	2.5	1.5	44	1.1%	.9%	1.1%	.3%
Apple Computer	5.3	4.7	.0	1,021	1.0%	1.7%	.0%	5.9%
Valid	4.4	.3	2.6	22	.8%	.1%	1.9%	.1%
Autodesk	4.2	.0	4.2	0	.8%	.0%	3.1%	.0%
McDonnell Douglas	4.2	2.1	1.6	64	.8%	.8%	1.2%	.4%
Control Data	4.1	2.3	.6	54	.8%	.8%	.4%	.3%
Cimatron	3.7	1.7	1.7	110	.7%	.6%	1.2%	.6%
MacNeal-Schwendler	3.5	.0	3.3	0	.7%	.0%	2.4%	.0%
Silicon Graphics	2.9	2.6	.0	65	.6%	.9%	.0%	.4%
SDRC	2.9	.0	2.9	0	.6%	.0%	2.1%	.0%
Unisys	2.5	1.3	.9	34	.5%	.4%	.6%	.2%
Schlumberger	2.1	.7	.7	21	.4%	.3%	.5%	.1%
Fides Industrielle Automation	2.0	.2	1.8	15	.4%	.1%	1.3%	.1%
Investronica SA	2.0	1.6	.2	78	.4%	.6%	.1%	.5%
LPKF	1.8	1.2	.5	72	.3%	.4%	.3%	.4%
ESRI	1.7	.0	1.5	0	.3%	.0%	1.1%	.0%

(Continued)

TABLE NUMBER: 45
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Olivetti	1.7	1.4	.0	263	.3%	.5%	.0%	1.5%
Racal-Redac	1.4	.1	1.2	7	.3%	.0%	.8%	.0%
Framasoft	1.1	.0	.7	0	.2%	.0%	.5%	.0%
PDA Engineering	1.0	.0	1.0	0	.2%	.0%	.7%	.0%
S.T.L.D. s.r.l.	.8	.0	.8	0	.2%	.0%	.6%	.0%
Star Informatic	.8	.7	.2	39	.2%	.3%	.2%	.2%
DATAID Technologies*	.8	.0	.2	0	.2%	.0%	.1%	.0%
Delcam International	.8	.3	.4	13	.2%	.1%	.3%	.1%
PAFEC	.7	.0	.7	0	.1%	.0%	.5%	.0%
Academi Systems	.6	.1	.5	2	.1%	.0%	.3%	.0%
Cisigraph	.6	.2	.2	5	.1%	.1%	.1%	.0%
Parametric Technology	.5	.0	.5	0	.1%	.0%	.4%	.0%
Cimlinc	.5	.1	.3	10	.1%	.0%	.2%	.1%
rotring euroCAD	.5	.3	.2	14	.1%	.1%	.1%	.1%
Gerber Systems	.5	.2	.2	7	.1%	.1%	.1%	.0%
Scientific Calc.	.5	.1	.3	2	.1%	.0%	.2%	.0%
Viewlogic Systems	.5	.0	.4	0	.1%	.0%	.3%	.0%
VLSI Technology	.5	.0	.4	1	.1%	.0%	.3%	.0%
MCS	.3	.0	.3	0	.1%	.0%	.2%	.0%
Technische Computer Systeme	.3	.1	.3	8	.1%	.0%	.2%	.0%
Anilam Electronics	.3	.1	.2	4	.1%	.0%	.1%	.0%
Nemetschek	.3	.1	.2	5	.1%	.0%	.1%	.0%
Calay	.3	.1	.2	5	.1%	.0%	.1%	.0%
Moss Systems	.3	.0	.3	0	.1%	.0%	.2%	.0%
ALS Design	.3	.0	.3	0	.0%	.0%	.2%	.0%
BETRONEX	.2	.0	.2	0	.0%	.0%	.2%	.0%
Robocom	.2	.0	.2	0	.0%	.0%	.2%	.0%
Ferranti	.2	.1	.1	2	.0%	.0%	.1%	.0%
Zycad	.2	.2	.0	2	.0%	.1%	.0%	.0%
Soft-Tech Software Technologie	.2	.0	.1	5	.0%	.0%	.1%	.0%
Ziegler	.2	.0	.2	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 45 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
MEDESIGN	.1	.0	.1	1	.0%	.0%	.0%	.0%
Pathtrace	.1	.0	.1	1	.0%	.0%	.1%	.0%
Catalpa	.1	.0	.1	1	.0%	.0%	.0%	.0%
Laser-Scan	.1	.0	.0	0	.0%	.0%	.0%	.0%
Whesoe Computing Systems	.1	.0	.1	0	.0%	.0%	.1%	.0%
DAT Standard Information syste	.1	.0	.1	0	.0%	.0%	.1%	.0%
BATISOFT	.1	.0	.0	2	.0%	.0%	.0%	.0%
CAMTEK	.1	.0	.1	0	.0%	.0%	.0%	.0%
t2 Solutions	.1	.0	.0	1	.0%	.0%	.0%	.0%
Aucotec	.1	.0	.0	1	.0%	.0%	.0%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
debis Systemhaus	.0	.0	.0	1	.0%	.0%	.0%	.0%
FEES	.0	.0	.0	0	.0%	.0%	.0%	.0%
Macao Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
ESDU International	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	21.8	21.9	.0	3,643	4.2%	7.8%	.0%	21.2%
All Companies	524.3	280.5	137.5	17,184	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	400.8	237.8	79.2	15,738	76.4%	84.8%	57.6%	91.6%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	123.5	42.7	58.3	1,446	23.6%	15.2%	42.4%	8.4%
All Hardware Companies	135.4	116.3	.0	12,789	25.8%	41.5%	.0%	74.4%
All Turnkey & SW Companies	388.9	164.2	137.5	4,395	74.2%	58.5%	100.0%	25.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 46
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Computervision	75.8	32.5	18.3	608	25.4%	23.9%	20.3%	14.0%
Hewlett-Packard	37.2	26.2	4.4	1,370	12.5%	19.3%	4.9%	31.5%
ItalCad	30.0	14.1	7.2	280	10.1%	10.4%	8.0%	6.4%
Intergraph	21.9	12.2	3.9	243	7.4%	9.0%	4.4%	5.6%
Siemens	18.3	9.2	6.4	243	6.1%	6.7%	7.1%	5.6%
Matra Datavision	10.9	4.9	4.4	115	3.7%	3.6%	4.8%	2.6%
Mentor Graphics	10.9	3.0	4.6	108	3.6%	2.2%	5.1%	2.5%
CAD Lab	9.9	.0	8.0	0	3.3%	.0%	8.8%	.0%
Digital	8.7	6.3	.0	290	2.9%	4.6%	.0%	6.7%
IBM	7.9	4.8	1.7	206	2.7%	3.6%	1.9%	4.7%
Sun	7.1	6.2	.0	318	2.4%	4.6%	.0%	7.3%
Dazix	6.3	1.0	2.5	46	2.1%	.7%	2.8%	1.1%
Spectrum Graphics	6.3	1.9	3.1	58	2.1%	1.4%	3.5%	1.3%
Valid	4.4	.3	2.6	22	1.5%	.2%	2.9%	.5%
McDonnell Douglas	3.5	1.8	1.3	40	1.2%	1.3%	1.5%	.9%
Dassault*	3.3	.0	2.8	0	1.1%	.0%	3.1%	.0%
Silicon Graphics	2.9	2.5	.0	64	1.0%	1.8%	.0%	1.5%
Cimatron	2.6	1.2	1.2	77	.9%	.9%	1.3%	1.8%
SDRC	2.5	.0	2.5	0	.8%	.0%	2.8%	.0%
Sysscan	1.9	.9	.5	11	.7%	.6%	.6%	.3%
Unisys	1.9	1.0	.7	27	.6%	.7%	.7%	.6%
Control Data	1.8	1.2	.3	41	.6%	.9%	.3%	.9%
Schlumberger	1.4	.5	.5	12	.5%	.4%	.6%	.3%
Racal-Redac	1.2	.1	1.0	7	.4%	.0%	1.1%	.2%
ESRI	1.0	.0	.9	0	.3%	.0%	1.0%	.0%
Framasoft	1.0	.0	.6	0	.3%	.0%	.7%	.0%
MacNeal-Schwendler	.9	.0	.8	0	.3%	.0%	.9%	.0%
Star Informatic	.8	.7	.2	39	.3%	.5%	.2%	.9%
Micrograph*	.8	.5	.3	18	.3%	.4%	.3%	.4%
Delcam International	.8	.3	.4	13	.3%	.2%	.4%	.3%
PDA Engineering	.7	.0	.7	0	.2%	.0%	.7%	.0%
PAFEC	.6	.0	.6	0	.2%	.0%	.7%	.0%
Cisigraph	.5	.2	.2	4	.2%	.1%	.2%	.1%

(Continued)

TABLE NUMBER: 46
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Parametric Technology	.5	.0	.5	0	.2%	.0%	.5%	.0%
Cimlinc	.5	.1	.3	10	.2%	.1%	.3%	.2%
DATAID Technologies*	.5	.0	.1	0	.2%	.0%	.1%	.0%
Gerber Systems	.5	.2	.2	7	.2%	.2%	.2%	.2%
VLSI Technology	.5	.0	.4	1	.2%	.0%	.4%	.0%
Fides Industrielle Automation	.4	.1	.4	6	.1%	.0%	.4%	.1%
Scientific Calc.	.4	.0	.2	1	.1%	.0%	.2%	.0%
Autodesk	.4	.0	.4	0	.1%	.0%	.4%	.0%
Technische Computer Systeme	.3	.1	.3	8	.1%	.0%	.3%	.2%
Calay	.3	.1	.2	5	.1%	.1%	.2%	.1%
Moss Systems	.3	.0	.3	0	.1%	.0%	.3%	.0%
rotring euroCAD	.3	.2	.1	8	.1%	.1%	.1%	.2%
Academi Systems	.2	.0	.2	1	.1%	.0%	.2%	.0%
Ferranti	.2	.1	.1	2	.1%	.1%	.1%	.0%
Viewlogic Systems	.2	.0	.2	0	.1%	.0%	.2%	.0%
MCS	.2	.0	.1	0	.1%	.0%	.2%	.0%
Zycad	.2	.1	.0	1	.1%	.1%	.0%	.0%
MEDESIGN	.1	.0	.1	1	.0%	.0%	.1%	.0%
Catalpa	.1	.0	.1	1	.0%	.0%	.1%	.0%
Laser-Scan	.1	.0	.0	0	.0%	.0%	.0%	.0%
t2 Solutions	.1	.0	.0	1	.0%	.0%	.0%	.0%
CAMTEK	.1	.0	.0	0	.0%	.0%	.0%	.0%
Nemetschek	.0	.0	.0	0	.0%	.0%	.0%	.0%
Aucotec	.0	.0	.0	0	.0%	.0%	.0%	.0%
debis Systemhaus	.0	.0	.0	1	.0%	.0%	.0%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.0%	.0%
FEGS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
Macao Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
Mhessoe Computing Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 46 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	6.2	1.4	3.8	19	2.1%	1.0%	4.2%	.4%
All Companies	298.2	135.9	90.2	4,344	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	207.4	101.9	52.0	3,463	69.6%	75.0%	57.7%	79.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	90.8	34.0	38.2	882	30.4%	25.0%	42.3%	20.3%
All Hardware Companies	35.2	28.9	.0	1,543	11.8%	21.3%	.0%	35.5%
All Turnkey & SW Companies	262.9	106.9	90.2	2,802	88.2%	78.7%	100.0%	64.5%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 47
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	70.3	42.2	15.5	928	47.1%	46.4%	53.9%	46.6%
Digital	30.9	22.6	.0	0	20.7%	24.8%	.0%	.0%
Computervision	9.3	4.0	2.1	269	6.2%	4.4%	7.3%	13.5%
Dassault*	6.9	.0	5.9	0	4.6%	.0%	20.4%	.0%
Intergraph	3.8	1.9	.6	34	2.6%	2.1%	2.1%	1.7%
Sysscan	3.8	1.7	1.0	32	2.5%	1.8%	3.4%	1.6%
Siemens	3.2	1.8	1.2	51	2.1%	2.0%	4.2%	2.6%
MacNeal-Schwendler	2.6	.0	2.5	0	1.7%	.0%	8.7%	.0%
Control Data	2.4	1.1	.3	14	1.6%	1.2%	.9%	.7%
Sun	1.8	1.5	.0	54	1.2%	1.6%	.0%	2.7%
Fides Industrielle Automation	1.6	.2	1.4	9	1.1%	.2%	5.0%	.4%
Hewlett-Packard	.7	.6	.0	35	.5%	.6%	.0%	1.8%
McDonnell Douglas	.7	.4	.3	24	.5%	.4%	1.0%	1.2%
Schlumberger	.6	.2	.2	9	.4%	.3%	.7%	.5%
ESRI	.6	.0	.5	0	.4%	.0%	1.8%	.0%
Unisys	.6	.3	.2	7	.4%	.3%	.7%	.4%
SDRC	.4	.0	.4	0	.3%	.0%	1.3%	.0%
PDA Engineering	.3	.0	.3	0	.2%	.0%	1.1%	.0%
DATAID Technologies*	.3	.0	.1	0	.2%	.0%	.2%	.0%
Olivetti	.1	.1	.0	2	.1%	.1%	.0%	.1%
Framasoft	.1	.0	.1	0	.1%	.0%	.2%	.0%
MCS	.1	.0	.1	0	.1%	.0%	.3%	.0%
Scientific Calc.	.1	.0	.1	0	.1%	.0%	.2%	.0%
Cisigraph	.1	.0	.0	1	.0%	.0%	.1%	.1%
Silicon Graphics	.1	.1	.0	1	.0%	.1%	.0%	.0%
Zycad	.0	.0	.0	0	.0%	.0%	.0%	.0%
Whesoe Computing Systems	.0	.0	.0	0	.0%	.0%	.1%	.0%
FECS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Laser-Scan	.0	.0	.0	0	.0%	.0%	.0%	.0%
Macao Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 47 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	8.1	12.4	.0	517	5.5%	13.7%	.0%	26.0%
All Companies	149.2	91.0	28.7	1,989	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	133.5	87.2	19.1	1,893	89.5%	95.9%	66.6%	95.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	15.7	3.8	9.6	96	10.5%	4.1%	33.4%	4.8%
All Hardware Companies	47.1	37.5	.0	612	31.6%	41.2%	.0%	30.8%
All Turnkey & SW Companies	102.1	53.5	28.7	1,377	68.4%	58.8%	100.0%	69.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 48
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Compaq	13.8	13.8	.0	2,306	18.0%	25.8%	.0%	21.2%
IBM	10.9	10.3	.0	2,426	14.1%	19.2%	.0%	22.4%
Hewlett-Packard	8.9	7.1	.0	1,359	11.5%	13.2%	.0%	12.5%
Micrograph*	7.6	4.5	2.3	157	9.9%	8.5%	12.2%	1.5%
Vero International Software	6.4	.0	5.8	0	8.3%	.0%	31.3%	.0%
Apple Computer	5.3	4.7	.0	1,021	6.9%	8.7%	.0%	9.4%
Autodesk	3.9	.0	3.9	0	5.0%	.0%	20.8%	.0%
Investronica SA	2.0	1.6	.2	78	2.5%	2.9%	1.1%	.7%
LPKF	1.8	1.2	.5	72	2.3%	2.2%	2.4%	.7%
Olivetti	1.5	1.3	.0	260	2.0%	2.4%	.0%	2.4%
Cimatron	1.1	.5	.5	33	1.4%	.9%	2.7%	.3%
S.T.L.D. s.r.l.	.8	.0	.8	0	1.1%	.0%	4.5%	.0%
Computervision	.8	.0	.8	8	1.0%	.1%	4.0%	.1%
Intergraph	.8	.0	.7	0	1.0%	.0%	3.8%	.0%
CAD Lab	.4	.0	.4	0	.5%	.0%	2.0%	.0%
Academi Systems	.4	.0	.3	1	.5%	.1%	1.5%	.0%
Anilam Electronics	.3	.1	.2	4	.4%	.2%	1.0%	.0%
Nemetschek	.3	.1	.2	5	.4%	.2%	.9%	.0%
Viewlogic Systems	.3	.0	.2	0	.3%	.0%	1.2%	.0%
ALS Design	.3	.0	.3	0	.3%	.0%	1.3%	.0%
rotring euroCAD	.3	.1	.1	6	.3%	.2%	.5%	.1%
BETRONEX	.2	.0	.2	0	.3%	.0%	1.3%	.0%
Robocom	.2	.0	.2	0	.3%	.0%	1.3%	.0%
Racal-Redac	.2	.0	.2	0	.2%	.0%	1.0%	.0%
Soft-Tech Software Technologie	.2	.0	.1	5	.2%	.0%	.8%	.0%
Ziegler	.2	.0	.2	0	.2%	.0%	1.0%	.0%
ESRI	.2	.0	.2	0	.2%	.0%	.8%	.0%
Pathtrace	.1	.0	.1	1	.1%	.1%	.4%	.0%
DAT Standard Information syste	.1	.0	.1	0	.1%	.0%	.4%	.0%
DATAID Technologies*	.1	.0	.0	0	.1%	.0%	.1%	.0%
BATISOFT	.1	.0	.0	2	.1%	.0%	.2%	.0%
MCS	.1	.0	.1	0	.1%	.0%	.3%	.0%

(Continued)

TABLE NUMBER: 48 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
PAFEC	.1	.0	.1	0	.1%	.0%	.4%	.0%
Whesoe Computing Systems	.1	.0	.1	0	.1%	.0%	.3%	.0%
Aucotec	.0	.0	.0	1	.1%	.0%	.1%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.1%	.0%
CAMTEK	.0	.0	.0	0	.0%	.0%	.1%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.1%	.0%
Schlumberger	.0	.0	.0	0	.0%	.0%	.0%	.0%
ESDU International	.0	.0	.0	0	.0%	.0%	.1%	.0%
Other Companies	7.5	8.2	.0	3,106	9.7%	15.2%	.0%	28.6%
All Companies	76.9	53.6	18.5	10,851	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	59.9	48.7	8.0	10,383	77.9%	90.7%	43.2%	95.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	17.0	5.0	10.5	469	22.1%	9.3%	56.8%	4.3%
All Hardware Companies	53.1	49.9	.0	10,634	69.0%	93.0%	.0%	98.0%
All Turnkey & SW Companies	23.8	3.7	18.5	217	31.0%	7.0%	100.0%	2.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 49
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Computervision	75.5	32.2	18.6	778	24.1%	19.5%	21.9%	9.0%
IBM	71.8	44.7	14.8	1,933	22.9%	27.1%	17.4%	22.4%
Hewlett-Packard	29.9	21.1	3.7	1,503	9.6%	12.8%	4.3%	17.4%
Digital	21.4	15.6	.0	148	6.8%	9.5%	.0%	1.7%
Matra Datavision	10.9	4.9	4.4	115	3.5%	3.0%	5.2%	1.3%
ItalCad	10.8	5.1	2.6	101	3.4%	3.1%	3.1%	1.2%
CAD Lab	10.4	.0	8.3	0	3.3%	.0%	9.8%	.0%
Dassault*	9.4	.0	8.0	0	3.0%	.0%	9.5%	.0%
Vero International Software	6.4	.0	5.8	0	2.0%	.0%	6.8%	.0%
Compaq	5.0	5.0	.0	825	1.6%	3.0%	.0%	9.6%
Micrograph*	4.6	2.8	1.4	96	1.5%	1.7%	1.6%	1.1%
Intergraph	4.5	2.4	.9	47	1.4%	1.5%	1.1%	.5%
Control Data	3.9	2.1	.5	50	1.2%	1.3%	.6%	.6%
Cimatron	3.7	1.7	1.7	110	1.2%	1.0%	2.0%	1.3%
Sun	3.5	3.1	.0	144	1.1%	1.9%	.0%	1.7%
McDonnell Douglas	3.5	1.8	1.4	53	1.1%	1.1%	1.6%	.6%
MacNeal-Schwendler	3.3	.0	3.2	0	1.1%	.0%	3.7%	.0%
SDRC	2.9	.0	2.9	0	.9%	.0%	3.4%	.0%
Silicon Graphics	2.9	2.5	.0	64	.9%	1.5%	.0%	.7%
Unisys	2.5	1.3	.9	34	.8%	.8%	1.0%	.4%
Apple Computer	2.2	1.9	.0	418	.7%	1.2%	.0%	4.9%
Schlumberger	2.0	.7	.7	21	.6%	.4%	.9%	.2%
Fides Industrielle Automation	2.0	.2	1.8	15	.6%	.1%	2.1%	.2%
Investronica SA	2.0	1.6	.2	78	.6%	1.0%	.2%	.9%
Autodesk	1.6	.0	1.6	0	.5%	.0%	1.9%	.0%
Siemens	1.3	.7	.5	17	.4%	.4%	.5%	.2%
Framasoft	1.1	.0	.7	0	.3%	.0%	.8%	.0%
Olivetti	1.1	.9	.0	161	.3%	.5%	.0%	1.9%
PDA Engineering	1.0	.0	1.0	0	.3%	.0%	1.1%	.0%
S.T.L.D. s.r.l.	.8	.0	.8	0	.3%	.0%	1.0%	.0%
DATAID Technologies*	.8	.0	.2	0	.3%	.0%	.2%	.0%
Delcam International	.8	.3	.4	13	.3%	.2%	.5%	.2%

(Continued)

TABLE NUMBER: 49 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Cisigraph	.6	.2	.2	5	.2%	.1%	.2%	.1%
Parametric Technology	.5	.0	.5	0	.2%	.0%	.6%	.0%
Cimline	.5	.1	.3	10	.2%	.1%	.4%	.1%
Gerber Systems	.5	.2	.2	7	.2%	.1%	.2%	.1%
PAFEC	.5	.0	.5	0	.2%	.0%	.6%	.0%
rotring euroCAD	.4	.3	.2	12	.1%	.2%	.2%	.1%
MCS	.3	.0	.3	0	.1%	.0%	.4%	.0%
Technische Computer Systeme	.3	.1	.3	8	.1%	.0%	.3%	.1%
Anilam Electronics	.3	.1	.2	4	.1%	.1%	.2%	.0%
Spectrum Graphics	.3	.1	.2	3	.1%	.1%	.2%	.0%
Ferranti	.2	.1	.1	2	.1%	.0%	.1%	.0%
Mentor Graphics	.1	.0	.1	1	.0%	.0%	.1%	.0%
Robocom	.1	.0	.1	0	.0%	.0%	.1%	.0%
Pathtrace	.1	.0	.1	1	.0%	.0%	.1%	.0%
Catalpa	.1	.0	.1	1	.0%	.0%	.1%	.0%
Whesoe Computing Systems	.1	.0	.1	0	.0%	.0%	.1%	.0%
DAT Standard Information syste	.1	.0	.1	0	.0%	.0%	.1%	.0%
CAMTEK	.1	.0	.1	0	.0%	.0%	.1%	.0%
Ziegler	.1	.0	.1	0	.0%	.0%	.1%	.0%
FECS	.0	.0	.0	0	.0%	.0%	.0%	.0%
debis Systemhaus	.0	.0	.0	0	.0%	.0%	.0%	.0%
ESDU International	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	4.4	11.4	.0	1,837	1.4%	6.9%	.0%	21.3%
All Companies	313.1	165.0	84.8	8,620	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	249.2	148.8	47.6	7,973	79.6%	90.2%	56.1%	92.5%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	63.9	16.2	37.2	647	20.4%	9.8%	43.9%	7.5%
All Hardware Companies	67.3	57.2	.0	5,710	21.5%	34.7%	.0%	66.2%
All Turnkey & SW Companies	245.8	107.7	84.8	2,910	78.5%	65.3%	100.0%	33.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 50
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
ItalCad	14.4	6.8	3.5	134	22.6%	16.9%	29.5%	3.7%
IBM	9.2	6.4	1.5	627	14.5%	15.9%	12.8%	17.2%
Intergraph	9.0	4.8	1.8	94	14.2%	12.1%	15.3%	2.6%
Hewlett-Packard	5.3	4.4	.0	464	8.3%	10.9%	.0%	12.7%
Digital	4.0	2.9	.0	27	6.2%	7.2%	.0%	.7%
Computervision	3.6	1.5	1.0	40	5.6%	3.7%	8.2%	1.1%
Compaq	3.1	3.1	.0	510	4.8%	7.7%	.0%	13.9%
Apple Computer	2.1	1.9	.0	408	3.3%	4.7%	.0%	11.2%
Autodesk	1.9	.0	1.9	0	2.9%	.0%	15.8%	.0%
Spectrum Graphics	.9	.3	.5	9	1.5%	.7%	4.0%	.2%
Micrograph*	.8	.5	.3	18	1.3%	1.3%	2.2%	.5%
Star Informatic	.8	.7	.2	39	1.3%	1.8%	1.9%	1.1%
Dassault*	.7	.0	.6	0	1.1%	.0%	5.1%	.0%
McDonnell Douglas	.6	.3	.2	8	.9%	.7%	1.9%	.2%
Siemens	.5	.2	.2	6	.7%	.6%	1.4%	.2%
Sun	.4	.3	.0	15	.6%	.8%	.0%	.4%
Olivetti	.3	.3	.0	56	.5%	.7%	.0%	1.5%
Nemetschek	.3	.1	.2	5	.5%	.3%	1.6%	.1%
Soft-Tech Software Technologie	.2	.0	.1	5	.3%	.1%	1.2%	.1%
MEDESIGN	.1	.0	.1	1	.2%	.1%	.4%	.0%
Robocom	.1	.0	.1	0	.2%	.0%	.9%	.0%
Control Data	.1	.0	.0	1	.1%	.1%	.2%	.0%
BATISOFT	.1	.0	.0	2	.1%	.0%	.3%	.1%
t2 Solutions	.1	.0	.0	1	.1%	.1%	.2%	.0%
PAFEC	.0	.0	.0	0	.1%	.0%	.3%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.2%	.0%
Ziegler	.0	.0	.0	0	.0%	.0%	.2%	.0%

(Continued)

TABLE NUMBER: 50 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	5.1	5.5	.0	1,177	8.0%	13.7%	.0%	32.2%
All Companies	63.6	40.0	11.7	3,654	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	45.0	31.5	6.2	3,396	70.7%	78.7%	52.8%	92.9%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	18.7	8.5	5.5	258	29.3%	21.3%	47.2%	7.1%
All Hardware Companies	23.4	20.9	.0	3,204	36.8%	52.2%	.0%	87.7%
All Turnkey & SW Companies	40.2	19.1	11.7	450	63.2%	47.8%	100.0%	12.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 51
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Siemens	19.7	10.1	7.0	270	28.5%	27.5%	36.7%	13.8%
Intergraph	11.7	6.2	2.3	122	16.9%	17.0%	12.2%	6.2%
Sysscan	5.7	2.5	1.5	44	8.3%	6.8%	7.8%	2.2%
Spectrum Graphics	5.0	1.5	2.5	46	7.3%	4.1%	13.2%	2.4%
ItalCad	4.8	2.3	1.2	45	7.0%	6.2%	6.1%	2.3%
Digital	4.4	3.2	.0	30	6.3%	8.7%	.0%	1.5%
IBM	4.1	3.1	.5	437	5.9%	8.4%	2.6%	22.3%
Compaq	2.0	2.0	.0	333	2.9%	5.5%	.0%	17.0%
ESRI	1.7	.0	1.5	0	2.5%	.0%	8.0%	.0%
Computervision	1.7	.8	.4	25	2.5%	2.3%	1.9%	1.3%
Micrograph*	1.0	.6	.3	21	1.5%	1.6%	1.6%	1.1%
Hewlett-Packard	.7	.6	.0	59	1.0%	1.5%	.0%	3.0%
Apple Computer	.6	.5	.0	112	.8%	1.4%	.0%	5.7%
Autodesk	.4	.0	.4	0	.6%	.0%	2.2%	.0%
Sun	.4	.3	.0	15	.5%	.8%	.0%	.7%
Moss Systems	.3	.0	.3	0	.4%	.0%	1.4%	.0%
Olivetti	.3	.2	.0	46	.4%	.6%	.0%	2.3%
PAFEC	.2	.0	.2	0	.2%	.0%	.9%	.0%
Control Data	.1	.1	.0	3	.2%	.2%	.1%	.2%
Laser-Scan	.1	.0	.0	0	.1%	.1%	.2%	.0%
McDonnell Douglas	.1	.0	.0	2	.1%	.1%	.2%	.1%
Silicon Graphics	.1	.1	.0	1	.1%	.1%	.0%	.1%
Macao Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
Robocom	.0	.0	.0	0	.0%	.0%	.1%	.0%
Ziegler	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 51 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	4.1	2.6	.9	349	6.0%	7.0%	4.6%	17.8%
All Companies	69.1	36.7	19.0	1,961	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	33.0	20.1	6.4	1,509	47.8%	54.7%	33.5%	77.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	36.1	16.6	12.7	451	52.2%	45.3%	66.5%	23.0%
All Hardware Companies	12.5	10.9	.0	1,361	18.1%	29.7%	.0%	69.4%
All Turnkey & SW Companies	56.6	25.8	19.0	600	81.9%	70.3%	100.0%	30.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 52
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Hewlett-Packard	10.9	7.9	.7	739	13.8%	20.3%	3.3%	25.1%
Mentor Graphics	10.8	3.0	4.5	107	13.7%	7.7%	20.6%	3.6%
Digital	9.9	7.2	.0	85	12.6%	18.5%	.0%	2.9%
Dazix	6.3	1.0	2.5	46	8.0%	2.6%	11.5%	1.6%
Computervision	5.1	2.1	1.3	42	6.5%	5.4%	5.7%	1.4%
Sun	4.6	4.0	.0	198	5.9%	10.3%	.0%	6.7%
Valid	4.4	.3	2.6	22	5.6%	.8%	12.0%	.8%
IBM	4.0	3.2	.3	562	5.0%	8.3%	1.6%	19.1%
Compaq	3.8	3.8	.0	638	4.9%	9.9%	.0%	21.6%
Micrograph*	1.9	1.2	.6	40	2.5%	3.0%	2.6%	1.4%
LPKF	1.8	1.2	.5	72	2.3%	3.0%	2.1%	2.4%
Racal-Redac	1.4	.1	1.2	7	1.8%	.2%	5.3%	.2%
Intergraph	1.3	.6	.2	14	1.7%	1.6%	1.0%	.5%
Academi Systems	.6	.1	.5	2	.8%	.2%	2.1%	.1%
Scientific Calc.	.5	.1	.3	2	.6%	.1%	1.3%	.1%
Viewlogic Systems	.5	.0	.4	0	.6%	.0%	1.7%	.0%
VLSI Technology	.5	.0	.4	1	.6%	.1%	1.7%	.0%
Apple Computer	.4	.4	.0	82	.5%	1.0%	.0%	2.8%
Autodesk	.3	.0	.3	0	.4%	.0%	1.6%	.0%
Calay	.3	.1	.2	5	.4%	.2%	.8%	.2%
ALS Design	.3	.0	.3	0	.3%	.0%	1.1%	.0%
BETRONEX	.2	.0	.2	0	.3%	.0%	1.1%	.0%
Zycad	.2	.2	.0	2	.2%	.4%	.0%	.1%
MacNeal-Schwendler	.2	.0	.2	0	.2%	.0%	.7%	.0%
rottring euroCAD	.1	.0	.0	2	.1%	.1%	.1%	.1%
Ziegler	.1	.0	.1	0	.1%	.0%	.3%	.0%
Aucotec	.1	.0	.0	1	.1%	.0%	.1%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.1%	.0%
Schlumberger	.0	.0	.0	0	.0%	.0%	.0%	.0%
debis Systemhaus	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 52 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	8.3	2.5	4.7	280	10.5%	6.5%	21.4%	9.5%
All Companies	78.5	38.9	21.9	2,949	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	73.7	37.4	19.0	2,860	93.8%	96.3%	86.8%	97.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	4.8	1.4	2.9	89	6.2%	3.7%	13.2%	3.0%
All Hardware Companies	32.3	27.3	.0	2,514	41.1%	70.3%	.0%	85.2%
All Turnkey & SW Companies	46.3	11.5	21.9	435	58.9%	29.7%	100.0%	14.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 53
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company =====	----- Market Share -----							
	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====
Hewlett-Packard	7.6	5.9	.4	555	17.8%	27.4%	3.2%	27.7%
Mentor Graphics	6.5	1.9	2.7	65	15.2%	8.7%	21.7%	3.2%
Digital	4.0	2.9	.0	34	9.2%	13.4%	.0%	1.7%
Dazix	3.8	.8	1.5	28	8.8%	3.5%	11.9%	1.4%
Compaq	2.7	2.7	.0	450	6.3%	12.5%	.0%	22.4%
Valid	2.5	.2	1.5	13	5.9%	.8%	12.0%	.6%
Sun	2.1	1.9	.0	91	5.0%	8.6%	.0%	4.5%
IBM	2.1	2.0	.0	461	4.8%	9.1%	.0%	23.0%
Computervision	1.7	.7	.4	14	4.0%	3.3%	3.3%	.7%
Micrograph*	1.0	.6	.3	21	2.3%	2.8%	2.4%	1.0%
Intergraph	.7	.3	.1	7	1.5%	1.6%	.9%	.3%
Racal-Redac	.5	.0	.4	2	1.1%	.1%	3.1%	.1%
Viewlogic Systems	.5	.0	.4	0	1.0%	.0%	3.0%	.0%
Autodesk	.3	.0	.3	0	.7%	.0%	2.4%	.0%
VLSI Technology	.3	.0	.2	1	.6%	.0%	1.8%	.0%
Apple Computer	.2	.2	.0	41	.5%	.9%	.0%	2.0%
ALS Design	.2	.0	.2	0	.4%	.0%	1.5%	.0%
Zycad	.2	.2	.0	2	.4%	.7%	.0%	.1%
MacNeal-Schwendler	.2	.0	.2	0	.4%	.0%	1.3%	.0%
rotring euroCAD	.1	.0	.0	2	.2%	.2%	.2%	.1%
Aucotec	.1	.0	.0	1	.1%	.0%	.2%	.0%
Calay	.1	.0	.0	1	.1%	.1%	.3%	.0%
Ziegler	.0	.0	.0	0	.1%	.0%	.3%	.0%
Inca	.0	.0	.0	0	.1%	.0%	.2%	.0%
Scientific Calc.	.0	.0	.0	0	.0%	.0%	.1%	.0%
debis Systemhaus	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 53 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	5.8	1.4	3.8	216	13.5%	6.3%	30.1%	10.8%
All Companies	43.0	21.6	12.6	2,004	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	42.1	21.5	11.9	1,997	97.8%	99.5%	94.1%	99.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.9	.1	.8	6	2.2%	.5%	5.9%	.3%
All Hardware Companies	18.7	16.2	.0	1,818	43.5%	74.9%	.0%	90.7%
All Turnkey & SW Companies	24.3	5.4	12.6	185	56.5%	25.1%	100.0%	9.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 54
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: IC Layout
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Market Share			
					Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	1.7	.5	.7	17	23.6%	13.9%	35.8%	11.1%
Digital	1.6	1.2	.0	14	21.6%	32.3%	.0%	8.8%
Sun	1.4	1.2	.0	62	19.3%	34.5%	.0%	39.8%
Micrograph*	.9	.6	.3	19	12.5%	15.6%	13.7%	12.5%
Hewlett-Packard	.6	.5	.0	53	8.0%	13.9%	.0%	34.6%
Valid	.5	.0	.3	3	7.1%	1.1%	15.7%	1.7%
VLSI Technology	.2	.0	.2	1	2.4%	.3%	7.4%	.3%
Other Companies	.4	.0	.6	0	5.4%	.0%	27.5%	.0%
All Companies	7.4	3.6	2.0	155	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	7.4	3.6	2.0	155	100.0%	100.0%	100.0%	100.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Hardware Companies	3.7	3.0	.0	134	50.7%	84.4%	.0%	86.6%
All Turnkey & SW Companies	3.6	.6	2.0	21	49.3%	15.6%	100.0%	13.4%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 55
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Italy
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Digital	4.4	3.1	.0	38	15.5%	23.0%	.0%	4.8%
Computervision	3.4	1.4	.8	27	12.1%	10.1%	11.5%	3.4%
Hewlett-Packard	2.6	1.4	.3	131	9.3%	10.6%	4.6%	16.6%
Dazix	2.5	.3	1.0	19	8.9%	1.8%	14.0%	2.3%
Mentor Graphics	2.5	.6	1.0	25	8.9%	4.5%	14.4%	3.1%
IBM	1.9	1.3	.3	101	6.7%	9.2%	4.7%	12.8%
LPKF	1.8	1.2	.5	72	6.3%	8.5%	6.2%	9.1%
Valid	1.3	.1	.8	7	4.7%	.7%	10.8%	.8%
Compaq	1.1	1.1	.0	188	4.0%	8.3%	.0%	23.8%
Sun	1.1	.9	.0	46	3.8%	6.8%	.0%	5.8%
Racal-Redac	1.0	.0	.8	4	3.4%	.2%	10.6%	.6%
Intergraph	.7	.3	.1	7	2.3%	2.0%	1.5%	.9%
Academi Systems	.6	.1	.5	2	2.1%	.4%	6.5%	.3%
Scientific Calc.	.5	.1	.3	2	1.6%	.4%	3.7%	.2%
BETRONEX	.2	.0	.2	0	.9%	.0%	3.3%	.0%
Calay	.2	.1	.1	4	.8%	.5%	1.8%	.5%
Apple Computer	.2	.2	.0	41	.7%	1.4%	.0%	5.2%
ALS Design	.1	.0	.1	0	.2%	.0%	.8%	.0%
Autodesk	.0	.0	.0	0	.1%	.0%	.6%	.0%
Ziegler	.0	.0	.0	0	.1%	.0%	.4%	.0%
Schlumberger	.0	.0	.0	0	.1%	.0%	.0%	.0%
Other Companies	2.1	1.6	.3	78	7.4%	11.6%	4.7%	9.8%
All Companies	28.1	13.6	7.2	791	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	24.3	12.3	5.1	709	86.2%	90.3%	70.3%	89.6%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	3.9	1.3	2.2	83	13.8%	9.7%	29.7%	10.4%
All Hardware Companies	9.8	8.1	.0	562	34.8%	59.3%	.0%	71.0%
All Turnkey & SW Companies	18.3	5.6	7.2	229	65.2%	40.7%	100.0%	29.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 56
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	77.8	50.2	14.8	3,221	18.7%	21.6%	13.7%	21.5%
Intergraph	47.9	25.5	9.5	500	11.5%	11.0%	8.8%	3.3%
Digital	36.0	26.2	.0	264	8.6%	11.3%	.0%	1.8%
Computervision	35.4	14.9	9.0	364	8.5%	6.4%	8.4%	2.4%
Hewlett-Packard	26.0	19.0	2.3	1,582	6.2%	8.2%	2.1%	10.6%
Sun	24.8	21.6	.0	1,043	6.0%	9.3%	.0%	7.0%
Autodesk	22.8	.0	22.8	0	5.5%	.0%	21.1%	.0%
McDonnell Douglas	16.7	8.6	6.5	257	4.0%	3.7%	6.0%	1.7%
Norsk Data	15.0	7.9	2.7	158	3.6%	3.4%	2.5%	1.1%
Compaq	11.9	11.9	.0	1,976	2.9%	5.1%	.0%	13.2%
Mentor Graphics	11.1	3.1	4.7	110	2.7%	1.3%	4.3%	.7%
Data Technology/DATECH*	10.5	1.9	7.6	304	2.5%	.8%	7.0%	2.0%
Apple Computer	8.8	7.8	.0	1,701	2.1%	3.4%	.0%	11.4%
Dassault*	5.4	.0	4.6	0	1.3%	.0%	4.3%	.0%
Control Data	4.9	2.7	.7	65	1.2%	1.2%	.6%	.4%
Schlumberger	3.9	1.4	1.4	41	.9%	.6%	1.3%	.3%
Kockums Computer Systems	3.2	.8	1.8	160	.8%	.3%	1.6%	1.1%
SDRC	2.4	.0	2.4	0	.6%	.0%	2.2%	.0%
Scientific Calc.	2.3	.3	1.3	8	.6%	.1%	1.2%	.1%
LPKF	2.0	1.3	.5	80	.5%	.6%	.5%	.5%
Valid	2.0	.1	1.2	10	.5%	.1%	1.1%	.1%
PAFEC	1.8	.0	1.8	0	.4%	.0%	1.7%	.0%
Investronica SA	1.7	1.4	.2	69	.4%	.6%	.2%	.5%
ESRI	1.7	.0	1.5	0	.4%	.0%	1.4%	.0%
Dimlinc	1.7	.3	1.0	32	.4%	.1%	.9%	.2%
Silicon Graphics	1.6	1.4	.0	36	.4%	.6%	.0%	.2%
Siemens	1.5	.8	.5	21	.4%	.3%	.5%	.1%
Racal-Redac	1.3	.1	1.0	6	.3%	.0%	1.0%	.0%
MacNeal-Schwendler	1.3	.0	1.2	0	.3%	.0%	1.1%	.0%
PDA Engineering	1.2	.0	1.2	0	.3%	.0%	1.1%	.0%
Exapt	1.0	.5	.4	18	.3%	.2%	.3%	.1%
Dazix	.9	.1	.4	7	.2%	.1%	.3%	.0%
Aucotec	.9	.3	.5	14	.2%	.1%	.5%	.1%

(Continued)

TABLE NUMBER: 56
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
BETRONEX	.8	.0	.8	0	.2%	.0%	.7%	.0%
Ziegler	.7	.0	.7	0	.2%	.0%	.7%	.0%
Research Machines	.7	.7	.0	110	.2%	.3%	.0%	.7%
MEDESIGN	.7	.2	.2	7	.2%	.1%	.2%	.0%
CADNATIC	.6	.1	.4	4	.2%	.0%	.4%	.0%
Gerber Systems	.6	.3	.2	8	.1%	.1%	.2%	.1%
Vero International Software	.6	.0	.5	0	.1%	.0%	.5%	.0%
Unisys	.5	.3	.2	7	.1%	.1%	.2%	.0%
Genasys II	.4	.1	.2	1	.1%	.1%	.2%	.0%
Delcam International	.4	.1	.2	7	.1%	.1%	.2%	.0%
VLSI Technology	.4	.0	.3	1	.1%	.0%	.3%	.0%
Moss Systems	.4	.0	.3	0	.1%	.0%	.3%	.0%
Olivetti	.4	.3	.0	57	.1%	.1%	.0%	.4%
Solbourne	.4	.4	.0	28	.1%	.2%	.0%	.2%
Laser-Scan	.4	.1	.2	1	.1%	.0%	.2%	.0%
Parametric Technology	.3	.0	.3	0	.1%	.0%	.3%	.0%
ABB Cade International	.3	.2	.1	1	.1%	.1%	.1%	.0%
Calay	.3	.1	.2	5	.1%	.0%	.2%	.0%
Viewlogic Systems	.2	.0	.2	0	.1%	.0%	.2%	.0%
Pathtrace	.2	.1	.2	3	.1%	.0%	.1%	.0%
Sysscan	.2	.1	.1	2	.1%	.1%	.1%	.0%
Ferranti	.2	.1	.1	2	.1%	.0%	.1%	.0%
MCS	.2	.0	.2	0	.0%	.0%	.2%	.0%
Whesoe Computing Systems	.2	.0	.2	0	.0%	.0%	.2%	.0%
Silvar-Lisco	.2	.0	.1	0	.0%	.0%	.1%	.0%
Anilam Electronics	.2	.1	.1	2	.0%	.0%	.1%	.0%
Superdraft	.2	.1	.1	9	.0%	.0%	.1%	.1%
Robocom	.1	.0	.1	0	.0%	.0%	.1%	.0%
ALS Design	.1	.0	.1	0	.0%	.0%	.1%	.0%
Intercad	.1	.1	.0	6	.0%	.0%	.0%	.0%
Serbi	.1	.0	.1	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 56 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Radan Computational	.1	.0	.1	3	.0%	.0%	.0%	.0%
Cisigraph	.1	.0	.0	1	.0%	.0%	.0%	.0%
CANTEK	.1	.0	.0	0	.0%	.0%	.0%	.0%
DAT Standard Information syste	.1	.0	.1	0	.0%	.0%	.1%	.0%
Star Informatic	.1	.1	.0	3	.0%	.0%	.0%	.0%
FECS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	17.4	18.7	.0	2,627	4.2%	8.1%	.0%	17.6%
All Companies	416.0	232.2	108.2	14,954	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	373.9	216.9	89.3	14,194	89.9%	93.4%	82.5%	94.9%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	42.1	15.3	18.9	761	10.1%	6.6%	17.5%	5.1%
All Hardware Companies	129.8	111.6	.0	11,576	31.2%	48.1%	.0%	77.4%
All Turnkey & SW Companies	286.2	120.6	108.2	3,378	68.8%	51.9%	100.0%	22.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 57
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	39.6	22.1	7.1	438	19.9%	21.5%	13.3%	11.8%
Computervision	30.8	13.2	7.4	247	15.4%	12.9%	13.9%	6.7%
Hewlett-Packard	20.8	14.9	2.3	848	10.4%	14.5%	4.3%	22.9%
Sun	19.9	17.5	.0	891	10.0%	17.1%	.0%	24.1%
McDonnell Douglas	13.9	7.1	5.3	160	6.9%	7.0%	10.0%	4.3%
Mentor Graphics	11.1	3.1	4.7	110	5.6%	3.0%	8.8%	3.0%
Norsk Data	9.3	5.4	1.9	116	4.7%	5.3%	3.5%	3.1%
Digital	7.9	5.7	.0	264	4.0%	5.6%	.0%	7.1%
IBM	6.8	4.2	1.4	177	3.4%	4.1%	2.7%	4.8%
Kockums Computer Systems	3.2	.8	1.8	160	1.6%	.8%	3.3%	4.3%
Schlumberger	2.8	.9	1.0	23	1.4%	.9%	1.9%	.6%
SDRC	2.1	.0	2.1	0	1.1%	.0%	3.9%	.0%
Control Data	2.1	1.4	.4	49	1.0%	1.4%	.7%	1.3%
Valid	2.0	.1	1.2	10	1.0%	.1%	2.2%	.3%
Autodesk	1.9	.0	1.9	0	.9%	.0%	3.5%	.0%
Scientific Calc.	1.9	.2	1.0	6	.9%	.2%	1.9%	.2%
Dassault*	1.7	.0	1.5	0	.9%	.0%	2.8%	.0%
Cimline	1.7	.3	1.0	32	.8%	.3%	1.9%	.9%
PAFEC	1.6	.0	1.6	0	.8%	.0%	3.1%	.0%
Silicon Graphics	1.6	1.4	.0	36	.8%	1.4%	.0%	1.0%
Siemens	1.3	.6	.5	17	.6%	.6%	.8%	.5%
Racal-Redac	1.1	.1	.9	6	.6%	.0%	1.6%	.2%
ESRI	1.0	.0	.8	0	.5%	.0%	1.6%	.0%
Data Technology/DATECH*	1.0	.0	.9	0	.5%	.0%	1.6%	.0%
Dazix	.9	.1	.4	7	.5%	.1%	.7%	.2%
PDA Engineering	.8	.0	.8	0	.4%	.0%	1.4%	.0%
MEDESIGN	.7	.2	.2	7	.3%	.2%	.4%	.2%
Gerber Systems	.6	.3	.2	8	.3%	.3%	.4%	.2%
Delcam International	.4	.1	.2	7	.2%	.1%	.4%	.2%
Unisys	.4	.2	.1	5	.2%	.2%	.2%	.1%
VLSI Technology	.4	.0	.3	1	.2%	.0%	.6%	.0%
Moss Systems	.4	.0	.3	0	.2%	.0%	.6%	.0%

(Continued)

TABLE NUMBER: 57 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					Market Share			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Genasys II	.4	.1	.2	1	.2%	.1%	.4%	.0%
Laser-Scan	.3	.1	.2	1	.2%	.1%	.3%	.0%
MacNeal-Schwendler	.3	.0	.3	0	.2%	.0%	.5%	.0%
Parametric Technology	.3	.0	.3	0	.2%	.0%	.5%	.0%
ABB Cade International	.3	.2	.1	1	.2%	.2%	.1%	.0%
Aucotec	.3	.1	.2	5	.1%	.1%	.3%	.1%
Calay	.3	.1	.2	5	.1%	.1%	.3%	.1%
Exapt	.3	.1	.1	9	.1%	.1%	.2%	.2%
CADMATIC	.2	.0	.2	1	.1%	.0%	.3%	.0%
Ferranti	.2	.1	.1	2	.1%	.1%	.2%	.1%
Silver-Lisco	.2	.0	.1	0	.1%	.0%	.2%	.0%
Viewlogic Systems	.1	.0	.1	0	.1%	.0%	.2%	.0%
MCS	.1	.0	.1	0	.0%	.0%	.1%	.0%
Radan Computational	.1	.0	.1	3	.0%	.0%	.1%	.1%
Sysscan	.1	.0	.0	0	.0%	.0%	.0%	.0%
Cisigraph	.1	.0	.0	0	.0%	.0%	.0%	.0%
Solbourne	.1	.1	.0	5	.0%	.1%	.0%	.1%
Star Informatic	.1	.1	.0	3	.0%	.0%	.0%	.1%
CAMTEK	.0	.0	.0	0	.0%	.0%	.1%	.0%
FECS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Whessoe Computing Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	4.4	1.4	2.0	27	2.2%	1.3%	3.7%	.7%
All Companies	199.5	102.4	53.3	3,704	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	177.5	94.4	43.4	3,347	89.0%	92.2%	81.4%	90.4%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	22.0	8.0	9.9	356	11.0%	7.8%	18.6%	9.6%
All Hardware Companies	39.9	33.5	.0	1,789	20.0%	32.7%	.0%	48.3%
All Turnkey & SW Companies	159.6	68.9	53.3	1,914	80.0%	67.3%	100.0%	51.7%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 58
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	60.9	36.6	13.4	804	45.5%	44.1%	59.1%	45.6%
Digital	28.1	20.5	.0	0	21.0%	24.7%	.0%	.0%
Intergraph	6.9	3.5	1.1	62	5.1%	4.2%	4.9%	3.5%
Norsk Data	5.7	2.5	.9	42	4.3%	3.0%	3.8%	2.4%
Sun	4.9	4.1	.0	152	3.7%	4.9%	.0%	8.6%
Computervision	3.8	1.6	.8	109	2.8%	2.0%	3.7%	6.2%
Dassault*	3.7	.0	3.1	0	2.7%	.0%	13.8%	.0%
McDonnell Douglas	2.8	1.4	1.1	97	2.1%	1.7%	4.9%	5.5%
Control Data	2.8	1.3	.3	16	2.1%	1.6%	1.4%	.9%
Schlumberger	1.1	.4	.4	17	.9%	.5%	1.7%	1.0%
MacNeal-Schwendler	1.0	.0	.9	0	.7%	.0%	4.0%	.0%
Exapt	.8	.4	.3	9	.6%	.5%	1.1%	.5%
ESRI	.6	.0	.5	0	.4%	.0%	2.3%	.0%
Hewlett-Packard	.5	.4	.0	26	.4%	.5%	.0%	1.5%
Scientific Calc.	.4	.1	.3	2	.3%	.1%	1.4%	.1%
PDA Engineering	.4	.0	.4	0	.3%	.0%	1.7%	.0%
SDRC	.3	.0	.3	0	.2%	.0%	1.4%	.0%
Solbourne	.3	.3	.0	23	.2%	.4%	.0%	1.3%
Siemens	.2	.2	.1	4	.2%	.2%	.4%	.2%
Sysscan	.2	.1	.0	1	.1%	.1%	.2%	.1%
Unisys	.1	.1	.0	1	.1%	.1%	.2%	.1%
MCS	.1	.0	.1	0	.1%	.0%	.3%	.0%
Laser-Scan	.0	.0	.0	0	.0%	.0%	.0%	.0%
Whesoe Computing Systems	.0	.0	.0	0	.0%	.0%	.2%	.0%
Olivetti	.0	.0	.0	1	.0%	.0%	.0%	.0%
Silicon Graphics	.0	.0	.0	1	.0%	.0%	.0%	.0%
FEES	.0	.0	.0	0	.0%	.0%	.0%	.0%
Cisigraph	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 58 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	8.3	9.5	.0	394	6.2%	11.4%	.0%	22.4%
All Companies	133.9	82.9	22.7	1,762	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	123.3	79.8	18.2	1,705	92.0%	96.2%	80.4%	96.8%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	10.7	3.1	4.4	57	8.0%	3.8%	19.6%	3.2%
All Hardware Companies	44.5	35.2	.0	599	33.2%	42.4%	.0%	34.0%
All Turnkey & SW Companies	89.5	47.7	22.7	1,163	66.8%	57.6%	100.0%	66.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 59
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Autodesk	20.9	.0	20.9	0	25.3%	.0%	64.9%	.0%
Compaq	11.9	11.9	.0	1,976	14.4%	25.3%	.0%	20.8%
IBM	10.0	9.5	.0	2,239	12.1%	20.3%	.0%	23.6%
Data Technology/DATECH*	9.6	1.9	6.7	304	11.6%	4.1%	20.8%	3.2%
Apple Computer	8.8	7.8	.0	1,701	10.7%	16.6%	.0%	17.9%
Hewlett-Packard	4.6	3.7	.0	708	5.6%	7.9%	.0%	7.5%
LPKF	2.0	1.3	.5	80	2.4%	2.8%	1.6%	.8%
Investronica SA	1.7	1.4	.2	69	2.1%	3.0%	.5%	.7%
Intergraph	1.4	.0	1.3	0	1.6%	.0%	4.0%	.0%
Computervision	.8	.0	.8	8	1.0%	.1%	2.4%	.1%
BETRONEX	.8	.0	.8	0	.9%	.0%	2.3%	.0%
Ziegler	.7	.0	.7	0	.9%	.0%	2.3%	.0%
Research Machines	.7	.7	.0	110	.9%	1.5%	.0%	1.2%
Aucotec	.6	.2	.3	9	.7%	.4%	1.0%	.1%
Vero International Software	.6	.0	.5	0	.7%	.0%	1.6%	.0%
CADMATIC	.4	.0	.3	3	.5%	.1%	.9%	.0%
Olivetti	.3	.3	.0	56	.4%	.6%	.0%	.6%
Pathtrace	.2	.1	.2	3	.3%	.1%	.5%	.0%
PAFEC	.2	.0	.2	0	.2%	.0%	.6%	.0%
Anilam Electronics	.2	.1	.1	2	.2%	.1%	.3%	.0%
Racal-Redac	.2	.0	.2	0	.2%	.0%	.5%	.0%
Superdraft	.2	.1	.1	9	.2%	.1%	.2%	.1%
ESRI	.2	.0	.2	0	.2%	.0%	.5%	.0%
Viewlogic Systems	.1	.0	.1	0	.2%	.0%	.4%	.0%
Robocom	.1	.0	.1	0	.2%	.0%	.4%	.0%
Whesoe Computing Systems	.1	.0	.1	0	.2%	.0%	.4%	.0%
ALS Design	.1	.0	.1	0	.1%	.0%	.3%	.0%
Intercad	.1	.1	.0	6	.1%	.1%	.1%	.1%
Serbi	.1	.0	.1	0	.1%	.0%	.3%	.0%
DAT Standard Information syste	.1	.0	.1	0	.1%	.0%	.2%	.0%
Genasys II	.0	.0	.0	0	.0%	.0%	.1%	.0%
MCS	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 59 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Schlumberger	.0	.0	.0	0	.0%	.0%	.1%	.0%
Norsk Data	.0	.0	.0	1	.0%	.0%	.0%	.0%
CAMTEK	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.1%	.0%
Other Companies	4.7	7.9	.0	2,205	5.8%	16.8%	.0%	23.2%
All Companies	82.6	46.9	32.2	9,489	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	73.1	42.7	27.7	9,142	88.6%	91.1%	85.9%	96.3%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	9.4	4.2	4.5	347	11.4%	8.9%	14.1%	3.7%
All Hardware Companies	45.4	42.9	.0	9,188	55.0%	91.5%	.0%	96.8%
All Turnkey & SW Companies	37.1	4.0	32.2	301	45.0%	8.5%	100.0%	3.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 60
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	61.8	38.5	12.7	1,719	28.2%	30.5%	23.6%	24.5%
Computervision	31.1	13.1	7.9	320	14.1%	10.4%	14.7%	4.5%
Digital	19.4	14.2	.0	134	8.8%	11.2%	.0%	1.9%
Hewlett-Packard	15.9	11.3	1.9	823	7.2%	8.9%	3.5%	11.7%
McDonnell Douglas	14.5	7.4	5.6	220	6.6%	5.9%	10.4%	3.1%
Sun	9.9	8.6	.0	403	4.5%	6.8%	.0%	5.7%
Autodesk	8.7	.0	8.7	0	3.9%	.0%	16.1%	.0%
Intergraph	8.1	4.4	1.6	85	3.7%	3.4%	3.0%	1.2%
Data Technology/DATECH*	5.3	1.0	3.8	152	2.4%	.8%	7.0%	2.2%
Dassault*	5.0	.0	4.3	0	2.3%	.0%	8.0%	.0%
Control Data	4.6	2.6	.6	60	2.1%	2.0%	1.2%	.8%
Compaq	4.3	4.3	.0	707	1.9%	3.4%	.0%	10.1%
Schlumberger	3.9	1.4	1.4	41	1.8%	1.1%	2.7%	.6%
Apple Computer	3.6	3.2	.0	697	1.7%	2.5%	.0%	9.9%
Norsk Data	3.0	1.5	.5	30	1.4%	1.2%	1.0%	.4%
SDRC	2.4	.0	2.4	0	1.1%	.0%	4.5%	.0%
Investronica SA	1.7	1.4	.2	69	.8%	1.1%	.3%	1.0%
Cimlinc	1.7	.3	1.0	32	.8%	.3%	1.8%	.4%
Silicon Graphics	1.6	1.4	.0	35	.7%	1.1%	.0%	.5%
PAFEC	1.3	.0	1.3	0	.6%	.0%	2.3%	.0%
PDA Engineering	1.2	.0	1.2	0	.5%	.0%	2.1%	.0%
MacNeal-Schwendler	1.1	.0	1.1	0	.5%	.0%	2.0%	.0%
Exapt	1.0	.5	.4	18	.5%	.4%	.7%	.3%
Gerber Systems	.6	.3	.2	8	.3%	.2%	.4%	.1%
Vero International Software	.6	.0	.5	0	.3%	.0%	.9%	.0%
Unisys	.5	.3	.2	7	.2%	.2%	.3%	.1%
Delcam International	.4	.1	.2	7	.2%	.1%	.4%	.1%
Research Machines	.3	.3	.0	53	.2%	.3%	.0%	.8%
Parametric Technology	.3	.0	.3	0	.1%	.0%	.5%	.0%
Ziegler	.3	.0	.3	0	.1%	.0%	.5%	.0%
Olivetti	.3	.2	.0	39	.1%	.2%	.0%	.6%
Pathtrace	.2	.1	.2	3	.1%	.0%	.3%	.0%

(Continued)

TABLE NUMBER: 60 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Ferranti	.2	.1	.1	2	.1%	.1%	.2%	.0%
MCS	.2	.0	.2	0	.1%	.0%	.3%	.0%
Whesoe Computing Systems	.2	.0	.2	0	.1%	.0%	.4%	.0%
Anilam Electronics	.2	.1	.1	2	.1%	.0%	.2%	.0%
Superdraft	.2	.1	.1	9	.1%	.1%	.1%	.1%
Mentor Graphics	.1	.0	.1	1	.1%	.0%	.1%	.0%
InterCAD	.1	.1	.0	5	.0%	.0%	.1%	.1%
Cisigraph	.1	.0	.0	1	.0%	.0%	.0%	.0%
Radan Computational	.1	.0	.0	3	.0%	.0%	.1%	.0%
CAMTEK	.1	.0	.0	0	.0%	.0%	.1%	.0%
DAT Standard Information syste	.1	.0	.1	0	.0%	.0%	.1%	.0%
Robocom	.1	.0	.1	0	.0%	.0%	.1%	.0%
Serbi	.1	.0	.1	0	.0%	.0%	.1%	.0%
FEGS	.0	.0	.0	0	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	1	.0%	.0%	.0%	.0%
Other Companies	3.6	9.8	.0	1,327	1.6%	7.8%	.0%	18.9%
All Companies	219.6	126.4	53.8	7,025	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	204.2	121.9	45.2	6,772	93.0%	96.5%	84.1%	96.4%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	15.4	4.5	8.5	253	7.0%	3.5%	15.9%	3.6%
All Hardware Companies	61.6	52.3	.0	4,980	28.0%	41.4%	.0%	70.9%
All Turnkey & SW Companies	158.1	74.1	53.8	2,045	72.0%	58.6%	100.0%	29.1%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 61
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	16.3	8.7	3.3	170	22.8%	22.8%	15.3%	4.9%
Autodesk	10.0	.0	10.0	0	14.0%	.0%	47.1%	.0%
Norsk Data	9.0	4.8	1.7	97	12.6%	12.5%	7.8%	2.8%
IBM	8.1	5.6	1.3	574	11.3%	14.7%	6.1%	16.6%
Data Technology/DATECH*	3.9	.7	2.8	113	5.4%	1.9%	13.1%	3.3%
Digital	3.6	2.6	.0	25	5.0%	6.9%	.0%	.7%
Apple Computer	3.5	3.1	.0	680	5.0%	8.1%	.0%	19.7%
Kockums Computer Systems	3.2	.8	1.8	160	4.5%	2.1%	8.4%	4.6%
Hewlett-Packard	2.8	2.3	.0	243	3.8%	5.9%	.0%	7.0%
Compaq	2.6	2.6	.0	437	3.7%	6.8%	.0%	12.6%
McDonnell Douglas	1.9	1.0	.7	28	2.6%	2.5%	3.4%	.8%
Computervision	1.5	.6	.5	17	2.2%	1.6%	2.3%	.5%
Sun	1.0	.9	.0	43	1.4%	2.2%	.0%	1.3%
MEDESIGN	.7	.2	.2	7	.9%	.5%	1.1%	.2%
CADMATIC	.6	.1	.4	4	.9%	.1%	2.0%	.1%
Dassault*	.4	.0	.3	0	.5%	.0%	1.5%	.0%
Research Machines	.2	.2	.0	30	.3%	.5%	.0%	.9%
PAFEC	.1	.0	.1	0	.2%	.0%	.5%	.0%
Control Data	.1	.1	.0	1	.1%	.2%	.1%	.0%
Ziegler	.1	.0	.1	0	.1%	.0%	.5%	.0%
Olivetti	.1	.1	.0	13	.1%	.2%	.0%	.4%
Robocom	.1	.0	.1	0	.1%	.0%	.3%	.0%
Star Informatic	.1	.1	.0	3	.1%	.1%	.0%	.1%
Serbi	.0	.0	.0	0	.0%	.0%	.1%	.0%
Radan Computational	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 61 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	1.6	3.9	.0	809	2.3%	10.3%	.0%	23.4%
All Companies	71.5	38.3	21.3	3,454	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	56.9	32.1	16.6	3,140	79.7%	83.9%	77.7%	90.9%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	14.5	6.2	4.7	314	20.3%	16.1%	22.3%	9.1%
All Hardware Companies	20.3	18.1	.0	2,849	28.4%	47.4%	.0%	82.5%
All Turnkey & SW Companies	51.2	20.1	21.3	605	71.6%	52.6%	100.0%	17.5%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 62
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	21.1	11.3	4.2	220	42.8%	42.1%	33.7%	14.0%
IBM	4.4	3.2	.6	412	8.9%	12.1%	4.7%	26.2%
Digital	4.0	2.9	.0	27	8.1%	10.8%	.0%	1.7%
Norsk Data	3.0	1.6	.5	32	6.1%	5.9%	4.3%	2.0%
Autodesk	2.3	.0	2.3	0	4.6%	.0%	18.3%	.0%
Compaq	1.7	1.7	.0	286	3.5%	6.4%	.0%	18.2%
ESRI	1.7	.0	1.5	0	3.4%	.0%	12.0%	.0%
Siemens	1.5	.8	.5	21	3.1%	2.9%	4.3%	1.3%
Sun	1.0	.9	.0	41	2.0%	3.2%	.0%	2.6%
Apple Computer	1.0	.9	.0	187	2.0%	3.2%	.0%	11.9%
Data Technology/DATECH*	1.0	.2	.7	27	1.9%	.7%	5.4%	1.7%
Computervision	.7	.3	.2	10	1.4%	1.3%	1.2%	.6%
PAFEC	.5	.0	.5	0	.9%	.0%	3.7%	.0%
Genasys II	.4	.1	.2	1	.8%	.5%	1.9%	.1%
McDonnell Douglas	.4	.2	.2	10	.8%	.7%	1.2%	.6%
Moss Systems	.4	.0	.3	0	.8%	.0%	2.6%	.0%
Laser-Scan	.4	.1	.2	1	.7%	.3%	1.4%	.1%
Hewlett-Packard	.3	.2	.0	21	.5%	.7%	.0%	1.4%
Sysscan	.2	.1	.1	2	.5%	.4%	.5%	.1%
Control Data	.2	.1	.0	4	.3%	.4%	.2%	.2%
Ziegler	.1	.0	.1	0	.2%	.0%	.6%	.0%
Solbourne	.1	.1	.0	4	.1%	.2%	.0%	.3%
Research Machines	.1	.1	.0	8	.1%	.2%	.0%	.5%
Silicon Graphics	.0	.0	.0	1	.1%	.1%	.0%	.0%
Olivetti	.0	.0	.0	3	.0%	.0%	.0%	.2%
Robocom	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 62 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	3.1	2.1	.5	254	6.3%	7.8%	3.8%	16.1%
All Companies	49.2	26.8	12.5	1,571	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	43.1	24.2	10.3	1,505	87.6%	90.2%	82.5%	95.8%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	6.1	2.6	2.2	66	12.4%	9.8%	17.5%	4.2%
All Hardware Companies	11.5	10.0	.0	1,219	23.4%	37.3%	.0%	77.6%
All Turnkey & SW Companies	37.7	16.8	12.5	352	76.6%	62.7%	100.0%	22.4%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 63
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Sun	12.9	11.3	.0	555	17.0%	27.6%	.0%	19.1%
Mentor Graphics	11.0	3.1	4.6	109	14.5%	7.6%	22.3%	3.8%
Digital	9.0	6.5	.0	78	11.9%	16.0%	.0%	2.7%
Hewlett-Packard	7.1	5.2	.4	495	9.4%	12.8%	2.1%	17.0%
IBM	3.4	2.8	.3	516	4.5%	6.9%	1.3%	17.8%
Compaq	3.3	3.3	.0	546	4.3%	8.0%	.0%	18.8%
Intergraph	2.4	1.2	.4	25	3.2%	2.8%	2.0%	.9%
Scientific Calc.	2.3	.3	1.3	8	3.0%	.7%	6.4%	.3%
Computervision	2.1	.9	.5	17	2.7%	2.1%	2.5%	.6%
LPKF	2.0	1.3	.5	80	2.6%	3.2%	2.4%	2.8%
Valid	2.0	.1	1.2	10	2.6%	.3%	5.7%	.4%
Autodesk	1.8	.0	1.8	0	2.4%	.0%	8.8%	.0%
Racal-Redac	1.3	.1	1.0	6	1.7%	.1%	5.0%	.2%
Dazix	.9	.1	.4	7	1.2%	.3%	1.7%	.2%
Aucotec	.9	.3	.5	14	1.2%	.8%	2.4%	.5%
BETRONEX	.8	.0	.8	0	1.0%	.0%	3.6%	.0%
Apple Computer	.7	.6	.0	136	.9%	1.5%	.0%	4.7%
Data Technology/DATECH*	.4	.1	.3	12	.6%	.1%	1.5%	.4%
VLSI Technology	.4	.0	.3	1	.5%	.0%	1.5%	.0%
ABB Cade International	.3	.2	.1	1	.4%	.4%	.4%	.0%
Solbourne	.3	.3	.0	23	.4%	.8%	.0%	.8%
Calay	.3	.1	.2	5	.4%	.2%	.8%	.2%
Ziegler	.3	.0	.3	0	.4%	.0%	1.3%	.0%
Viewlogic Systems	.2	.0	.2	0	.3%	.0%	1.0%	.0%
Silver-Lisco	.2	.0	.1	0	.2%	.0%	.5%	.0%
MacNeal-Schwendler	.2	.0	.2	0	.2%	.0%	.7%	.0%
Research Machines	.1	.1	.0	20	.2%	.3%	.0%	.7%
ALS Design	.1	.0	.1	0	.1%	.0%	.5%	.0%
Schlumberger	.0	.0	.0	0	.1%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.1%	.0%
Intercad	.0	.0	.0	1	.0%	.0%	.0%	.0%
Serbi	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 63 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Olivetti	.0	.0	.0	2	.0%	.0%	.0%	.1%
Other Companies	9.1	2.9	5.2	237	12.0%	7.2%	25.1%	8.2%
All Companies	75.7	40.8	20.7	2,904	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	69.7	38.7	17.2	2,776	92.0%	94.9%	83.3%	95.6%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	6.1	2.1	3.5	129	8.0%	5.1%	16.7%	4.4%
All Hardware Companies	36.4	31.1	.0	2,528	48.1%	76.4%	.0%	87.0%
All Turnkey & SW Companies	39.3	9.6	20.7	376	51.9%	23.6%	100.0%	13.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 64
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	6.7	1.9	2.8	66	16.6%	9.0%	23.3%	3.6%
Sun	6.0	5.2	.0	254	14.8%	24.1%	.0%	13.8%
Hewlett-Packard	5.0	3.9	.3	369	12.5%	18.2%	2.1%	20.0%
Digital	3.6	2.6	.0	31	8.9%	12.2%	.0%	1.7%
Compaq	2.3	2.3	.0	385	5.7%	10.7%	.0%	20.9%
IBM	1.9	1.8	.0	425	4.7%	8.4%	.0%	23.0%
Autodesk	1.6	.0	1.6	0	4.0%	.0%	13.2%	.0%
Intergraph	1.2	.7	.2	12	3.0%	3.0%	1.7%	.7%
Valid	1.2	.1	.7	6	2.9%	.4%	5.7%	.3%
Aucotec	.9	.3	.5	14	2.2%	1.4%	4.1%	.8%
Computervision	.7	.3	.2	6	1.7%	1.3%	1.4%	.3%
Dazix	.5	.1	.2	4	1.3%	.5%	1.7%	.2%
Racal-Redac	.4	.0	.3	2	1.0%	.1%	2.8%	.1%
Apple Computer	.4	.3	.0	68	.9%	1.4%	.0%	3.7%
Viewlogic Systems	.2	.0	.2	0	.6%	.0%	1.7%	.0%
VLSI Technology	.2	.0	.2	1	.6%	.0%	1.6%	.0%
ABB Cade International	.2	.1	.1	1	.5%	.6%	.5%	.0%
Data Technology/DATECH*	.2	.0	.2	6	.5%	.1%	1.3%	.3%
MacNeal-Schwendler	.2	.0	.2	0	.4%	.0%	1.2%	.0%
Ziegler	.2	.0	.2	0	.4%	.0%	1.2%	.0%
Scientific Calc.	.1	.0	.1	0	.3%	.1%	.6%	.0%
ALS Design	.1	.0	.1	0	.2%	.0%	.7%	.0%
Research Machines	.1	.1	.0	12	.2%	.4%	.0%	.7%
Solbourne	.1	.1	.0	6	.2%	.3%	.0%	.3%
Calay	.1	.0	.0	1	.1%	.1%	.3%	.1%
Inca	.0	.0	.0	0	.1%	.0%	.2%	.0%
Intercad	.0	.0	.0	1	.0%	.0%	.1%	.1%
Serbi	.0	.0	.0	0	.0%	.0%	.2%	.0%

(Continued)

TABLE NUMBER: 64 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	6.3	1.6	4.1	177	15.6%	7.5%	34.1%	9.6%
All Companies	40.2	21.6	12.0	1,848	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	38.3	21.0	10.8	1,817	95.1%	97.4%	89.9%	98.3%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	2.0	.6	1.2	31	4.9%	2.6%	10.1%	1.7%
All Hardware Companies	19.6	17.1	.0	1,689	48.8%	79.3%	.0%	91.4%
All Turnkey & SW Companies	20.6	4.5	12.0	159	51.2%	20.7%	100.0%	8.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 65
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: IC Layout
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Sun	4.0	3.5	.0	172	41.5%	61.0%	.0%	66.2%
Mentor Graphics	1.8	.5	.8	18	18.6%	9.0%	39.7%	6.8%
Digital	1.4	1.1	.0	12	15.0%	18.5%	.0%	4.8%
Hewlett-Packard	.4	.4	.0	39	4.5%	6.5%	.0%	15.1%
Valid	.2	.0	.1	1	2.5%	.4%	7.4%	.5%
Silvar-Lisco	.2	.0	.1	0	1.8%	.0%	5.3%	.0%
Solbourne	.2	.2	.0	13	1.8%	3.0%	.0%	4.8%
VLSI Technology	.2	.0	.1	0	1.6%	.0%	6.3%	.2%
Other Companies	1.2	.1	.8	4	12.7%	1.8%	41.3%	1.7%
All Companies	9.6	5.7	1.9	260	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	9.6	5.7	1.9	260	100.0%	100.0%	100.0%	100.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Hardware Companies	6.1	5.2	.0	240	63.8%	90.5%	.0%	92.5%
All Turnkey & SW Companies	3.5	.5	1.9	20	36.2%	9.5%	100.0%	7.5%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 66
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Digital	4.0	2.9	.0	34	15.3%	21.0%	.0%	4.3%
Sun	3.0	2.6	.0	129	11.5%	19.3%	.0%	16.2%
Mentor Graphics	2.6	.6	1.1	25	9.8%	4.7%	15.8%	3.2%
Scientific Calc.	2.2	.3	1.3	8	8.4%	1.9%	18.6%	1.0%
LPKF	2.0	1.3	.5	80	7.6%	9.5%	7.4%	10.0%
Hewlett-Packard	1.6	.9	.2	86	6.3%	6.9%	2.8%	10.8%
IBM	1.5	1.0	.3	90	5.9%	7.5%	4.0%	11.3%
Computervision	1.4	.6	.3	11	5.3%	4.1%	5.0%	1.4%
Intergraph	1.2	.5	.2	13	4.6%	3.7%	3.1%	1.6%
Compaq	1.0	1.0	.0	161	3.7%	7.2%	.0%	20.2%
Racal-Redac	.9	.0	.7	4	3.3%	.2%	10.2%	.5%
BETRONEX	.8	.0	.8	0	2.9%	.0%	11.0%	.0%
Valid	.6	.0	.4	3	2.3%	.3%	5.3%	.4%
Dazix	.4	.0	.1	3	1.4%	.3%	2.1%	.3%
Apple Computer	.4	.3	.0	68	1.3%	2.3%	.0%	8.5%
Autodesk	.2	.0	.2	0	.9%	.0%	3.4%	.0%
Calay	.2	.1	.1	4	.9%	.5%	1.9%	.5%
Data Technology/DATECH*	.2	.0	.2	6	.8%	.2%	2.4%	.8%
Ziegler	.1	.0	.1	0	.5%	.0%	1.8%	.0%
ABB Cade International	.1	.1	.0	0	.3%	.4%	.3%	.1%
Solbourne	.1	.1	.0	5	.2%	.5%	.0%	.6%
Research Machines	.1	.1	.0	8	.2%	.4%	.0%	1.0%
Schlumberger	.0	.0	.0	0	.2%	.1%	.1%	.1%
ALS Design	.0	.0	.0	0	.1%	.0%	.4%	.0%
Olivetti	.0	.0	.0	2	.0%	.1%	.0%	.2%

(Continued)

TABLE NUMBER: 66 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Scandinavia
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	1.6	1.2	.3	56	6.2%	8.9%	4.6%	7.0%
All Companies	25.9	13.5	6.8	797	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	21.8	12.0	4.6	699	84.2%	88.9%	67.0%	87.8%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	4.1	1.5	2.2	98	15.8%	11.1%	33.0%	12.2%
All Hardware Companies	10.7	8.9	.0	599	41.1%	65.7%	.0%	75.1%
All Turnkey & SW Companies	15.3	4.6	6.8	198	58.9%	34.3%	100.0%	24.9%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 67
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
=====	=====	=====	=====	=====	=====	=====	=====	=====
Computervision	110.0	46.7	27.5	1,132	12.3%	9.8%	10.5%	3.4%
IBM	93.9	61.1	17.6	4,155	10.5%	12.8%	6.7%	12.6%
Intergraph	79.2	42.2	15.7	827	8.8%	8.9%	6.0%	2.5%
Digital	64.8	47.2	.0	475	7.2%	9.9%	.0%	1.4%
Sun	53.1	46.2	.0	2,234	5.9%	9.7%	.0%	6.8%
Compaq	51.4	51.4	.0	8,564	5.7%	10.8%	.0%	26.0%
Hewlett-Packard	45.1	32.8	4.1	2,736	5.0%	6.9%	1.5%	8.3%
McDonnell Douglas	36.7	18.8	14.2	720	4.1%	3.9%	5.4%	2.2%
Mentor Graphics	24.9	7.0	10.5	246	2.8%	1.5%	4.0%	.7%
Data Technology/DATECH*	21.4	3.9	15.4	618	2.4%	.8%	5.9%	1.9%
ICL	18.8	11.1	6.4	516	2.1%	2.3%	2.4%	1.6%
PAFEC	13.7	.0	13.7	0	1.5%	.0%	5.3%	.0%
Engineering Computer Services*	13.7	5.5	4.7	215	1.5%	1.2%	1.8%	.7%
Autodesk	13.5	.0	13.5	0	1.5%	.0%	5.2%	.0%
Research Machines	12.9	12.9	.0	1,980	1.4%	2.7%	.0%	6.0%
CAD Centre	12.1	.0	6.4	0	1.3%	.0%	2.4%	.0%
Racal-Redac	11.5	.5	9.3	53	1.3%	.1%	3.6%	.2%
Dassault*	11.5	.0	9.8	0	1.3%	.0%	3.7%	.0%
Dazix	9.9	1.6	4.0	73	1.1%	.3%	1.5%	.2%
Schlumberger	9.6	3.4	3.5	101	1.1%	.7%	1.3%	.3%
Apple Computer	9.4	8.3	.0	1,814	1.1%	1.7%	.0%	5.5%
Radan Computational	8.5	3.0	4.2	285	.9%	.6%	1.6%	.9%
Delcam International	8.4	2.9	4.2	140	.9%	.6%	1.6%	.4%
SDRC	8.0	.0	8.0	0	.9%	.0%	3.1%	.0%
Ferranti	7.0	2.6	3.2	61	.8%	.5%	1.2%	.2%
Laser-Scan	6.9	1.7	3.5	23	.8%	.4%	1.3%	.1%
t2 Solutions	6.9	3.4	2.5	131	.8%	.7%	.9%	.4%
Silicon Graphics	6.5	5.7	.0	145	.7%	1.2%	.0%	.4%
Moss Systems	6.3	.0	5.7	0	.7%	.0%	2.2%	.0%
Ground Modelling Systems	5.6	3.7	2.8	31	.6%	.8%	1.1%	.1%
Sysscan	5.6	2.5	1.5	43	.6%	.5%	.6%	.1%
Valid	5.2	.4	3.1	26	.6%	.1%	1.2%	.1%
ISICAD	4.9	1.8	2.5	26	.5%	.4%	1.0%	.1%

(Continued)

TABLE NUMBER: 67
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Cimlinc	4.5	.9	2.7	87	.5%	.2%	1.0%	.3%
Computer Services Consultants	4.3	.0	4.3	0	.5%	.0%	1.7%	.0%
MacNeal-Schwendler	3.9	.0	3.8	0	.4%	.0%	1.4%	.0%
Vero International Software	3.8	.0	3.5	0	.4%	.0%	1.3%	.0%
Whessoe Computing Systems	2.8	.0	2.8	0	.3%	.0%	1.1%	.0%
Alper Systems	2.7	1.3	.7	18	.3%	.3%	.3%	.1%
Pathtrace	2.6	.7	1.7	37	.3%	.1%	.7%	.1%
PDA Engineering	2.6	.0	2.6	0	.3%	.0%	1.0%	.0%
FEA Limited	2.5	.6	.6	48	.3%	.1%	.2%	.1%
Gable CAD Systems	2.5	1.0	1.2	31	.3%	.2%	.4%	.1%
Norsk Data	2.3	1.1	.4	22	.3%	.2%	.1%	.1%
Siemens	2.3	1.2	.8	31	.3%	.2%	.3%	.1%
Matra Datavision	2.0	.9	.8	21	.2%	.2%	.3%	.1%
Scientific Calc.	2.0	.2	1.2	7	.2%	.1%	.5%	.0%
Robocom	1.9	.0	1.9	0	.2%	.0%	.7%	.0%
ESRI	1.9	.0	1.7	0	.2%	.0%	.6%	.0%
Elstree Computing	1.8	.8	1.0	50	.2%	.2%	.4%	.2%
CAMTEK	1.8	.0	1.5	0	.2%	.0%	.6%	.0%
Superdraft	1.7	.8	.8	91	.2%	.2%	.3%	.3%
CADKEY	1.5	1.0	.5	150	.2%	.2%	.2%	.5%
Unisys	1.5	.8	.5	21	.2%	.2%	.2%	.1%
Calay	1.4	.5	.8	23	.2%	.1%	.3%	.1%
Wiechers Datentechnik	1.4	1.1	.3	44	.2%	.2%	.1%	.1%
MCS	1.3	.0	1.2	0	.1%	.0%	.4%	.0%
Anilam Electronics	1.3	.4	.8	16	.1%	.1%	.3%	.0%
Lamp Software	1.2	.3	.8	57	.1%	.1%	.3%	.2%
Solbourne	1.1	1.1	.0	83	.1%	.2%	.0%	.3%
Integer	1.1	.0	.9	0	.1%	.0%	.3%	.0%
Viewlogic Systems	1.1	.0	.9	0	.1%	.0%	.3%	.0%
VLSI Technology	1.1	.0	.9	3	.1%	.0%	.3%	.0%
Gerber Systems	1.0	.5	.3	13	.1%	.1%	.1%	.0%
FEGS	1.0	.0	.8	0	.1%	.0%	.3%	.0%
Control Data	.8	.4	.1	11	.1%	.1%	.0%	.0%

(Continued)

TABLE NUMBER: 67
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					Market Share			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Exapt	.7	.4	.3	13	.1%	.1%	.1%	.0%
Number One Systems	.7	.1	.7	18	.1%	.0%	.3%	.1%
Olivetti	.7	.6	.0	114	.1%	.1%	.0%	.3%
Computational Mechanics	.7	.0	.7	0	.1%	.0%	.3%	.0%
Contract Data Research	.7	.0	.5	0	.1%	.0%	.2%	.0%
Investronica SA	.6	.5	.1	25	.1%	.1%	.0%	.1%
Zycad	.6	.5	.0	5	.1%	.1%	.0%	.0%
Silvar-Lisco	.6	.0	.4	0	.1%	.0%	.1%	.0%
Aucotec	.5	.2	.3	8	.1%	.0%	.1%	.0%
Kewill Systems	.5	.2	.3	10	.1%	.0%	.1%	.0%
CAD-Capture	.5	.0	.1	0	.1%	.0%	.0%	.0%
BETRONEX	.5	.0	.5	0	.1%	.0%	.2%	.0%
Inca	.4	.0	.4	0	.0%	.0%	.2%	.0%
Genasys II	.4	.1	.2	1	.0%	.0%	.1%	.0%
Serbi	.4	.0	.4	0	.0%	.0%	.2%	.0%
Smallworld Systems	.4	.2	.2	11	.0%	.0%	.1%	.0%
ISYKON Software	.3	.2	.1	4	.0%	.0%	.0%	.0%
Parametric Technology	.3	.0	.3	0	.0%	.0%	.1%	.0%
Masta Corporation	.3	.0	.2	2	.0%	.0%	.1%	.0%
ALS Design	.3	.0	.3	0	.0%	.0%	.1%	.0%
Marcus Computer Systeme	.2	.1	.1	7	.0%	.0%	.0%	.0%
Soft-Tech Software Technologie	.2	.0	.1	5	.0%	.0%	.1%	.0%
Tebis	.2	.0	.1	1	.0%	.0%	.0%	.0%
ESDU International	.1	.0	.1	0	.0%	.0%	.1%	.0%
CAD Lab	.1	.0	.1	0	.0%	.0%	.0%	.0%
Academi Systems	.1	.0	.1	0	.0%	.0%	.0%	.0%
DAT Standard Information syste	.1	.0	.1	0	.0%	.0%	.0%	.0%
Hochtief	.1	.0	.1	1	.0%	.0%	.0%	.0%
Cisigraph	.1	.0	.0	1	.0%	.0%	.0%	.0%
Kloeckner-Moeller	.1	.1	.0	1	.0%	.0%	.0%	.0%
CAD-UL	.1	.0	.1	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 67 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Framesoft	.1	.0	.1	0	.0%	.0%	.0%	.0%
Star Informatic	.1	.1	.0	3	.0%	.0%	.0%	.0%
Other Companies	21.7	29.0	.0	4,491	2.4%	6.1%	.0%	13.6%
All Companies	896.4	475.9	261.3	32,957	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	708.9	418.4	156.0	28,981	79.1%	87.9%	59.7%	87.9%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	187.5	57.5	105.3	3,976	20.9%	12.1%	40.3%	12.1%
All Hardware Companies	262.6	230.0	.0	23,930	29.3%	48.3%	.0%	72.6%
All Turnkey & SW Companies	633.8	245.9	261.3	9,028	70.7%	51.7%	100.0%	27.4%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 68
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
*****	*****	*****	*****	*****	*****	*****	*****	*****
Computervision	96.6	41.4	23.4	775	19.1%	18.3%	13.8%	9.6%
Intergraph	65.5	36.5	11.8	725	13.0%	16.1%	7.0%	9.0%
Sun	42.6	37.5	.0	1,909	8.4%	16.6%	.0%	23.7%
Hewlett-Packard	36.1	25.6	4.1	1,448	7.1%	11.3%	2.4%	18.0%
Mentor Graphics	24.9	7.0	10.5	246	4.9%	3.1%	6.2%	3.1%
McDonnell Douglas	23.5	12.1	9.1	272	4.7%	5.4%	5.4%	3.4%
ICL	18.8	11.1	6.4	516	3.7%	4.9%	3.8%	6.4%
Digital	14.2	10.3	.0	475	2.8%	4.6%	.0%	5.9%
PAFEC	12.3	.0	12.3	0	2.4%	.0%	7.3%	.0%
CAD Centre	12.1	.0	6.4	0	2.4%	.0%	3.8%	.0%
Racal-Redac	10.0	.5	7.9	53	2.0%	.2%	4.7%	.7%
Dazix	9.9	1.6	4.0	73	2.0%	.7%	2.3%	.9%
Delcam International	8.4	2.9	4.2	140	1.7%	1.3%	2.5%	1.7%
IBM	8.4	5.1	1.8	217	1.7%	2.3%	1.0%	2.7%
Radan Computational	8.4	2.9	4.2	281	1.7%	1.3%	2.5%	3.5%
Engineering Computer Services*	7.4	3.0	2.5	116	1.5%	1.3%	1.5%	1.4%
Ferranti	7.0	2.6	3.2	61	1.4%	1.1%	1.9%	.8%
SDRC	6.9	.0	6.9	0	1.4%	.0%	4.1%	.0%
t2 Solutions	6.9	3.4	2.5	131	1.4%	1.5%	1.5%	1.6%
Schlumberger	6.7	2.3	2.5	57	1.3%	1.0%	1.5%	.7%
Silicon Graphics	6.4	5.6	.0	143	1.3%	2.5%	.0%	1.8%
Moss Systems	6.3	.0	5.7	0	1.2%	.0%	3.3%	.0%
Laser-Scan	6.3	1.6	3.1	19	1.2%	.7%	1.8%	.2%
Valid	5.2	.4	3.1	26	1.0%	.2%	1.8%	.3%
Cimlinc	4.5	.9	2.7	87	.9%	.4%	1.6%	1.1%
Dassault*	3.7	.0	3.1	0	.7%	.0%	1.9%	.0%
ISICAD	3.4	1.8	1.0	26	.7%	.8%	.6%	.3%
Alper Systems	2.7	1.3	.7	18	.5%	.6%	.4%	.2%
Gable CAD Systems	2.5	1.0	1.2	31	.5%	.4%	.7%	.4%
Matra Datavision	2.0	.9	.8	21	.4%	.4%	.5%	.3%
Data Technology/DATECH*	1.9	.0	1.7	0	.4%	.0%	1.0%	.0%
Siemens	1.9	1.0	.7	25	.4%	.4%	.4%	.3%
Sysscan	1.9	.8	.5	11	.4%	.4%	.3%	.1%

(Continued)

TABLE NUMBER: 68
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
PDA Engineering	1.8	.0	1.8	0	.4%	.0%	1.0%	.0%
Scientific Calc.	1.6	.2	.9	5	.3%	.1%	.5%	.1%
Calay	1.4	.5	.8	23	.3%	.2%	.5%	.3%
CAMTEK	1.2	.0	1.0	0	.2%	.0%	.6%	.0%
Unisys	1.1	.6	.4	16	.2%	.3%	.2%	.2%
Autodesk	1.1	.0	1.1	0	.2%	.0%	.7%	.0%
ESRI	1.1	.0	.9	0	.2%	.0%	.6%	.0%
Norsk Data	1.1	.6	.2	13	.2%	.3%	.1%	.2%
VLSI Technology	1.1	.0	.9	3	.2%	.0%	.5%	.0%
FEA Limited	1.0	.3	.3	19	.2%	.1%	.1%	.2%
Gerber Systems	1.0	.5	.3	13	.2%	.2%	.2%	.2%
MacNeal-Schwendler	1.0	.0	.9	0	.2%	.0%	.6%	.0%
MCS	.6	.0	.5	0	.1%	.0%	.3%	.0%
Silvar-Lisco	.6	.0	.4	0	.1%	.0%	.2%	.0%
FEGS	.5	.0	.4	0	.1%	.0%	.3%	.0%
Zycad	.5	.4	.0	4	.1%	.2%	.0%	.1%
Kewill Systems	.5	.1	.3	9	.1%	.1%	.2%	.1%
Viewlogic Systems	.5	.0	.4	0	.1%	.0%	.2%	.0%
Wiechers Datentechnik	.4	.3	.1	7	.1%	.1%	.0%	.1%
Smallworld Systems	.4	.2	.2	11	.1%	.1%	.1%	.1%
Genasys II	.4	.1	.2	1	.1%	.1%	.1%	.0%
Lamp Software	.4	.2	.3	22	.1%	.1%	.1%	.3%
Control Data	.4	.2	.1	8	.1%	.1%	.0%	.1%
ISYKON Software	.3	.2	.1	4	.1%	.1%	.1%	.1%
Parametric Technology	.3	.0	.3	0	.1%	.0%	.2%	.0%
Whesoe Computing Systems	.3	.0	.3	0	.1%	.0%	.2%	.0%
Computational Mechanics	.2	.0	.2	0	.0%	.0%	.1%	.0%
Solbourne	.2	.2	.0	16	.0%	.1%	.0%	.2%
Exapt	.2	.1	.1	6	.0%	.0%	.0%	.1%
Aucotec	.2	.1	.1	3	.0%	.0%	.1%	.0%
Marcus Computer Systems	.2	.1	.1	6	.0%	.0%	.0%	.1%

(Continued)

TABLE NUMBER: 68 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Inca	.1	.0	.1	0	.0%	.0%	.1%	.0%
CAD Lab	.1	.0	.1	0	.0%	.0%	.1%	.0%
Masta Corporation	.1	.0	.1	1	.0%	.0%	.0%	.0%
CADKEY	.1	.0	.0	3	.0%	.0%	.0%	.0%
Cisigraph	.1	.0	.0	0	.0%	.0%	.0%	.0%
Star Informatic	.1	.1	.0	3	.0%	.0%	.0%	.0%
Framasoft	.1	.0	.0	0	.0%	.0%	.0%	.0%
Academi Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
Serbi	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	8.4	.3	7.2	0	1.7%	.1%	4.3%	.0%
All Companies	505.6	226.1	168.9	8,048	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	385.9	193.5	101.3	6,613	76.3%	85.6%	60.0%	82.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	119.7	32.6	67.6	1,435	23.7%	14.4%	40.0%	17.8%
All Hardware Companies	80.8	68.3	.0	3,528	16.0%	30.2%	.0%	43.8%
All Turnkey & SW Companies	424.7	157.8	168.9	4,520	84.0%	69.8%	100.0%	56.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 69
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	72.2	43.3	15.9	953	34.1%	33.4%	40.2%	30.7%
Digital	50.5	36.9	.0	0	23.8%	28.4%	.0%	.0%
McDonnell Douglas	13.1	6.7	5.2	448	6.2%	5.1%	13.0%	14.4%
Computervision	11.8	5.2	2.7	343	5.6%	4.0%	6.7%	11.0%
Intergraph	11.4	5.7	1.8	102	5.4%	4.4%	4.6%	3.3%
Sun	10.5	8.7	.0	325	5.0%	6.7%	.0%	10.5%
Dassault*	7.8	.0	6.6	0	3.7%	.0%	16.8%	.0%
Sysscan	3.7	1.6	1.0	32	1.7%	1.3%	2.4%	1.0%
MacNeal-Schwendler	3.0	.0	2.8	0	1.4%	.0%	7.2%	.0%
Schlumberger	2.8	1.1	1.0	43	1.3%	.8%	2.4%	1.4%
Norsk Data	1.2	.5	.2	9	.6%	.4%	.5%	.3%
SDRC	1.0	.0	1.0	0	.5%	.0%	2.6%	.0%
Solbourne	.9	.9	.0	67	.4%	.7%	.0%	2.2%
PDA Engineering	.9	.0	.9	0	.4%	.0%	2.2%	.0%
Hewlett-Packard	.9	.7	.0	44	.4%	.6%	.0%	1.4%
Laser-Scan	.7	.2	.4	3	.3%	.1%	.9%	.1%
ESRI	.6	.0	.6	0	.3%	.0%	1.4%	.0%
Whesoe Computing Systems	.6	.0	.6	0	.3%	.0%	1.4%	.0%
Exapt	.5	.3	.2	6	.3%	.2%	.5%	.2%
Computational Mechanics	.5	.0	.5	0	.2%	.0%	1.2%	.0%
Control Data	.5	.2	.1	3	.2%	.2%	.1%	.1%
FEGS	.5	.0	.4	0	.2%	.0%	1.0%	.0%
MCS	.5	.0	.4	0	.2%	.0%	1.0%	.0%
Siemens	.4	.2	.1	6	.2%	.2%	.4%	.2%
Scientific Calc.	.4	.1	.3	2	.2%	.1%	.7%	.1%
Unisys	.3	.2	.1	4	.2%	.1%	.3%	.1%
FEA Limited	.3	.1	.1	5	.1%	.0%	.2%	.2%
Silicon Graphics	.1	.1	.0	2	.1%	.1%	.0%	.1%
Zycad	.1	.1	.0	1	.1%	.1%	.0%	.0%
Masta Corporation	.1	.0	.1	0	.0%	.0%	.2%	.0%
CADKEY	.1	.1	.0	2	.0%	.0%	.1%	.1%
Kewill Systems	.1	.0	.0	1	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 69 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Lamp Software	.1	.0	.0	1	.0%	.0%	.1%	.0%
Olivetti	.0	.0	.0	1	.0%	.0%	.0%	.0%
Cisigraph	.0	.0	.0	0	.0%	.0%	.0%	.0%
Framasoft	.0	.0	.0	0	.0%	.0%	.0%	.0%
VLSI Technology	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	14.0	16.9	.0	706	6.6%	13.0%	.0%	22.7%
All Companies	211.8	129.7	39.5	3,107	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	195.5	126.8	29.4	3,044	92.3%	97.7%	74.5%	98.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	16.3	2.9	10.1	64	7.7%	2.3%	25.5%	2.0%
All Hardware Companies	80.9	64.4	.0	1,143	38.2%	49.6%	.0%	36.8%
All Turnkey & SW Companies	130.9	65.4	39.5	1,964	61.8%	50.4%	100.0%	63.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 70
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
=====	=====	=====	=====	=====	=====	=====	=====	=====
Compaq	51.4	51.4	.0	8,564	28.7%	42.8%	.0%	39.3%
Data Technology/DATECH*	19.5	3.9	13.6	618	10.9%	3.2%	25.7%	2.8%
IBM	13.4	12.7	.0	2,986	7.5%	10.6%	.0%	13.7%
Research Machines	12.9	12.9	.0	1,980	7.2%	10.7%	.0%	9.1%
Autodesk	12.4	.0	12.4	0	6.9%	.0%	23.4%	.0%
Apple Computer	9.4	8.3	.0	1,814	5.3%	6.9%	.0%	8.3%
Hewlett-Packard	8.1	6.5	.0	1,245	4.5%	5.4%	.0%	5.7%
Engineering Computer Services*	6.3	2.5	2.1	99	3.5%	2.1%	4.0%	.5%
Ground Modelling Systems	5.6	3.7	2.8	31	3.1%	3.1%	5.3%	.1%
Computer Services Consultants	4.3	.0	4.3	0	2.4%	.0%	8.2%	.0%
Vero International Software	3.8	.0	3.5	0	2.1%	.0%	6.6%	.0%
Pathtrace	2.6	.7	1.7	37	1.5%	.6%	3.3%	.2%
Intergraph	2.3	.0	2.1	0	1.3%	.0%	4.0%	.0%
Whesoe Computing Systems	2.0	.0	2.0	0	1.1%	.0%	3.7%	.0%
Robocom	1.9	.0	1.9	0	1.1%	.0%	3.6%	.0%
Elstree Computing	1.8	.8	1.0	50	1.0%	.7%	1.9%	.2%
Superdraft	1.7	.8	.8	91	.9%	.7%	1.6%	.4%
Computervision	1.6	.1	1.5	15	.9%	.1%	2.8%	.1%
Racal-Redac	1.5	.0	1.4	0	.8%	.0%	2.7%	.0%
ISICAD	1.5	.0	1.5	0	.8%	.0%	2.8%	.0%
PAFEC	1.4	.0	1.4	0	.8%	.0%	2.7%	.0%
CADKEY	1.4	.9	.4	145	.8%	.7%	.8%	.7%
Anilem Electronics	1.3	.4	.8	16	.7%	.3%	1.5%	.1%
FEA Limited	1.3	.3	.3	24	.7%	.3%	.6%	.1%
Integer	1.1	.0	.9	0	.6%	.0%	1.6%	.0%
Wiechers Datentechnik	1.0	.8	.2	37	.6%	.7%	.4%	.2%
Lamp Software	.8	.1	.5	33	.4%	.1%	.9%	.2%
Number One Systems	.7	.1	.7	18	.4%	.0%	1.2%	.1%
Olivetti	.7	.6	.0	113	.4%	.5%	.0%	.5%
Contract Data Research	.7	.0	.5	0	.4%	.0%	.9%	.0%
Investronica SA	.6	.5	.1	25	.4%	.4%	.1%	.1%
Viewlogic Systems	.6	.0	.5	0	.3%	.0%	1.0%	.0%

(Continued)

TABLE NUMBER: 70 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
CAMTEK	.5	.0	.5	0	.3%	.0%	.9%	.0%
CAD-Capture	.5	.0	.1	0	.3%	.0%	.2%	.0%
BETROWEX	.5	.0	.5	0	.3%	.0%	.9%	.0%
Serbi	.4	.0	.4	0	.2%	.0%	.7%	.0%
Aucotec	.4	.1	.2	6	.2%	.1%	.4%	.0%
Inca	.3	.0	.3	0	.2%	.0%	.6%	.0%
MCS	.3	.0	.2	0	.1%	.0%	.5%	.0%
ALS Design	.3	.0	.3	0	.1%	.0%	.5%	.0%
Soft-Tech Software Technologie	.2	.0	.1	5	.1%	.0%	.3%	.0%
ESRI	.2	.0	.2	0	.1%	.0%	.3%	.0%
Tebis	.2	.0	.1	1	.1%	.0%	.2%	.0%
ESDU International	.1	.0	.1	0	.1%	.0%	.3%	.0%
DAT Standard Information syste	.1	.0	.1	0	.1%	.0%	.2%	.0%
Masta Corporation	.1	.0	.1	1	.1%	.0%	.1%	.0%
Schlumberger	.1	.0	.0	1	.1%	.0%	.1%	.0%
Hochtief	.1	.0	.1	1	.0%	.0%	.1%	.0%
Radan Computational	.1	.0	.0	4	.0%	.0%	.1%	.0%
Kloekner-Moeller	.1	.1	.0	1	.0%	.0%	.0%	.0%
CAD-UL	.1	.0	.1	0	.0%	.0%	.1%	.0%
Academi Systems	.1	.0	.0	0	.0%	.0%	.1%	.0%
Marcus Computer Systeme	.1	.0	.0	2	.0%	.0%	.0%	.0%
Genasys II	.0	.0	.0	0	.0%	.0%	.0%	.0%
Norsk Data	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	.0	11.8	.0	3,839	.0%	9.8%	.0%	17.6%
All Companies	179.0	120.0	52.9	21,802	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	127.5	98.1	25.3	19,325	71.2%	81.7%	47.8%	88.6%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	51.5	22.0	27.6	2,477	28.8%	18.3%	52.2%	11.4%
All Hardware Companies	100.9	97.3	.0	19,259	56.3%	81.1%	.0%	88.3%
All Turnkey & SW Companies	78.2	22.7	52.9	2,544	43.7%	18.9%	100.0%	11.7%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 71
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company =====	----- Market Share -----							
	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====
Computervision	96.7	41.0	24.1	995	21.1%	16.6%	18.8%	6.6%
IBM	77.6	48.5	15.9	2,222	16.9%	19.6%	12.3%	14.7%
Digital	35.0	25.5	.0	241	7.6%	10.3%	.0%	1.6%
Hewlett-Packard	26.4	18.8	3.1	1,373	5.8%	7.6%	2.4%	9.1%
Sun	21.3	18.4	.0	864	4.6%	7.4%	.0%	5.7%
Compaq	18.4	18.4	.0	3,066	4.0%	7.4%	.0%	20.3%
McDonnell Douglas	15.8	8.1	6.1	239	3.4%	3.3%	4.7%	1.6%
Engineering Computer Services*	13.7	5.5	4.7	215	3.0%	2.2%	3.6%	1.4%
Intergraph	13.5	7.2	2.7	140	2.9%	2.9%	2.1%	.9%
Dassault*	10.7	.0	9.1	0	2.3%	.0%	7.1%	.0%
Data Technology/DATECH*	10.7	1.9	7.7	309	2.3%	.8%	6.0%	2.1%
PAFEC	9.5	.0	9.5	0	2.1%	.0%	7.4%	.0%
Schlumberger	9.5	3.4	3.5	100	2.1%	1.4%	2.7%	.7%
Delcam International	8.4	2.9	4.2	140	1.8%	1.2%	3.3%	.9%
SDRC	8.0	.0	8.0	0	1.7%	.0%	6.2%	.0%
Radan Computational	7.2	2.5	3.6	242	1.6%	1.0%	2.8%	1.6%
Ferranti	7.0	2.6	3.2	61	1.5%	1.0%	2.5%	.4%
ICL	6.9	4.1	2.3	189	1.5%	1.6%	1.8%	1.3%
Silicon Graphics	6.4	5.6	.0	142	1.4%	2.3%	.0%	.9%
Research Machines	6.2	6.2	.0	950	1.3%	2.5%	.0%	6.3%
Autodesk	5.1	.0	5.1	0	1.1%	.0%	4.0%	.0%
Cimlinc	4.5	.9	2.7	87	1.0%	.4%	2.1%	.6%
Apple Computer	3.9	3.4	.0	744	.8%	1.4%	.0%	4.9%
Vero International Software	3.8	.0	3.5	0	.8%	.0%	2.7%	.0%
MacNeal-Schwendler	3.8	.0	3.6	0	.8%	.0%	2.8%	.0%
Whessoe Computing Systems	2.8	.0	2.8	0	.6%	.0%	2.2%	.0%
Pathtrace	2.6	.7	1.7	37	.6%	.3%	1.4%	.2%
PDA Engineering	2.6	.0	2.6	0	.6%	.0%	2.1%	.0%
FEA Limited	2.5	.6	.6	48	.6%	.3%	.5%	.3%
Norsk Data	2.3	1.1	.4	22	.5%	.5%	.3%	.1%
Matra Datavision	2.0	.9	.8	21	.4%	.4%	.6%	.1%
CAMTEK	1.8	.0	1.5	0	.4%	.0%	1.2%	.0%
Superdraft	1.7	.8	.8	91	.4%	.3%	.7%	.6%

(Continued)

TABLE NUMBER: 71
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
CADKEY	1.5	1.0	.5	150	.3%	.4%	.4%	1.0%
Unisys	1.5	.8	.5	21	.3%	.3%	.4%	.1%
CAD Centre	1.5	.0	.8	0	.3%	.0%	.6%	.0%
Wiechers Datentechnik	1.4	1.1	.3	44	.3%	.5%	.2%	.3%
MCS	1.3	.0	1.2	0	.3%	.0%	.9%	.0%
Anilam Electronics	1.3	.4	.8	16	.3%	.2%	.6%	.1%
Gerber Systems	1.0	.5	.3	13	.2%	.2%	.3%	.1%
FEGS	1.0	.0	.8	0	.2%	.0%	.6%	.0%
Robocom	.9	.0	.9	0	.2%	.0%	.7%	.0%
Control Data	.8	.4	.1	10	.2%	.2%	.1%	.1%
Exapt	.7	.4	.3	13	.2%	.1%	.2%	.1%
Computational Mechanics	.7	.0	.7	0	.2%	.0%	.5%	.0%
Investronica SA	.6	.5	.1	25	.1%	.2%	.0%	.2%
Olivetti	.3	.3	.0	52	.1%	.1%	.0%	.3%
ISYKON Software	.3	.2	.1	4	.1%	.1%	.1%	.0%
Parametric Technology	.3	.0	.3	0	.1%	.0%	.2%	.0%
Kewill Systems	.3	.1	.2	5	.1%	.0%	.1%	.0%
Mentor Graphics	.3	.1	.1	2	.1%	.0%	.1%	.0%
Serbi	.2	.0	.2	0	.1%	.0%	.2%	.0%
Marcus Computer Systeme	.2	.1	.1	7	.0%	.0%	.1%	.0%
Tebis	.2	.0	.1	1	.0%	.0%	.1%	.0%
CAD-Capture	.2	.0	.0	0	.0%	.0%	.0%	.0%
ESDU International	.1	.0	.1	0	.0%	.0%	.1%	.0%
CAD Lab	.1	.0	.1	0	.0%	.0%	.1%	.0%
DAT Standard Information syste	.1	.0	.1	0	.0%	.0%	.1%	.0%
Cisigraph	.1	.0	.0	1	.0%	.0%	.0%	.0%
Framasoft	.1	.0	.1	0	.0%	.0%	.0%	.0%
Lamp Software	.1	.0	.0	3	.0%	.0%	.0%	.0%
Number One Systems	.0	.0	.0	1	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	2	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 71 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	.0	12.2	.0	2,155	.0%	4.9%	.0%	14.3%
All Companies	458.1	247.1	128.5	15,066	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	372.4	221.5	78.7	13,091	81.3%	89.7%	61.2%	86.9%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	85.7	25.6	49.8	1,975	18.7%	10.3%	38.8%	13.1%
All Hardware Companies	121.5	105.1	.0	9,942	26.5%	42.5%	.0%	66.0%
All Turnkey & SW Companies	336.6	142.0	128.5	5,124	73.5%	57.5%	100.0%	34.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 72
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	26.9	14.4	5.4	281	20.5%	20.7%	13.3%	4.1%
Compaq	11.4	11.4	.0	1,893	8.6%	16.3%	.0%	27.8%
CAD Centre	10.6	.0	5.6	0	8.1%	.0%	13.9%	.0%
Data Technology/DATECH*	7.9	1.4	5.7	229	6.0%	2.1%	14.1%	3.4%
IBM	7.0	5.3	.9	713	5.4%	7.5%	2.2%	10.5%
t2 Solutions	6.9	3.4	2.5	131	5.2%	4.9%	6.1%	1.9%
Digital	6.5	4.7	.0	45	4.9%	6.8%	.0%	.7%
McDonnell Douglas	6.0	3.1	2.3	89	4.5%	4.4%	5.7%	1.3%
Autodesk	6.0	.0	6.0	0	4.5%	.0%	14.7%	.0%
ISICAD	4.9	1.8	2.5	26	3.7%	2.6%	6.2%	.4%
Computervision	4.6	1.9	1.3	53	3.5%	2.7%	3.3%	.8%
Computer Services Consultants	4.3	.0	4.3	0	3.3%	.0%	10.7%	.0%
Hewlett-Packard	4.0	3.3	.0	347	3.0%	4.7%	.0%	5.1%
Apple Computer	3.8	3.3	.0	726	2.9%	4.8%	.0%	10.7%
Research Machines	3.5	3.5	.0	535	2.6%	5.0%	.0%	7.8%
Gable CAD Systems	2.5	1.0	1.2	31	1.9%	1.4%	2.9%	.5%
Sun	2.1	1.9	.0	93	1.6%	2.7%	.0%	1.4%
Elstree Computing	1.8	.8	1.0	50	1.4%	1.1%	2.4%	.7%
Radan Computational	1.3	.4	.6	43	1.0%	.6%	1.6%	.6%
Ground Modelling Systems	1.1	.8	.6	6	.9%	1.1%	1.4%	.1%
Integer	1.1	.0	.9	0	.8%	.0%	2.1%	.0%
Lamp Software	1.1	.3	.7	51	.8%	.4%	1.7%	.8%
Robocom	.9	.0	.9	0	.6%	.0%	2.1%	.0%
PAFEC	.8	.0	.8	0	.6%	.0%	2.0%	.0%
Dassault*	.8	.0	.7	0	.6%	.0%	1.7%	.0%
Kewill Systems	.3	.1	.2	5	.2%	.1%	.4%	.1%
Mesta Corporation	.2	.0	.2	1	.2%	.0%	.4%	.0%
Olivetti	.2	.2	.0	36	.2%	.3%	.0%	.5%
CAD-Capture	.2	.0	.0	0	.1%	.0%	.1%	.0%
Soft-Tech Software Technologie	.2	.0	.1	5	.1%	.0%	.3%	.1%
Hochtief	.1	.0	.1	1	.1%	.0%	.1%	.0%
Serbi	.1	.0	.1	0	.1%	.0%	.2%	.0%

(Continued)

TABLE NUMBER: 72 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Star Informatic	.1	.1	.0	3	.0%	.1%	.0%	.0%
Control Data	.0	.0	.0	0	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	1	.0%	.0%	.0%	.0%
Other Companies	2.5	6.9	.0	1,423	1.9%	9.9%	.0%	20.9%
All Companies	131.3	69.8	40.4	6,814	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	93.5	59.3	20.1	5,918	71.2%	85.0%	49.8%	86.8%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	37.8	10.5	20.3	897	28.8%	15.0%	50.2%	13.2%
All Hardware Companies	39.0	35.6	.0	5,437	29.7%	50.9%	.0%	79.8%
All Turnkey & SW Companies	92.4	34.2	40.4	1,377	70.3%	49.1%	100.0%	20.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 73
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					Market Share			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Intergraph	34.8	18.6	7.0	364	26.2%	27.1%	16.3%	8.9%
McDonnell Douglas	14.9	7.6	5.8	392	11.2%	11.1%	13.6%	9.6%
ICL	11.2	6.6	3.8	308	8.4%	9.6%	8.9%	7.6%
Compaq	7.4	7.4	.0	1,237	5.6%	10.8%	.0%	30.4%
Digital	7.1	5.2	.0	49	5.4%	7.6%	.0%	1.2%
Laser-Scan	6.9	1.7	3.5	23	5.2%	2.5%	8.1%	.6%
Moss Systems	6.3	.0	5.7	0	4.7%	.0%	13.2%	.0%
Sysscan	5.6	2.5	1.5	43	4.2%	3.6%	3.4%	1.1%
Ground Modelling Systems	4.5	3.0	2.2	25	3.4%	4.3%	5.2%	.6%
IBM	4.1	3.2	.4	524	3.1%	4.7%	.9%	12.9%
PAFEC	3.4	.0	3.4	0	2.6%	.0%	8.0%	.0%
Alper Systems	2.7	1.3	.7	18	2.0%	1.9%	1.5%	.4%
Siemens	2.3	1.2	.8	31	1.7%	1.7%	1.9%	.8%
Computervision	2.2	1.1	.5	31	1.6%	1.5%	1.1%	.8%
Sun	2.1	1.8	.0	88	1.6%	2.7%	.0%	2.2%
Data Technology/DATECH*	1.9	.4	1.4	56	1.4%	.5%	3.3%	1.4%
ESRI	1.9	.0	1.7	0	1.4%	.0%	3.9%	.0%
Autodesk	1.4	.0	1.4	0	1.0%	.0%	3.2%	.0%
Apple Computer	1.0	.9	.0	200	.8%	1.3%	.0%	4.9%
Research Machines	.9	.9	.0	139	.7%	1.3%	.0%	3.4%
Contract Data Research	.7	.0	.5	0	.5%	.0%	1.1%	.0%
Genasys II	.4	.1	.2	1	.3%	.2%	.6%	.0%
Smallworld Systems	.4	.2	.2	11	.3%	.2%	.5%	.3%
Hewlett-Packard	.3	.2	.0	27	.2%	.3%	.0%	.7%
CAD-Capture	.2	.0	.0	0	.1%	.0%	.1%	.0%
Solbourne	.2	.2	.0	12	.1%	.2%	.0%	.3%
Robocom	.2	.0	.2	0	.1%	.0%	.4%	.0%
Olivetti	.1	.1	.0	21	.1%	.1%	.0%	.5%
Silicon Graphics	.1	.1	.0	3	.1%	.2%	.0%	.1%
Lamp Software	.1	.0	.0	3	.0%	.0%	.1%	.1%
Control Data	.0	.0	.0	1	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 73 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	7.6	4.3	2.0	465	5.7%	6.3%	4.7%	11.4%
All Companies	132.8	68.7	42.8	4,071	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	87.5	51.3	20.3	3,450	65.9%	74.6%	47.5%	84.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	45.3	17.5	22.5	621	34.1%	25.4%	52.5%	15.3%
All Hardware Companies	23.9	21.3	.0	2,629	18.0%	30.9%	.0%	64.6%
All Turnkey & SW Companies	108.8	47.5	42.8	1,442	82.0%	69.1%	100.0%	35.4%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 74
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
=====	=====	=====	=====	=====	=====	=====	=====	=====
Sun	27.6	24.2	.0	1,190	15.9%	26.8%	.0%	17.0%
Mentor Graphics	24.6	6.9	10.3	244	14.1%	7.7%	20.8%	3.5%
Digital	16.2	11.7	.0	140	9.3%	13.0%	.0%	2.0%
Hewlett-Packard	14.5	10.6	1.0	989	8.3%	11.7%	1.9%	14.1%
Compaq	14.2	14.2	.0	2,368	8.2%	15.7%	.0%	33.8%
Racal-Redac	11.5	.5	9.3	53	6.6%	.5%	18.8%	.8%
Dazix	9.9	1.6	4.0	73	5.7%	1.8%	8.0%	1.0%
Computervision	6.5	2.7	1.6	53	3.7%	3.0%	3.2%	.8%
IBM	5.2	4.1	.5	696	3.0%	4.6%	1.0%	9.9%
Valid	5.2	.4	3.1	26	3.0%	.4%	6.2%	.4%
Intergraph	4.0	1.9	.7	42	2.3%	2.1%	1.4%	.6%
Research Machines	2.3	2.3	.0	356	1.3%	2.6%	.0%	5.1%
Scientific Calc.	2.0	.2	1.2	7	1.1%	.3%	2.4%	.1%
Calay	1.4	.5	.8	23	.8%	.5%	1.7%	.3%
Autodesk	1.1	.0	1.1	0	.6%	.0%	2.2%	.0%
Viewlogic Systems	1.1	.0	.9	0	.6%	.0%	1.8%	.0%
VLSI Technology	1.1	.0	.9	3	.6%	.0%	1.8%	.0%
Solbourne	.9	.9	.0	67	.5%	1.0%	.0%	1.0%
Data Technology/DATECH*	.9	.2	.6	25	.5%	.2%	1.2%	.4%
Apple Computer	.8	.7	.0	145	.4%	.7%	.0%	2.1%
ICL	.7	.4	.2	19	.4%	.5%	.5%	.3%
Number One Systems	.7	.1	.6	17	.4%	.1%	1.3%	.2%
Zycad	.6	.5	.0	5	.4%	.6%	.0%	.1%
Silvar-Lisco	.6	.0	.4	0	.4%	.0%	.7%	.0%
Aucotec	.5	.2	.3	8	.3%	.2%	.6%	.1%
BETRONEX	.5	.0	.5	0	.3%	.0%	1.0%	.0%
Inca	.4	.0	.4	0	.2%	.0%	.9%	.0%
ALS Design	.3	.0	.3	0	.1%	.0%	.5%	.0%
MacNeal-Schwandler	.2	.0	.2	0	.1%	.0%	.3%	.0%
Schlumberger	.1	.0	.0	1	.1%	.0%	.1%	.0%
Academi Systems	.1	.0	.1	0	.1%	.0%	.1%	.0%
Serbi	.1	.0	.1	0	.0%	.0%	.2%	.0%

(Continued)

TABLE NUMBER: 74 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Kloekner-Moeller	.1	.1	.0	1	.0%	.1%	.0%	.0%
CAD-UL	.1	.0	.1	0	.0%	.0%	.1%	.0%
Olivetti	.0	.0	.0	5	.0%	.0%	.0%	.1%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%
Robocom	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	18.5	5.5	10.7	448	10.6%	6.1%	21.5%	6.4%
All Companies	174.2	90.3	49.7	7,006	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	155.5	86.3	37.0	6,523	89.3%	95.6%	74.4%	93.1%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	18.7	4.0	12.7	483	10.7%	4.4%	25.6%	6.9%
All Hardware Companies	78.2	68.1	.0	5,922	44.9%	75.4%	.0%	84.5%
All Turnkey & SW Companies	96.0	22.2	49.7	1,085	55.1%	24.6%	100.0%	15.5%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 75
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Market Share			
					Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Mentor Graphics	14.9	4.3	6.3	148	15.8%	8.6%	23.0%	3.3%
Sun	12.8	11.1	.0	545	13.5%	22.0%	.0%	12.0%
Hewlett-Packard	10.7	8.3	.6	767	11.3%	16.4%	2.1%	16.9%
Compaq	10.0	10.0	.0	1,670	10.6%	19.8%	.0%	36.8%
Digital	6.5	4.7	.0	56	6.9%	9.4%	.0%	1.2%
Dazix	5.9	1.2	2.4	44	6.3%	2.3%	8.7%	1.0%
Racal-Redac	3.8	.2	3.1	17	4.0%	.4%	11.4%	.4%
Valid	3.0	.2	1.8	15	3.2%	.4%	6.6%	.3%
IBM	2.5	2.4	.0	567	2.7%	4.8%	.0%	12.5%
Computervision	2.2	.9	.5	18	2.3%	1.8%	1.9%	.4%
Intergraph	2.0	1.1	.3	20	2.1%	2.1%	1.2%	.4%
Research Machines	1.4	1.4	.0	218	1.5%	2.8%	.0%	4.8%
Viewlogic Systems	1.1	.0	.9	0	1.1%	.0%	3.3%	.0%
Autodesk	1.0	.0	1.0	0	1.0%	.0%	3.5%	.0%
VLSI Technology	.6	.0	.5	2	.7%	.0%	1.9%	.0%
Zycad	.6	.5	.0	5	.7%	1.0%	.0%	.1%
Aucotec	.5	.2	.3	8	.5%	.4%	1.1%	.2%
Data Technology/DATECH*	.4	.1	.3	12	.5%	.2%	1.1%	.3%
Inca	.4	.0	.4	0	.5%	.0%	1.6%	.0%
Apple Computer	.4	.3	.0	73	.4%	.7%	.0%	1.6%
Calay	.3	.1	.2	5	.3%	.2%	.6%	.1%
Solbourne	.2	.2	.0	17	.2%	.4%	.0%	.4%
ALS Design	.2	.0	.2	0	.2%	.0%	.7%	.0%
MacNeal-Schwendler	.2	.0	.2	0	.2%	.0%	.6%	.0%
Number One Systems	.1	.0	.1	3	.1%	.0%	.4%	.1%
Scientific Calc.	.1	.0	.1	0	.1%	.0%	.3%	.0%
Serbi	.1	.0	.1	0	.1%	.0%	.3%	.0%
Kloekner-Moeller	.1	.1	.0	1	.1%	.1%	.1%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 75 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Market Share			
					Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	12.6	3.1	8.1	326	13.3%	6.1%	29.8%	7.2%
All Companies	94.6	50.5	27.3	4,537	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	87.6	48.5	22.9	4,285	92.7%	96.1%	83.9%	94.4%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	6.9	2.0	4.4	252	7.3%	3.9%	16.1%	5.6%
All Hardware Companies	43.3	38.4	.0	3,955	45.8%	76.0%	.0%	87.2%
All Turnkey & SW Companies	51.3	12.1	27.3	582	54.2%	24.0%	100.0%	12.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 76
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: IC Layout
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Sun	8.5	7.4	.0	369	40.4%	62.7%	.0%	67.5%
Mentor Graphics	4.0	1.2	1.7	39	18.9%	9.7%	34.5%	7.2%
Digital	2.6	1.9	.0	22	12.3%	16.0%	.0%	4.1%
Hewlett-Packard	.7	.6	.0	67	3.5%	5.2%	.0%	12.3%
Valid	.6	.0	.4	3	2.9%	.3%	7.6%	.6%
Silver-Lisco	.6	.0	.4	0	2.9%	.0%	7.6%	.0%
Solbourne	.5	.5	.0	36	2.4%	4.2%	.0%	6.7%
VLSI Technology	.4	.0	.4	1	2.0%	.1%	7.2%	.2%
Other Companies	3.1	.2	2.1	8	14.6%	1.8%	43.0%	1.5%
All Companies	21.0	11.9	4.8	547	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	21.0	11.9	4.8	547	100.0%	100.0%	100.0%	100.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Hardware Companies	12.5	10.6	.0	502	59.5%	89.6%	.0%	91.9%
All Turnkey & SW Companies	8.5	1.2	4.8	45	40.5%	10.4%	100.0%	8.1%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 77
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Racal-Redac	7.7	.3	6.2	35	13.1%	1.0%	35.4%	1.8%
Digital	7.1	5.1	.0	61	12.2%	18.3%	.0%	3.2%
Sun	6.4	5.6	.0	277	10.9%	20.0%	.0%	14.4%
Mentor Graphics	5.7	1.4	2.4	57	9.8%	5.1%	13.7%	2.9%
Computervision	4.3	1.8	1.1	35	7.4%	6.3%	6.0%	1.8%
Compaq	4.2	4.2	.0	698	7.1%	15.0%	.0%	36.3%
Dazix	4.0	.4	1.6	29	6.7%	1.4%	9.0%	1.5%
Hewlett-Packard	3.0	1.7	.4	155	5.2%	6.1%	2.1%	8.1%
IBM	2.7	1.7	.5	129	4.5%	6.2%	2.8%	6.7%
Intergraph	2.0	.9	.4	21	3.4%	3.0%	2.0%	1.1%
Scientific Calc.	1.9	.2	1.1	7	3.2%	.8%	6.3%	.3%
Valid	1.6	.1	.9	8	2.6%	.4%	5.3%	.4%
Calay	1.2	.4	.7	19	2.0%	1.3%	3.8%	1.0%
Research Machines	.9	.9	.0	139	1.5%	3.2%	.0%	7.2%
ICL	.7	.4	.2	19	1.2%	1.5%	1.3%	1.0%
Number One Systems	.6	.0	.5	14	1.0%	.1%	3.0%	.7%
BETRONEX	.5	.0	.5	0	.8%	.0%	2.8%	.0%
Data Technology/DATECH*	.4	.1	.3	12	.7%	.3%	1.7%	.6%
Apple Computer	.4	.3	.0	73	.6%	1.2%	.0%	3.8%
Solbourne	.2	.2	.0	14	.3%	.7%	.0%	.7%
Autodesk	.1	.0	.1	0	.2%	.0%	.8%	.0%
Schlumberger	.1	.0	.0	1	.2%	.1%	.2%	.1%
Academi Systems	.1	.0	.1	0	.2%	.0%	.4%	.0%
ALS Design	.1	.0	.1	0	.1%	.0%	.3%	.0%
CAD-UL	.1	.0	.1	0	.1%	.0%	.3%	.0%
Olivetti	.0	.0	.0	5	.1%	.1%	.0%	.3%
Robocom	.0	.0	.0	0	.0%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 77 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: United Kingdom
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	2.8	2.2	.5	114	4.8%	7.9%	2.7%	5.9%
All Companies	58.6	27.9	17.6	1,923	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	46.9	25.9	9.2	1,692	79.9%	92.8%	52.5%	88.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	11.8	2.0	8.3	231	20.1%	7.2%	47.5%	12.0%
All Hardware Companies	22.4	19.1	.0	1,464	38.2%	68.4%	.0%	76.2%
All Turnkey & SW Companies	36.3	8.8	17.6	458	61.8%	31.6%	100.0%	23.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 78
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Hewlett-Packard	44.4	34.2	2.5	3,148	24.0%	31.5%	5.6%	38.5%
IBM	19.5	12.6	3.7	807	10.6%	11.6%	8.4%	9.9%
Intergraph	18.4	9.8	3.7	192	9.9%	9.0%	8.2%	2.4%
Computervision	17.3	7.3	4.3	178	9.3%	6.7%	9.7%	2.2%
Siemens	9.8	5.0	3.5	135	5.3%	4.6%	7.9%	1.7%
CINTEK*	7.1	3.4	3.0	67	3.8%	3.2%	6.9%	.8%
Club Informatico SA*	6.7	3.0	3.3	260	3.6%	2.8%	7.4%	3.2%
Compaq	5.9	5.9	.0	988	3.2%	5.5%	.0%	12.1%
DECISA*	5.9	3.4	1.8	104	3.2%	3.1%	4.0%	1.3%
Control Data	5.6	3.2	.8	74	3.0%	2.9%	1.8%	.9%
Digital	5.0	3.7	.0	37	2.7%	3.4%	.0%	.5%
Investronica SA	5.0	4.0	.5	199	2.7%	3.7%	1.1%	2.4%
Mentor Graphics	4.8	1.4	2.0	48	2.6%	1.2%	4.6%	.6%
Autodesk	4.4	.0	4.4	0	2.4%	.0%	10.0%	.0%
FHECOR*	4.0	.0	4.0	0	2.1%	.0%	8.9%	.0%
Asicom*	3.1	.3	2.8	100	1.7%	.3%	6.4%	1.2%
Star Informatic	3.1	2.7	.8	143	1.7%	2.5%	1.8%	1.7%
Eptisa*	2.9	.1	2.3	2	1.6%	.1%	5.2%	.0%
Dazix	1.8	.3	.7	13	1.0%	.3%	1.6%	.2%
Apple Computer	1.8	1.6	.0	340	1.0%	1.4%	.0%	4.2%
Sun	1.8	1.6	.0	74	1.0%	1.4%	.0%	.9%
Aplein*	1.7	1.6	.1	20	.9%	1.5%	.2%	.2%
McDonnell Douglas	1.6	.9	.6	27	.9%	.8%	1.4%	.3%
ARKTEC	1.4	.4	1.0	40	.8%	.4%	2.2%	.5%
Soft*	1.4	.0	1.2	0	.7%	.0%	2.8%	.0%
Dassault*	1.4	.0	1.2	0	.7%	.0%	2.6%	.0%
Schlumberger	1.3	.5	.5	14	.7%	.4%	1.1%	.2%
ESRI	1.2	.0	1.1	0	.7%	.0%	2.4%	.0%
Ziegler	1.2	.0	1.2	0	.7%	.0%	2.7%	.0%
DAPCO	1.2	.0	.8	0	.6%	.0%	1.8%	.0%
CAD TECH Iberica*	1.1	.6	.5	59	.6%	.5%	1.0%	.7%
MacNeal-Schwendler	1.0	.0	1.0	0	.5%	.0%	2.1%	.0%
DELTA CAD*	1.0	.4	.4	12	.5%	.4%	1.0%	.1%

(Continued)

TABLE NUMBER: 78
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Silicon Graphics	1.0	.9	.0	22	.5%	.8%	.0%	.3%
CENTUNION*	.9	.2	.5	12	.5%	.2%	1.1%	.1%
STI-Straessle	.9	.2	.5	8	.5%	.2%	1.1%	.1%
Racal-Redac	.8	.0	.7	4	.4%	.0%	1.5%	.0%
Fides Industrielle Automation	.7	.1	.6	5	.4%	.1%	1.4%	.1%
PAFEC	.7	.0	.7	0	.4%	.0%	1.5%	.0%
Kockums Computer Systems	.7	.2	.4	32	.4%	.1%	.8%	.4%
Cimatron	.6	.3	.3	17	.3%	.2%	.6%	.2%
ACERI SA	.6	.1	.3	3	.3%	.1%	.7%	.0%
Genasys II	.4	.1	.2	1	.2%	.1%	.5%	.0%
Valid	.4	.0	.3	2	.2%	.0%	.6%	.0%
Delcam International	.4	.1	.2	7	.2%	.1%	.5%	.1%
Unisys	.4	.2	.1	5	.2%	.2%	.3%	.1%
PDA Engineering	.4	.0	.4	0	.2%	.0%	.8%	.0%
Logic Control*	.4	.2	.1	80	.2%	.2%	.2%	1.0%
Tebis	.3	.1	.2	2	.2%	.0%	.5%	.0%
Nemetschek	.3	.1	.2	5	.2%	.1%	.4%	.1%
Moss Systems	.3	.0	.3	0	.2%	.0%	.6%	.0%
Ground Modelling Systems	.3	.2	.1	1	.1%	.1%	.3%	.0%
Kontron Instruments	.2	.1	.1	4	.1%	.1%	.3%	.0%
DAT Standard Information syste	.2	.0	.2	0	.1%	.0%	.5%	.0%
Instrumatic Espanola	.2	.0	.2	0	.1%	.0%	.5%	.0%
Parametric Technology	.2	.0	.2	0	.1%	.0%	.4%	.0%
Vero International Software	.2	.0	.2	0	.1%	.0%	.4%	.0%
Robocom	.2	.0	.2	0	.1%	.0%	.4%	.0%
TOOL Software	.2	.1	.1	4	.1%	.0%	.2%	.0%
Anilam Electronics	.2	.1	.1	2	.1%	.0%	.2%	.0%
Serbi	.2	.0	.2	0	.1%	.0%	.4%	.0%
BATISOFT	.2	.0	.1	5	.1%	.0%	.2%	.1%
Calay	.1	.1	.1	2	.1%	.0%	.2%	.0%
Zycad	.1	.1	.0	1	.1%	.1%	.0%	.0%

(Continued)

TABLE NUMBER: 78 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
CAD Lab	.1	.0	.1	0	.1%	.0%	.2%	.0%
XAO Industrie	.1	.0	.1	3	.0%	.0%	.1%	.0%
Solbourne	.1	.1	.0	7	.0%	.1%	.0%	.1%
VLSI Technology	.1	.0	.1	0	.0%	.0%	.1%	.0%
Albert Nestler	.1	.0	.0	1	.0%	.0%	.1%	.0%
Aucotec	.1	.0	.0	1	.0%	.0%	.1%	.0%
CANTEK	.1	.0	.0	0	.0%	.0%	.1%	.0%
MCS	.1	.0	.1	0	.0%	.0%	.1%	.0%
BETRONEX	.0	.0	.0	0	.0%	.0%	.1%	.0%
ALS Design	.0	.0	.0	0	.0%	.0%	.1%	.0%
DECAD	.0	.0	.0	0	.0%	.0%	.0%	.0%
Pathtrace	.0	.0	.0	0	.0%	.0%	.0%	.0%
Viewlogic Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
CAD-UL	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	.0	.0	.0	761	.0%	.0%	.0%	9.3%
All Companies	185.0	108.4	44.4	8,171	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	153.2	94.6	29.3	7,523	82.8%	87.2%	66.0%	92.1%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	31.8	13.8	15.1	648	17.2%	12.8%	34.0%	7.9%
All Hardware Companies	61.6	53.3	.0	6,360	33.3%	49.2%	.0%	77.8%
All Turnkey & SW Companies	123.4	55.1	44.4	1,811	66.7%	50.8%	100.0%	22.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 79
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Hewlett-Packard	32.2	24.4	2.5	1,365	31.2%	43.0%	9.9%	56.3%
Intergraph	15.2	8.5	2.7	169	14.8%	14.9%	10.8%	7.0%
Computervision	15.2	6.5	3.7	122	14.7%	11.5%	14.5%	5.0%
Siemens	8.3	4.1	2.9	110	8.0%	7.3%	11.4%	4.5%
Mentor Graphics	4.8	1.4	2.0	48	4.7%	2.4%	8.0%	2.0%
DECISA*	4.4	2.5	1.3	68	4.2%	4.4%	5.2%	2.8%
CIMTEK*	4.3	2.2	1.6	37	4.1%	3.9%	6.5%	1.5%
Star Informatic	3.1	2.7	.8	143	3.0%	4.8%	3.2%	5.9%
Control Data	2.4	1.6	.4	56	2.3%	2.9%	1.6%	2.3%
Eptisa*	2.1	.0	1.6	1	2.0%	.1%	6.4%	.0%
Dazix	1.8	.3	.7	13	1.7%	.5%	2.8%	.5%
Aplein*	1.7	1.6	.1	20	1.7%	2.9%	.4%	.8%
IBM	1.7	1.1	.4	45	1.7%	1.9%	1.4%	1.8%
Sun	1.4	1.3	.0	64	1.4%	2.2%	.0%	2.6%
McDonnell Douglas	1.3	.7	.5	15	1.3%	1.2%	2.0%	.6%
DAPCO	1.2	.0	.8	0	1.2%	.0%	3.2%	.0%
Digital	1.1	.8	.0	37	1.1%	1.4%	.0%	1.5%
Soft*	1.0	.0	.9	0	.9%	.0%	3.4%	.0%
Silicon Graphics	1.0	.8	.0	21	.9%	1.5%	.0%	.9%
Schlumberger	.9	.3	.4	8	.9%	.6%	1.4%	.3%
STI-Straessle	.9	.2	.5	8	.8%	.4%	1.9%	.3%
ESRI	.7	.0	.6	0	.7%	.0%	2.4%	.0%
Racal-Redac	.7	.0	.6	4	.7%	.1%	2.2%	.1%
Kockums Computer Systems	.7	.2	.4	32	.6%	.3%	1.4%	1.3%
PAFEC	.6	.0	.6	0	.6%	.0%	2.4%	.0%
ARKTEC	.4	.3	.2	18	.4%	.4%	.7%	.8%
Dassault*	.4	.0	.4	0	.4%	.0%	1.5%	.0%
Cimatron	.4	.2	.2	12	.4%	.3%	.8%	.5%
Valid	.4	.0	.3	2	.4%	.1%	1.0%	.1%
Delcam International	.4	.1	.2	7	.4%	.2%	.8%	.3%
Autodesk	.4	.0	.4	0	.4%	.0%	1.5%	.0%
Genasys II	.4	.1	.2	1	.3%	.2%	.9%	.0%

(Continued)

TABLE NUMBER: 79 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Asicom*	.4	.0	.3	11	.3%	.1%	1.3%	.5%
CAD TECH Iberica*	.3	.2	.1	14	.3%	.3%	.5%	.6%
Unisys	.3	.2	.1	4	.3%	.3%	.4%	.2%
Moss Systems	.3	.0	.3	0	.3%	.0%	1.0%	.0%
MacNeal-Schwendler	.3	.0	.2	0	.2%	.0%	.9%	.0%
PDA Engineering	.2	.0	.2	0	.2%	.0%	.9%	.0%
Parametric Technology	.2	.0	.2	0	.2%	.0%	.7%	.0%
Calay	.1	.1	.1	2	.1%	.1%	.3%	.1%
Fides Industrielle Automation	.1	.0	.1	2	.1%	.0%	.5%	.1%
CAD Lab	.1	.0	.1	0	.1%	.0%	.4%	.0%
Zycad	.1	.1	.0	1	.1%	.2%	.0%	.0%
XAO Industrie	.1	.0	.1	3	.1%	.1%	.2%	.1%
VLSI Technology	.1	.0	.1	0	.1%	.0%	.2%	.0%
Albert Nestler	.1	.0	.0	1	.1%	.0%	.1%	.0%
CAMTEK	.0	.0	.0	0	.0%	.0%	.1%	.0%
TOOL Software	.0	.0	.0	1	.0%	.0%	.1%	.0%
DECAD	.0	.0	.0	0	.0%	.0%	.0%	.0%
MCS	.0	.0	.0	0	.0%	.0%	.1%	.0%
Nemetschek	.0	.0	.0	0	.0%	.0%	.1%	.0%
Aucotec	.0	.0	.0	0	.0%	.0%	.0%	.0%
Serbi	.0	.0	.0	0	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	1	.0%	.0%	.0%	.1%
Viewlogic Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Companies	103.1	56.8	25.3	2,425	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	85.0	48.8	17.1	2,056	82.5%	86.0%	67.6%	84.8%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	18.1	8.0	8.2	369	17.5%	14.0%	32.4%	15.2%
All Hardware Companies	24.2	20.4	.0	1,211	23.5%	35.9%	.0%	50.0%
All Turnkey & SW Companies	78.9	36.4	25.3	1,214	76.5%	64.1%	100.0%	50.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 80
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	15.3	9.2	3.4	202	40.1%	40.1%	43.8%	33.5%
Digital	3.9	2.9	.0	0	10.3%	12.5%	.0%	.0%
Control Data	3.2	1.5	.4	19	8.5%	6.6%	4.8%	3.1%
Intergraph	2.6	1.3	.4	24	6.9%	5.8%	5.6%	3.9%
Computervision	1.9	.8	.4	54	4.9%	3.5%	5.4%	8.9%
Siemens	1.6	.9	.6	25	4.1%	3.9%	7.8%	4.2%
Dassault*	.9	.0	.8	0	2.4%	.0%	10.1%	.0%
Hewlett-Packard	.9	.7	.0	44	2.3%	3.2%	.0%	7.2%
MacNeal-Schwendler	.7	.0	.7	0	1.9%	.0%	9.2%	.0%
CIMTEK*	.7	.4	.2	6	1.9%	1.9%	2.1%	1.0%
DECISA*	.6	.4	.2	6	1.6%	1.5%	2.2%	1.0%
Fides Industrielle Automation	.6	.1	.5	3	1.5%	.3%	6.5%	.5%
ESRI	.4	.0	.4	0	1.1%	.0%	4.7%	.0%
Schlumberger	.4	.2	.1	6	1.0%	.7%	1.7%	1.0%
Sun	.4	.3	.0	11	.9%	1.3%	.0%	1.8%
McDonnell Douglas	.3	.2	.1	12	.9%	.8%	1.7%	2.0%
PDA Engineering	.1	.0	.1	0	.3%	.0%	1.6%	.0%
Unisys	.1	.0	.0	1	.2%	.2%	.4%	.2%
Solbourne	.1	.1	.0	6	.2%	.3%	.0%	1.0%
Zycad	.0	.0	.0	0	.1%	.1%	.0%	.0%
MCS	.0	.0	.0	0	.1%	.0%	.3%	.0%
Silicon Graphics	.0	.0	.0	0	.1%	.1%	.0%	.1%

(Continued)

TABLE NUMBER: 80 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	3.4	4.0	.0	185	8.8%	17.3%	.0%	30.7%
All Companies	38.2	22.9	7.7	604	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	35.1	21.9	5.8	575	92.0%	95.8%	75.6%	95.3%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	3.1	1.0	1.9	28	8.0%	4.2%	24.4%	4.7%
All Hardware Companies	10.9	9.1	.0	261	28.7%	39.8%	.0%	43.3%
All Turnkey & SW Companies	27.2	13.8	7.7	343	71.3%	60.2%	100.0%	56.7%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 81
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Hewlett-Packard	11.3	9.1	.0	1,740	25.9%	31.6%	.0%	33.8%
Club Informatico SA*	6.7	3.0	3.3	260	15.3%	10.5%	28.9%	5.1%
Compaq	5.9	5.9	.0	988	13.6%	20.6%	.0%	19.2%
Investronica SA	5.0	4.0	.5	199	11.3%	13.8%	4.4%	3.9%
Autodesk	4.1	.0	4.1	0	9.3%	.0%	35.8%	.0%
FHECOR*	4.0	.0	4.0	0	9.1%	.0%	34.8%	.0%
Asicom*	2.8	.3	2.5	89	6.4%	1.0%	22.1%	1.7%
IBM	2.5	2.4	.0	560	5.7%	8.3%	.0%	10.9%
CIMTEK*	2.1	.8	1.2	24	4.9%	2.7%	10.9%	.5%
Apple Computer	1.8	1.6	.0	340	4.0%	5.4%	.0%	6.6%
Ziegler	1.2	.0	1.2	0	2.8%	.0%	10.6%	.0%
ARKTEC	1.0	.2	.8	22	2.3%	.6%	7.2%	.4%
DELTA CAD*	1.0	.4	.4	12	2.2%	1.5%	3.9%	.2%
DECISA*	1.0	.6	.3	30	2.2%	1.9%	2.5%	.6%
CENTUNION*	.9	.2	.5	12	2.0%	.8%	4.2%	.2%
Eptisa*	.9	.0	.7	1	2.0%	.1%	6.2%	.0%
CAD TECN Iberica*	.8	.4	.3	45	1.8%	1.4%	2.8%	.9%
ACERI SA	.6	.1	.3	3	1.3%	.4%	2.8%	.1%
Intergraph	.5	.0	.5	0	1.2%	.0%	4.4%	.0%
Soft*	.4	.0	.4	0	.9%	.0%	3.3%	.0%
Logic Control*	.4	.2	.1	80	.8%	.7%	.8%	1.6%
Tebis	.3	.1	.2	2	.8%	.2%	2.1%	.0%
Nemetschek	.3	.1	.2	5	.6%	.4%	1.5%	.1%
Computervision	.3	.0	.2	2	.6%	.0%	2.1%	.0%
Ground Modelling Systems	.3	.2	.1	1	.6%	.6%	1.1%	.0%
Kontron Instruments	.2	.1	.1	4	.5%	.4%	1.1%	.1%
DAT Standard Information syste	.2	.0	.2	0	.5%	.0%	1.8%	.0%
Instrumatic Espanola	.2	.0	.2	0	.5%	.0%	1.8%	.0%
Vero International Software	.2	.0	.2	0	.4%	.0%	1.5%	.0%
Cimatron	.2	.1	.1	5	.4%	.3%	.6%	.1%
Robocom	.2	.0	.2	0	.4%	.0%	1.5%	.0%
Anilam Electronics	.2	.1	.1	2	.4%	.2%	.8%	.0%

(Continued)

TABLE NUMBER: 81 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
BATISOFT	.2	.0	.1	5	.3%	.1%	.7%	.1%
Serbi	.2	.0	.2	0	.3%	.0%	1.3%	.0%
TOOL Software	.1	.0	.1	3	.3%	.1%	.5%	.1%
ESRI	.1	.0	.1	0	.3%	.0%	1.0%	.0%
Racal-Redac	.1	.0	.1	0	.2%	.0%	.9%	.0%
PAFEC	.1	.0	.1	0	.2%	.0%	.6%	.0%
Aucotec	.0	.0	.0	1	.1%	.0%	.2%	.0%
BETROMEX	.0	.0	.0	0	.1%	.0%	.4%	.0%
Genasys II	.0	.0	.0	0	.1%	.0%	.2%	.0%
ALS Design	.0	.0	.0	0	.1%	.0%	.3%	.0%
Pathtrace	.0	.0	.0	0	.1%	.0%	.2%	.0%
CANTEK	.0	.0	.0	0	.0%	.0%	.1%	.0%
Viewlogic Systems	.0	.0	.0	0	.0%	.0%	.1%	.0%
CAD-UL	.0	.0	.0	0	.0%	.0%	.1%	.0%
MCS	.0	.0	.0	0	.0%	.0%	.1%	.0%
Schlumberger	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	.0	.0	.0	708	.0%	.0%	.0%	13.8%
All Companies	43.7	28.8	11.4	5,143	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	33.0	23.9	6.4	4,892	75.5%	82.9%	56.0%	95.1%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	10.7	4.9	5.0	251	24.5%	17.1%	44.0%	4.9%
All Hardware Companies	26.5	23.8	.0	4,888	60.5%	82.7%	.0%	95.0%
All Turnkey & SW Companies	17.3	5.0	11.4	255	39.5%	17.3%	100.0%	5.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 82
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Hewlett-Packard	19.0	13.6	2.2	996	21.6%	26.2%	11.1%	30.0%
IBM	15.5	9.6	3.2	430	17.5%	18.6%	15.8%	13.0%
Computervision	15.2	6.4	3.8	156	17.2%	12.4%	18.9%	4.7%
CIMTEK*	7.1	3.4	3.0	67	8.1%	6.6%	15.1%	2.0%
Control Data	5.3	3.0	.7	68	6.0%	5.7%	3.6%	2.1%
Investronica SA	5.0	4.0	.5	199	5.6%	7.7%	2.5%	6.0%
Intergraph	3.1	1.7	.6	33	3.5%	3.2%	3.1%	1.0%
Digital	2.7	2.0	.0	19	3.1%	3.8%	.0%	.6%
Compaq	2.1	2.1	.0	354	2.4%	4.1%	.0%	10.7%
Asicom*	1.9	.2	1.7	60	2.1%	.4%	8.4%	1.8%
Autodesk	1.7	.0	1.7	0	1.9%	.0%	8.4%	.0%
Schlumberger	1.3	.5	.5	14	1.5%	.9%	2.4%	.4%
Dassault*	1.3	.0	1.1	0	1.4%	.0%	5.3%	.0%
CAD TECH Iberica*	1.1	.6	.5	59	1.3%	1.1%	2.2%	1.8%
MacNeal-Schwendler	1.0	.0	.9	0	1.1%	.0%	4.5%	.0%
Silicon Graphics	1.0	.8	.0	21	1.1%	1.6%	.0%	.6%
DELTA CAD*	.9	.4	.4	11	1.0%	.8%	2.0%	.3%
McDonnell Douglas	.9	.5	.4	13	1.0%	.9%	1.7%	.4%
Club Informatico SA*	.9	.4	.4	34	1.0%	.8%	2.1%	1.0%
Apple Computer	.7	.6	.0	139	.8%	1.2%	.0%	4.2%
Sun	.7	.6	.0	29	.8%	1.2%	.0%	.9%
Fides Industrielle Automation	.7	.1	.6	5	.8%	.2%	3.1%	.2%
STI-Straessle	.6	.2	.4	6	.7%	.3%	1.7%	.2%
FHECOR*	.6	.0	.6	0	.7%	.0%	2.9%	.0%
Cimatron	.6	.3	.3	17	.7%	.5%	1.3%	.5%
ACERI SA	.6	.1	.3	3	.6%	.2%	1.6%	.1%
Aplein*	.5	.5	.0	6	.6%	.9%	.1%	.2%
Ziegler	.5	.0	.5	0	.6%	.0%	2.4%	.0%
PAFEC	.5	.0	.5	0	.5%	.0%	2.3%	.0%
CENTUNION*	.4	.1	.2	6	.5%	.2%	1.2%	.2%
Delcam International	.4	.1	.2	7	.4%	.3%	1.0%	.2%
Unisys	.4	.2	.1	5	.4%	.4%	.7%	.2%

(Continued)

TABLE NUMBER: 82 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
PDA Engineering	.4	.0	.4	0	.4%	.0%	1.8%	.0%
Logic Control*	.4	.2	.1	80	.4%	.4%	.4%	2.4%
Tebis	.3	.1	.2	2	.4%	.1%	1.2%	.1%
DAI Standard Information syste	.2	.0	.2	0	.2%	.0%	1.0%	.0%
Parametric Technology	.2	.0	.2	0	.2%	.0%	.9%	.0%
Vero International Software	.2	.0	.2	0	.2%	.0%	.8%	.0%
Anilam Electronics	.2	.1	.1	2	.2%	.1%	.4%	.1%
DAPCO	.1	.0	.1	0	.1%	.0%	.4%	.0%
CAD Lab	.1	.0	.1	0	.1%	.0%	.4%	.0%
Serbi	.1	.0	.1	0	.1%	.0%	.5%	.0%
XAO Industrie	.1	.0	.1	3	.1%	.1%	.2%	.1%
Robocom	.1	.0	.1	0	.1%	.0%	.4%	.0%
Albert Nestler	.1	.0	.0	1	.1%	.0%	.1%	.0%
CAMTEK	.1	.0	.0	0	.1%	.0%	.2%	.0%
MCS	.1	.0	.1	0	.1%	.0%	.3%	.0%
Mentor Graphics	.1	.0	.0	0	.1%	.0%	.1%	.0%
Pathtrace	.0	.0	.0	0	.0%	.0%	.1%	.0%
Other Companies	.0	.0	.0	414	.0%	.0%	.0%	12.5%
All Companies	88.2	51.9	20.1	3,314	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	76.6	47.0	14.6	3,044	86.9%	90.6%	72.6%	91.9%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	11.6	4.9	5.5	269	13.1%	9.4%	27.4%	8.1%
All Hardware Companies	23.0	20.0	.0	2,262	26.1%	38.6%	.0%	68.3%
All Turnkey & SW Companies	65.2	31.9	20.1	1,052	73.9%	61.4%	100.0%	31.7%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 83
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Hewlett-Packard	18.2	15.0	.0	1,600	43.7%	52.4%	.0%	54.6%
Intergraph	6.3	3.4	1.3	65	15.1%	11.7%	17.0%	2.2%
Club Informatico SA*	5.8	2.6	2.9	226	14.0%	9.2%	39.0%	7.7%
FHECOR*	3.4	.0	3.4	0	8.1%	.0%	45.9%	.0%
Star Informatic	3.1	2.7	.8	143	7.5%	9.5%	11.0%	4.9%
Autodesk	2.0	.0	2.0	0	4.7%	.0%	26.7%	.0%
IBM	1.9	1.3	.3	142	4.6%	4.7%	4.1%	4.8%
ARKTEC	1.4	.4	1.0	40	3.4%	1.5%	13.5%	1.4%
Soft*	1.4	.0	1.2	0	3.3%	.0%	16.8%	.0%
Compaq	1.3	1.3	.0	218	3.2%	4.6%	.0%	7.5%
Aplein*	1.2	1.1	.1	14	2.9%	4.0%	.8%	.5%
Asicom*	.8	.1	.7	25	1.9%	.3%	9.7%	.9%
Computervision	.7	.3	.2	8	1.8%	1.0%	2.9%	.3%
Apple Computer	.7	.6	.0	136	1.7%	2.2%	.0%	4.6%
Kockums Computer Systems	.7	.2	.4	32	1.6%	.6%	4.9%	1.1%
McDonnell Douglas	.6	.3	.2	8	1.3%	1.0%	3.0%	.3%
Digital	.5	.4	.0	3	1.2%	1.3%	.0%	.1%
CENTUNION*	.4	.1	.2	6	1.1%	.4%	3.3%	.2%
Nemetschek	.3	.1	.2	5	.7%	.4%	2.6%	.2%
DAPCO	.2	.0	.2	0	.6%	.0%	2.2%	.0%
TOOL Software	.2	.1	.1	4	.4%	.2%	1.1%	.1%
Ziegler	.2	.0	.2	0	.4%	.0%	2.2%	.0%
BATISOFT	.2	.0	.1	5	.4%	.1%	1.1%	.2%
Control Data	.1	.1	.0	2	.3%	.3%	.3%	.1%
DELTA CAD*	.1	.0	.0	1	.2%	.1%	.5%	.0%
Dassault*	.1	.0	.1	0	.2%	.0%	1.1%	.0%
Robocom	.1	.0	.1	0	.2%	.0%	1.1%	.0%
Sun	.1	.1	.0	3	.2%	.2%	.0%	.1%
Ground Modelling Systems	.1	.0	.0	0	.1%	.1%	.4%	.0%
PAFEC	.0	.0	.0	0	.1%	.0%	.5%	.0%
Serbi	.0	.0	.0	0	.1%	.0%	.4%	.0%

(Continued)

TABLE NUMBER: 83 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
=====	=====	=====	=====	=====	=====	=====	=====	=====
Other Companies	.0	.0	.0	205	.0%	.0%	.0%	7.0%
All Companies	41.5	28.6	7.3	2,928	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	35.0	25.1	4.3	2,699	84.4%	87.7%	57.9%	92.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	6.5	3.5	3.1	229	15.6%	12.3%	42.1%	7.8%
All Hardware Companies	23.7	20.2	.0	2,557	57.0%	70.5%	.0%	87.3%
All Turnkey & SW Companies	17.9	8.4	7.3	372	43.0%	29.5%	100.0%	12.7%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 84
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Siemens	9.8	5.0	3.5	135	34.6%	34.9%	37.9%	18.0%
Intergraph	8.1	4.3	1.6	85	28.4%	30.1%	17.6%	11.3%
Eptisa*	2.9	.1	2.3	2	10.3%	.4%	25.2%	.3%
ESRI	1.2	.0	1.1	0	4.3%	.0%	11.7%	.0%
IBM	1.1	.8	.2	103	3.9%	5.6%	1.6%	13.7%
Hewlett-Packard	.9	.7	.0	80	3.2%	5.1%	.0%	10.6%
Compaq	.9	.9	.0	143	3.0%	6.0%	.0%	19.0%
DAPCO	.7	.0	.5	0	2.5%	.0%	5.3%	.0%
Digital	.6	.4	.0	4	1.9%	2.8%	.0%	.5%
Autodesk	.4	.0	.4	0	1.5%	.0%	4.8%	.0%
Genasys II	.4	.1	.2	1	1.4%	1.0%	2.6%	.2%
Computervision	.3	.2	.1	5	1.2%	1.2%	.8%	.7%
Asicom*	.3	.0	.3	10	1.1%	.2%	3.0%	1.3%
Moss Systems	.3	.0	.3	0	1.0%	.0%	2.8%	.0%
STI-Straessle	.2	.1	.1	2	.8%	.3%	1.4%	.3%
Ground Modelling Systems	.2	.1	.1	1	.7%	.9%	1.1%	.2%
Apple Computer	.2	.2	.0	37	.7%	1.2%	.0%	5.0%
McDonnell Douglas	.2	.1	.1	5	.7%	.7%	.8%	.7%
Control Data	.2	.1	.0	4	.6%	.8%	.3%	.6%
PAFEC	.2	.0	.2	0	.6%	.0%	1.8%	.0%
Ziegler	.1	.0	.1	0	.5%	.0%	1.4%	.0%
Sun	.1	.1	.0	3	.2%	.4%	.0%	.4%
Silicon Graphics	.0	.0	.0	0	.1%	.1%	.0%	.1%
Robocom	.0	.0	.0	0	.0%	.0%	.1%	.0%
Solbourne	.0	.0	.0	1	.0%	.1%	.0%	.1%

(Continued)

TABLE NUMBER: 84 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	.0	1.2	.0	129	.0%	8.1%	.0%	17.2%
All Companies	28.5	14.4	9.2	751	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	16.9	9.2	4.4	613	59.3%	63.9%	48.0%	81.6%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	11.6	5.2	4.8	139	40.7%	36.1%	52.0%	18.4%
All Hardware Companies	4.0	3.6	.0	499	13.9%	24.9%	.0%	66.4%
All Turnkey & SW Companies	24.5	10.8	9.2	252	86.1%	75.1%	100.0%	33.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 85
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Hewlett-Packard	6.3	4.9	.3	474	23.6%	36.2%	3.6%	40.2%
DECISA*	5.9	3.4	1.8	104	22.0%	25.0%	22.7%	8.8%
Mentor Graphics	4.8	1.3	2.0	47	17.8%	9.9%	25.9%	4.0%
Dezix	1.8	.3	.7	13	6.7%	2.1%	9.3%	1.1%
Compaq	1.6	1.6	.0	273	6.1%	12.1%	.0%	23.2%
Digital	1.3	.9	.0	11	4.7%	6.8%	.0%	.9%
IBM	1.1	.8	.1	132	4.0%	6.2%	1.5%	11.2%
Computervision	1.0	.4	.3	8	3.8%	3.0%	3.2%	.7%
Intergraph	.9	.4	.2	10	3.4%	3.2%	2.1%	.8%
Sun	.9	.8	.0	40	3.4%	5.9%	.0%	3.4%
Racal-Redac	.8	.0	.7	4	2.9%	.2%	8.4%	.3%
Ziegler	.4	.0	.4	0	1.6%	.0%	5.5%	.0%
Valid	.4	.0	.3	2	1.5%	.2%	3.2%	.2%
Autodesk	.4	.0	.4	0	1.3%	.0%	4.5%	.0%
Kontron Instruments	.2	.1	.1	4	.9%	.9%	1.5%	.3%
Instrumatic Espanola	.2	.0	.2	0	.8%	.0%	2.6%	.0%
Asicom*	.2	.0	.2	5	.6%	.1%	1.9%	.4%
Apple Computer	.1	.1	.0	27	.5%	.9%	.0%	2.3%
Calay	.1	.1	.1	2	.5%	.4%	1.0%	.2%
Zycad	.1	.1	.0	1	.5%	.9%	.0%	.1%
DAPCO	.1	.0	.1	0	.4%	.0%	1.0%	.0%
VLSI Technology	.1	.0	.1	0	.3%	.0%	.8%	.0%
Solbourne	.1	.1	.0	6	.3%	.4%	.0%	.5%
Aucotec	.1	.0	.0	1	.2%	.1%	.4%	.1%
BETRONEX	.0	.0	.0	0	.1%	.0%	.5%	.0%
MacNeal-Schwendler	.0	.0	.0	0	.1%	.0%	.5%	.0%
ALS Design	.0	.0	.0	0	.1%	.0%	.4%	.0%
DECAD	.0	.0	.0	0	.1%	.0%	.1%	.0%
Serbi	.0	.0	.0	0	.1%	.0%	.4%	.0%
Viewlogic Systems	.0	.0	.0	0	.1%	.0%	.3%	.0%
CAD-UL	.0	.0	.0	0	.0%	.0%	.1%	.0%
Schlumberger	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 85 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	.0	.0	.0	13	.0%	.0%	.0%	1.1%
All Companies	26.8	13.6	7.8	1,178	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	24.7	13.4	6.1	1,167	92.0%	98.5%	78.0%	99.1%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	2.1	.2	1.7	11	8.0%	1.5%	22.0%	.9%
All Hardware Companies	11.0	9.6	.0	1,043	40.9%	70.6%	.0%	88.5%
All Turnkey & SW Companies	15.8	4.0	7.8	135	59.1%	29.4%	100.0%	11.5%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 86
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Hewlett-Packard	5.4	4.2	.2	403	31.9%	46.7%	5.2%	45.8%
Mentor Graphics	2.9	.8	1.2	29	17.2%	9.3%	26.0%	3.3%
DECISA*	2.4	1.4	.7	39	14.0%	15.6%	15.3%	4.5%
Compaq	1.2	1.2	.0	193	6.9%	12.8%	.0%	21.9%
Dazix	1.1	.2	.4	8	6.4%	2.4%	9.2%	.9%
Digital	.5	.4	.0	4	3.0%	4.1%	.0%	.5%
IBM	.5	.5	.0	106	2.8%	5.0%	.0%	12.1%
Intergraph	.5	.2	.1	5	2.7%	2.7%	1.7%	.5%
Sun	.4	.4	.0	18	2.5%	4.1%	.0%	2.1%
Computervision	.3	.1	.1	3	2.0%	1.6%	1.7%	.3%
Autodesk	.3	.0	.3	0	1.8%	.0%	6.7%	.0%
Racal-Redac	.3	.0	.2	1	1.5%	.1%	4.5%	.1%
Ziegler	.2	.0	.2	0	1.4%	.0%	5.2%	.0%
Valid	.2	.0	.1	1	1.4%	.2%	3.0%	.1%
Asicom*	.2	.0	.2	5	.9%	.1%	3.2%	.6%
Zycad	.1	.1	.0	1	.8%	1.3%	.0%	.1%
DAPCO	.1	.0	.1	0	.7%	.0%	1.7%	.0%
Apple Computer	.1	.1	.0	14	.4%	.7%	.0%	1.5%
Aucotec	.1	.0	.0	1	.4%	.1%	.6%	.1%
VLSI Technology	.1	.0	.0	0	.3%	.0%	.9%	.0%
MacNeal-Schwendler	.0	.0	.0	0	.2%	.0%	.9%	.0%
Calay	.0	.0	.0	0	.2%	.1%	.4%	.1%
Serbi	.0	.0	.0	0	.2%	.0%	.6%	.0%
Viewlogic Systems	.0	.0	.0	0	.2%	.0%	.4%	.0%
ALS Design	.0	.0	.0	0	.1%	.0%	.4%	.0%
Solbourne	.0	.0	.0	1	.1%	.1%	.0%	.2%

(Continued)

TABLE NUMBER: 86 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
=====	=====	=====	=====	=====	=====	=====	=====	=====
Other Companies	.0	.0	.6	47	.0%	.0%	12.3%	5.3%
All Companies	16.9	9.0	4.7	880	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	16.1	9.0	4.0	878	95.5%	99.7%	86.5%	99.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.8	.0	.6	3	4.5%	.3%	13.5%	.3%
All Hardware Companies	7.6	6.7	.0	801	45.3%	73.8%	.0%	91.0%
All Turnkey & SW Companies	9.2	2.4	4.7	79	54.7%	26.2%	100.0%	9.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 87
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: IC Layout
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
DECISA*	1.2	.7	.4	18	50.9%	60.2%	60.3%	23.1%
Mentor Graphics	.8	.2	.3	8	33.2%	18.6%	56.9%	9.9%
Hewlett-Packard	.6	.5	.0	50	24.1%	39.8%	.0%	64.7%
Sun	.3	.2	.0	12	12.5%	20.3%	.0%	15.9%
Digital	.2	.2	.0	2	8.6%	12.7%	.0%	2.3%
Valid	.1	.0	.0	0	2.2%	.0%	5.2%	.3%
Solbourne	.0	.0	.0	3	1.7%	3.4%	.0%	4.0%
VLSI Technology	.0	.0	.0	0	1.3%	.0%	3.4%	.1%
Other Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Companies	2.3	1.2	.6	77	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	2.3	1.2	.6	77	100.0%	100.0%	100.0%	100.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Hardware Companies	1.1	1.0	.0	69	49.1%	80.5%	.0%	89.5%
All Turnkey & SW Companies	1.2	.2	.6	8	50.9%	19.5%	100.0%	10.5%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 88
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
DECISA*	2.4	1.3	.7	47	31.0%	37.9%	27.7%	21.2%
Mentor Graphics	1.1	.3	.5	11	14.6%	8.4%	18.6%	5.0%
Daxix	.7	.1	.3	5	9.5%	2.1%	11.5%	2.4%
Computervision	.7	.3	.2	5	8.9%	8.1%	6.7%	2.5%
IBM	.6	.4	.1	26	7.8%	11.6%	4.7%	11.6%
Digital	.6	.4	.0	5	7.2%	11.9%	.0%	2.2%
Racal-Redac	.5	.0	.4	2	7.0%	.6%	17.4%	1.1%
Compaq	.5	.5	.0	81	6.3%	14.3%	.0%	36.5%
Intergraph	.5	.2	.1	5	6.0%	5.7%	3.2%	2.3%
Hewlett-Packard	.4	.2	.0	21	5.0%	6.6%	1.6%	9.3%
Kontron Instruments	.2	.1	.1	4	3.2%	3.6%	4.7%	1.8%
Instrumatic Espanola	.2	.0	.2	0	2.9%	.0%	7.9%	.0%
Sun	.2	.2	.0	9	2.8%	5.7%	.0%	4.2%
Ziegler	.2	.0	.2	0	2.5%	.0%	7.5%	.0%
Valid	.1	.0	.1	1	1.6%	.3%	3.2%	.3%
Calay	.1	.0	.1	2	1.4%	1.2%	2.4%	.8%
Apple Computer	.1	.1	.0	14	.9%	1.8%	.0%	6.2%
Autodesk	.0	.0	.0	0	.5%	.0%	1.6%	.0%
BETRONEX	.0	.0	.0	0	.5%	.0%	1.6%	.0%
DECAD	.0	.0	.0	0	.4%	.0%	.4%	.0%
ALS Design	.0	.0	.0	0	.1%	.0%	.4%	.0%
CAD-UL	.0	.0	.0	0	.1%	.0%	.4%	.0%
Schlumberger	.0	.0	.0	0	.1%	.0%	.0%	.1%
Solbourne	.0	.0	.0	1	.1%	.3%	.0%	.5%

(Continued)

TABLE NUMBER: 88 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Spain
 UNITS: Millions of Dollars/Actual Units

Company *****	----- Market Share -----							
	Total Revenue *****	Hardware Revenue *****	Software Revenue *****	Wkstns Shipped *****	Total Revenue *****	Hardware Revenue *****	Software Revenue *****	Wkstns Shipped *****
Other Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Companies	7.6	3.4	2.5	220	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	6.2	3.2	1.4	212	81.9%	94.6%	57.3%	96.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	1.4	.2	1.1	8	18.1%	5.4%	42.7%	3.8%
All Hardware Companies	2.2	2.0	.0	172	28.9%	58.5%	.0%	78.2%
All Turnkey & SW Companies	5.4	1.4	2.5	48	71.1%	41.5%	100.0%	21.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 89
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	37.9	24.2	7.4	1,422	10.5%	13.4%	6.1%	12.4%
Siemens	28.6	14.5	10.1	389	7.9%	8.0%	8.3%	3.4%
Hewlett-Packard	27.9	20.1	2.7	1,631	7.8%	11.1%	2.2%	14.2%
Computervision	23.1	9.8	5.8	238	6.4%	5.4%	4.8%	2.1%
Schlumberger	17.3	6.1	6.3	181	4.8%	3.4%	5.2%	1.6%
Investronica SA	13.3	10.6	1.3	531	3.7%	5.8%	1.1%	4.6%
Kewill Systems	13.2	4.0	7.3	265	3.7%	2.2%	6.0%	2.3%
STI-Straessle	12.9	3.0	7.1	120	3.6%	1.6%	5.8%	1.0%
Caditron	12.2	6.1	4.9	188	3.4%	3.3%	4.0%	1.6%
McDonnell Douglas	9.7	5.0	3.7	152	2.7%	2.7%	3.1%	1.3%
Digital	9.4	6.8	.0	69	2.6%	3.7%	.0%	.6%
ABB Cade International	8.4	4.9	2.5	36	2.3%	2.7%	2.1%	.3%
Compaq	7.9	7.9	.0	1,317	2.2%	4.4%	.0%	11.5%
Sun	7.1	6.2	.0	298	2.0%	3.4%	.0%	2.6%
Autodesk	6.9	.0	6.9	0	1.9%	.0%	5.6%	.0%
Control Data	6.7	3.7	.9	89	1.9%	2.1%	.8%	.8%
Mentor Graphics	6.2	1.7	2.6	61	1.7%	1.0%	2.1%	.5%
ISICAD	5.0	2.1	2.1	31	1.4%	1.2%	1.7%	.3%
Cimatron	5.0	2.2	2.2	146	1.4%	1.2%	1.8%	1.3%
Dazix	4.9	.8	2.0	36	1.4%	.4%	1.6%	.3%
Hemetschek	4.3	1.7	2.6	70	1.2%	.9%	2.1%	.6%
Apple Computer	3.5	3.1	.0	680	1.0%	1.7%	.0%	5.9%
Mannesmann PROCAD	3.1	1.6	.9	44	.9%	.9%	.7%	.4%
Star Informatic	3.0	2.6	.8	138	.8%	1.4%	.6%	1.2%
Intergraph	3.0	1.6	.6	31	.8%	.9%	.5%	.3%
Recal-Redac	2.8	.1	2.2	13	.8%	.1%	1.8%	.1%
Natra Datavision	2.7	1.2	1.1	29	.8%	.7%	.9%	.2%
Silicon Graphics	2.0	1.7	.0	43	.5%	.9%	.0%	.4%
DAT Standard Information syste	1.9	.0	1.8	0	.5%	.0%	1.5%	.0%
Vero International Software	1.8	.0	1.7	0	.5%	.0%	1.4%	.0%
Fides Industrielle Automation	1.8	.2	1.6	13	.5%	.1%	1.3%	.1%
Ziegler	1.7	.0	1.7	0	.5%	.0%	1.4%	.0%
VLSI Technology	1.6	.1	1.3	5	.4%	.0%	1.1%	.0%

(Continued)

TABLE NUMBER: 89
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company =====					----- Market Share -----			
	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====
Valid	1.6	.1	1.0	8	.4%	.1%	.8%	.1%
Kloekner-Moeller	1.6	.9	.6	25	.4%	.5%	.5%	.2%
Technische Computer Systeme	1.6	.3	1.2	40	.4%	.2%	1.0%	.3%
Soft-Tech Software Technologie	1.4	.1	1.2	36	.4%	.1%	.9%	.3%
Microway	1.4	1.0	.5	13	.4%	.5%	.4%	.1%
Dassault*	1.4	.0	1.2	0	.4%	.0%	.9%	.0%
Exapt	1.3	.6	.4	22	.4%	.3%	.4%	.2%
PAFEC	1.3	.0	1.3	0	.4%	.0%	1.0%	.0%
RIB/RZB	1.2	.1	.9	6	.3%	.1%	.8%	.0%
Ferranti	1.1	.4	.5	10	.3%	.2%	.4%	.1%
rotring euroCAD	1.1	.7	.4	29	.3%	.4%	.3%	.3%
Kockums Computer Systems	1.1	.3	.6	52	.3%	.1%	.5%	.5%
BATISOFT	1.0	.2	.5	31	.3%	.1%	.4%	.3%
LPKF	.9	.6	.2	36	.2%	.3%	.2%	.3%
Laser-Scan	.9	.2	.5	3	.2%	.1%	.4%	.0%
MacNeal-Schwendler	.8	.0	.8	0	.2%	.0%	.7%	.0%
Tebis	.8	.1	.6	4	.2%	.1%	.5%	.0%
Aucotec	.8	.3	.4	12	.2%	.1%	.4%	.1%
ISYKON Software	.8	.4	.3	11	.2%	.2%	.2%	.1%
Parametric Technology	.8	.0	.7	0	.2%	.0%	.6%	.0%
Gerber Systems	.6	.3	.2	8	.2%	.2%	.2%	.1%
PDA Engineering	.6	.0	.6	0	.2%	.0%	.5%	.0%
Lamp Software	.5	.1	.3	23	.1%	.1%	.3%	.2%
SDRC	.5	.0	.5	0	.1%	.0%	.4%	.0%
Calay	.4	.1	.3	7	.1%	.1%	.2%	.1%
Macao Systems	.4	.3	.2	4	.1%	.1%	.1%	.0%
Framasoft	.4	.0	.3	0	.1%	.0%	.2%	.0%
Wiechers Datentechnik	.4	.3	.1	59	.1%	.2%	.1%	.5%
Zycad	.4	.3	.0	3	.1%	.2%	.0%	.0%
Intercad	.4	.2	.1	17	.1%	.1%	.1%	.1%
CAD-UL	.3	.0	.3	0	.1%	.0%	.3%	.0%
Robocom	.3	.0	.3	0	.1%	.0%	.3%	.0%
LEICA	.3	.0	.2	0	.1%	.0%	.2%	.0%

(Continued)

TABLE NUMBER: 89
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
CAMTEK	.3	.0	.2	0	.1%	.0%	.2%	.0%
Serbi	.3	.0	.3	0	.1%	.0%	.2%	.0%
ALS Design	.3	.0	.3	0	.1%	.0%	.2%	.0%
Datagraphic	.2	.1	.1	4	.1%	.1%	.1%	.0%
ESRI	.2	.0	.2	0	.1%	.0%	.2%	.0%
Olivetti	.2	.2	.0	36	.1%	.1%	.0%	.3%
Vision 3D	.2	.1	.1	2	.1%	.1%	.0%	.0%
Marcus Computer Systems	.2	.1	.1	0	.1%	.1%	.1%	.0%
Ground Modelling Systems	.2	.1	.1	1	.1%	.1%	.1%	.0%
Masta Corporation	.2	.0	.1	2	.0%	.0%	.1%	.0%
Albert Mestler	.2	.1	.1	2	.0%	.0%	.0%	.0%
Computer Services Consultants	.1	.0	.1	0	.0%	.0%	.1%	.0%
Smallworld Systems	.1	.1	.1	4	.0%	.0%	.1%	.0%
Hochtief	.1	.0	.1	1	.0%	.0%	.1%	.0%
CAD Lab	.1	.0	.1	0	.0%	.0%	.1%	.0%
Superdraft	.1	.1	.1	6	.0%	.0%	.0%	.1%
MCS	.1	.0	.1	0	.0%	.0%	.1%	.0%
BETRONEX	.1	.0	.1	0	.0%	.0%	.1%	.0%
Gable CAD Systems	.1	.0	.0	1	.0%	.0%	.0%	.0%
Solbourne	.1	.1	.0	7	.0%	.0%	.0%	.1%
Catalpa	.1	.0	.0	1	.0%	.0%	.0%	.0%
t2 Solutions	.1	.0	.0	1	.0%	.0%	.0%	.0%
Academi Systems	.1	.0	.0	0	.0%	.0%	.0%	.0%
Cisigraph	.0	.0	.0	0	.0%	.0%	.0%	.0%
debis Systemhaus	.0	.0	.0	2	.0%	.0%	.0%	.0%
FHECOR*	.0	.0	.0	0	.0%	.0%	.0%	.0%
CAD-Capture	.0	.0	.0	0	.0%	.0%	.0%	.0%
XAO Industrie	.0	.0	.0	1	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 89 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	31.3	19.0	10.3	2,693	8.7%	10.4%	8.5%	23.4%
All Companies	359.8	181.6	121.6	11,488	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	217.0	120.6	56.7	8,997	60.3%	66.5%	46.6%	78.3%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	142.8	60.9	64.9	2,491	39.7%	33.5%	53.4%	21.7%
All Hardware Companies	68.8	60.8	.0	7,358	19.1%	33.5%	.0%	64.0%
All Turnkey & SW Companies	290.9	120.7	121.6	4,131	80.9%	66.5%	100.0%	36.0%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 90
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company	Market Share							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Siemens	25.3	12.7	8.9	336	12.9%	14.5%	12.3%	10.6%
Hewlett-Packard	22.2	15.5	2.7	788	11.3%	17.8%	3.8%	24.9%
Computervision	20.2	8.7	4.9	162	10.3%	9.9%	6.8%	5.1%
STI-Straessle	12.9	3.0	7.1	120	6.5%	3.4%	9.8%	3.8%
Schlumberger	12.1	4.1	4.6	103	6.2%	4.7%	6.3%	3.3%
Kewill Systems	11.9	3.6	6.6	251	6.1%	4.1%	9.1%	7.9%
ABB Cade International	8.4	4.9	2.5	36	4.3%	5.6%	3.5%	1.1%
McDonnell Douglas	7.9	4.1	3.0	91	4.0%	4.7%	4.2%	2.9%
Mentor Graphics	6.2	1.7	2.6	61	3.1%	2.0%	3.6%	1.9%
Sun	5.7	5.0	.0	255	2.9%	5.7%	.0%	8.0%
Dazix	4.9	.8	2.0	36	2.5%	.9%	2.7%	1.2%
ISICAD	4.1	2.1	1.2	31	2.1%	2.4%	1.7%	1.0%
Cimatron	3.5	1.6	1.6	103	1.8%	1.8%	2.2%	3.2%
IBM	3.4	2.1	.7	88	1.7%	2.4%	1.0%	2.8%
Mannesmann PROCAD	3.1	1.6	.9	44	1.6%	1.8%	1.2%	1.4%
Star Informatic	3.0	2.6	.8	138	1.5%	3.0%	1.1%	4.3%
Control Data	2.9	1.9	.5	67	1.5%	2.2%	.7%	2.1%
Matra Datavision	2.7	1.2	1.1	29	1.4%	1.4%	1.5%	.9%
Intergraph	2.4	1.4	.4	27	1.2%	1.6%	.6%	.9%
Racal-Redac	2.4	.1	1.9	13	1.2%	.1%	2.6%	.4%
Digital	2.1	1.5	.0	69	1.0%	1.7%	.0%	2.2%
Silicon Graphics	1.9	1.7	.0	43	1.0%	1.9%	.0%	1.4%
Valid	1.6	.1	1.0	8	.8%	.1%	1.3%	.3%
VLSI Technology	1.6	.1	1.3	5	.8%	.1%	1.8%	.1%
Technische Computer Systeme	1.6	.3	1.2	40	.8%	.4%	1.7%	1.3%
PAFEC	1.1	.0	1.1	0	.6%	.0%	1.6%	.0%
Ferranti	1.1	.4	.5	10	.6%	.5%	.7%	.3%
Kockums Computer Systems	1.1	.3	.6	52	.5%	.3%	.8%	1.6%
Microway	.9	.6	.3	7	.4%	.7%	.4%	.2%
Laser-Scan	.8	.2	.4	2	.4%	.2%	.6%	.1%
ISYKON Software	.8	.4	.3	11	.4%	.4%	.4%	.3%
Parametric Technology	.8	.0	.7	0	.4%	.0%	1.0%	.0%
Gerber Systems	.6	.3	.2	8	.3%	.3%	.3%	.3%

(Continued)

TABLE NUMBER: 90
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
rotring euroCAD	.6	.4	.2	16	.3%	.4%	.3%	.5%
Autodesk	.6	.0	.6	0	.3%	.0%	.8%	.0%
Calay	.4	.1	.3	7	.2%	.2%	.3%	.2%
Dassault*	.4	.0	.4	0	.2%	.0%	.5%	.0%
Nemetschek	.4	.2	.3	5	.2%	.2%	.4%	.1%
SDRC	.4	.0	.4	0	.2%	.0%	.6%	.0%
PDA Engineering	.4	.0	.4	0	.2%	.0%	.5%	.0%
Framasoft	.4	.0	.2	0	.2%	.0%	.3%	.0%
Exapt	.4	.2	.1	11	.2%	.2%	.2%	.4%
Fides Industrielle Automation	.4	.0	.3	6	.2%	.0%	.4%	.2%
RIB/RZB	.4	.0	.3	1	.2%	.0%	.4%	.0%
LEICA	.3	.0	.2	0	.1%	.0%	.3%	.0%
Zycad	.3	.2	.0	2	.1%	.3%	.0%	.1%
Aucotec	.3	.1	.1	4	.1%	.1%	.2%	.1%
Macao Systems	.3	.1	.1	3	.1%	.2%	.1%	.1%
MacNeal-Schwendler	.2	.0	.2	0	.1%	.0%	.3%	.0%
CANTEK	.2	.0	.2	0	.1%	.0%	.2%	.0%
Marcus Computer Systeme	.2	.1	.1	0	.1%	.1%	.1%	.0%
Albert Nestler	.2	.1	.1	2	.1%	.1%	.1%	.1%
Lamp Software	.2	.1	.1	9	.1%	.1%	.2%	.3%
ESRI	.1	.0	.1	0	.1%	.0%	.2%	.0%
Smallworld Systems	.1	.1	.1	4	.1%	.1%	.1%	.1%
CAD Lab	.1	.0	.1	0	.1%	.0%	.1%	.0%
Wiechers Datentechnik	.1	.1	.0	10	.1%	.1%	.0%	.3%
Gable CAD Systems	.1	.0	.0	1	.0%	.0%	.1%	.0%
Catalpa	.1	.0	.0	1	.0%	.0%	.1%	.0%
t2 Solutions	.1	.0	.0	1	.0%	.0%	.0%	.0%
MCS	.1	.0	.0	0	.0%	.0%	.1%	.0%
Cisigraph	.0	.0	.0	0	.0%	.0%	.0%	.0%
debis Systemhaus	.0	.0	.0	1	.0%	.0%	.0%	.0%
Masta Corporation	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 90 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Technical Workstation
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
XAO Industrie	.0	.0	.0	1	.0%	.0%	.0%	.0%
Academi Systems	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
Serbi	.0	.0	.0	0	.0%	.0%	.0%	.0%
Solbourne	.0	.0	.0	1	.0%	.0%	.0%	.0%
Other Companies	7.9	1.2	5.6	43	4.0%	1.4%	7.7%	1.4%
All Companies	196.5	87.5	72.0	3,163	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	110.5	52.6	33.1	1,887	56.3%	60.0%	46.0%	59.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	86.0	35.0	38.9	1,275	43.7%	40.0%	54.0%	40.3%
All Hardware Companies	19.6	16.5	.0	857	10.0%	18.8%	.0%	27.1%
All Turnkey & SW Companies	176.9	71.1	72.0	2,305	90.0%	81.2%	100.0%	72.9%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 91
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	30.3	18.2	6.7	400	42.1%	42.5%	41.2%	34.4%
Digital	7.3	5.3	.0	0	10.1%	12.4%	.0%	.0%
Schlumberger	5.0	2.0	1.7	77	6.9%	4.6%	10.5%	6.6%
Control Data	3.9	1.8	.4	22	5.4%	4.2%	2.7%	1.9%
Siemens	3.3	1.9	1.2	53	4.5%	4.3%	7.7%	4.5%
Computervision	2.5	1.1	.6	72	3.4%	2.5%	3.5%	6.2%
McDonnell Douglas	1.8	.9	.7	60	2.4%	2.1%	4.2%	5.2%
Sun	1.4	1.2	.0	43	2.0%	2.7%	.0%	3.7%
Fides Industrielle Automation	1.4	.2	1.3	8	1.9%	.4%	7.8%	.6%
Kewill Systems	1.3	.4	.7	14	1.8%	.9%	4.4%	1.2%
Exapt	.9	.5	.3	11	1.3%	1.1%	2.0%	.9%
Dassault*	.9	.0	.8	0	1.3%	.0%	4.8%	.0%
MacNeal-Schwendler	.6	.0	.6	0	.9%	.0%	3.8%	.0%
Intergraph	.4	.2	.1	4	.6%	.5%	.4%	.3%
Hewlett-Packard	.4	.3	.0	19	.5%	.7%	.0%	1.6%
PDA Engineering	.2	.0	.2	0	.3%	.0%	1.2%	.0%
Macao Systems	.2	.1	.1	1	.2%	.3%	.4%	.1%
Laser-Scan	.1	.0	.1	0	.1%	.0%	.3%	.0%
ESRI	.1	.0	.1	0	.1%	.0%	.4%	.0%
Solbourne	.1	.1	.0	6	.1%	.1%	.0%	.5%
Zycad	.1	.1	.0	1	.1%	.2%	.0%	.0%
SDRC	.1	.0	.1	0	.1%	.0%	.4%	.0%
Framasoft	.0	.0	.0	0	.1%	.0%	.2%	.0%
Silicon Graphics	.0	.0	.0	1	.1%	.1%	.0%	.1%
MCS	.0	.0	.0	0	.0%	.0%	.2%	.0%
Lamp Software	.0	.0	.0	1	.0%	.0%	.1%	.1%
Olivetti	.0	.0	.0	0	.0%	.0%	.0%	.0%
VLSI Technology	.0	.0	.0	0	.0%	.0%	.1%	.0%
Hochtief	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 91 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Host/Server
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	9.8	8.8	.6	373	13.5%	20.5%	3.8%	32.0%
All Companies	72.1	42.8	16.2	1,165	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	63.9	39.8	11.7	1,072	88.6%	92.9%	72.3%	92.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	8.2	3.0	4.5	93	11.4%	7.1%	27.7%	8.0%
All Hardware Companies	19.3	16.1	.0	437	26.7%	37.6%	.0%	37.5%
All Turnkey & SW Companies	52.8	26.7	16.2	728	73.3%	62.4%	100.0%	62.5%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 92
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Investronica SA	13.3	10.6	1.3	531	14.5%	20.7%	4.0%	7.4%
Caditron	12.2	6.1	4.9	188	13.3%	11.9%	14.6%	2.6%
Compaq	7.9	7.9	.0	1,317	8.7%	15.4%	.0%	18.4%
Autodesk	6.3	.0	6.3	0	6.9%	.0%	18.9%	.0%
Hewlett-Packard	5.4	4.3	.0	824	5.9%	8.4%	.0%	11.5%
IBM	4.2	4.0	.0	933	4.6%	7.7%	.0%	13.0%
Nemetschek	3.9	1.6	2.3	65	4.3%	3.0%	7.0%	.9%
Apple Computer	3.5	3.1	.0	680	3.9%	6.1%	.0%	9.5%
DAT Standard Information system	1.9	.0	1.8	0	2.1%	.0%	5.4%	.0%
Vero International Software	1.8	.0	1.7	0	2.0%	.0%	5.0%	.0%
Ziegler	1.7	.0	1.7	0	1.9%	.0%	5.2%	.0%
Kloeckner-Moeller	1.6	.9	.6	25	1.7%	1.8%	1.6%	.3%
Cimatron	1.5	.7	.7	44	1.6%	1.3%	2.0%	.6%
Soft-Tech Software Technologie	1.4	.1	1.2	36	1.6%	.3%	3.4%	.5%
BATISOFT	1.0	.2	.5	31	1.1%	.3%	1.5%	.4%
LPKF	.9	.6	.2	36	1.0%	1.1%	.7%	.5%
ISICAD	.9	.0	.9	0	.9%	.0%	2.5%	.0%
Tebis	.8	.1	.6	4	.9%	.2%	1.8%	.1%
RIB/RZB	.8	.1	.7	4	.9%	.2%	1.9%	.1%
Microway	.6	.4	.2	6	.6%	.7%	.6%	.1%
Aucotec	.5	.2	.3	8	.6%	.4%	.9%	.1%
rotring euroCAD	.5	.3	.2	13	.6%	.6%	.7%	.2%
Computervision	.4	.0	.4	4	.4%	.0%	1.1%	.1%
Racal-Redac	.4	.0	.3	0	.4%	.0%	1.0%	.0%
Intercad	.4	.2	.1	17	.4%	.4%	.3%	.2%
Lamp Software	.3	.1	.2	13	.4%	.1%	.6%	.2%
CAD-UL	.3	.0	.3	0	.3%	.0%	.9%	.0%
Robocom	.3	.0	.3	0	.3%	.0%	.9%	.0%
Wiechers Datentechnik	.3	.2	.1	50	.3%	.4%	.1%	.7%
ALS Design	.3	.0	.3	0	.3%	.0%	.7%	.0%
Serbi	.3	.0	.3	0	.3%	.0%	.7%	.0%
Datagraphic	.2	.1	.1	4	.3%	.2%	.3%	.1%

(Continued)

TABLE NUMBER: 92 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: All Applications
 PLATFORM: Personal Computer
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Vision 3D	.2	.1	.1	2	.3%	.3%	.2%	.0%
Olivetti	.2	.2	.0	36	.2%	.4%	.0%	.5%
Ground Modelling Systems	.2	.1	.1	1	.2%	.3%	.3%	.0%
Schlumberger	.2	.0	.1	1	.2%	.1%	.2%	.0%
Computer Services Consultants	.1	.0	.1	0	.1%	.0%	.4%	.0%
PAFEC	.1	.0	.1	0	.1%	.0%	.4%	.0%
Mesta Corporation	.1	.0	.1	2	.1%	.0%	.2%	.0%
Hochtief	.1	.0	.1	1	.1%	.0%	.2%	.0%
Superdraft	.1	.1	.1	6	.1%	.1%	.2%	.1%
BETRONEX	.1	.0	.1	0	.1%	.0%	.3%	.0%
Intergraph	.1	.0	.1	0	.1%	.0%	.2%	.0%
CAMTEK	.1	.0	.1	0	.1%	.0%	.2%	.0%
Marcus Computer Systeme	.1	.0	.0	0	.1%	.1%	.1%	.0%
FHECOR*	.0	.0	.0	0	.0%	.0%	.1%	.0%
Academi Systems	.0	.0	.0	0	.0%	.0%	.1%	.0%
CAD-Capture	.0	.0	.0	0	.0%	.0%	.0%	.0%
ESRI	.0	.0	.0	0	.0%	.0%	.1%	.0%
MCS	.0	.0	.0	0	.0%	.0%	.1%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	13.7	9.0	4.1	2,278	15.0%	17.5%	12.4%	31.8%
All Companies	91.2	51.2	33.4	7,161	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	42.6	28.3	11.9	6,038	46.7%	55.3%	35.6%	84.3%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	48.6	22.9	21.5	1,123	53.3%	44.7%	64.4%	15.7%
All Hardware Companies	30.0	28.2	.0	6,063	32.9%	55.1%	.0%	84.7%
All Turnkey & SW Companies	61.2	23.0	33.4	1,098	67.1%	44.9%	100.0%	15.3%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 93
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
IBM	30.6	19.0	6.3	787	15.1%	18.0%	10.2%	13.3%
Computervision	20.3	8.6	5.1	209	10.0%	8.1%	8.2%	3.5%
Hewlett-Packard	17.6	12.4	2.2	872	8.7%	11.7%	3.5%	14.7%
Schlumberger	17.1	6.1	6.3	180	8.5%	5.8%	10.0%	3.0%
Investronica SA	13.3	10.6	1.3	531	6.6%	10.0%	2.1%	8.9%
STI-Straessle	8.0	1.8	4.4	75	4.0%	1.7%	7.1%	1.3%
McDonnell Douglas	7.9	4.1	3.1	120	3.9%	3.8%	4.9%	2.0%
Caditron	7.0	3.5	2.8	108	3.5%	3.3%	4.5%	1.8%
Kewill Systems	6.6	2.0	3.6	133	3.3%	1.9%	5.8%	2.2%
Control Data	6.4	3.5	.9	82	3.1%	3.3%	1.4%	1.4%
Digital	5.1	3.7	.0	35	2.5%	3.5%	.0%	.6%
Cimatron	5.0	2.2	2.2	146	2.4%	2.1%	3.6%	2.5%
Mannesmann PROCAD	3.1	1.6	.9	44	1.6%	1.5%	1.4%	.7%
ISICAD	3.1	1.5	1.1	21	1.5%	1.4%	1.8%	.4%
Siemens	2.9	1.4	1.0	38	1.4%	1.4%	1.6%	.6%
Compaq	2.8	2.8	.0	472	1.4%	2.7%	.0%	8.0%
Sun	2.8	2.5	.0	115	1.4%	2.3%	.0%	1.9%
Matra Datavision	2.7	1.2	1.1	29	1.3%	1.2%	1.7%	.5%
Autodesk	2.6	.0	2.6	0	1.3%	.0%	4.2%	.0%
Silicon Graphics	1.9	1.7	.0	43	.9%	1.6%	.0%	.7%
DAT Standard Information syste	1.8	.0	1.7	0	.9%	.0%	2.8%	.0%
Vero International Software	1.8	.0	1.7	0	.9%	.0%	2.7%	.0%
Fides Industrielle Automation	1.8	.2	1.6	13	.9%	.2%	2.5%	.2%
Technische Computer Systeme	1.6	.3	1.2	40	.8%	.3%	2.0%	.7%
Apple Computer	1.5	1.3	.0	279	.7%	1.2%	.0%	4.7%
Exapt	1.3	.6	.4	22	.6%	.6%	.7%	.4%
Dassault*	1.3	.0	1.1	0	.6%	.0%	1.7%	.0%
Ferranti	1.1	.4	.5	10	.5%	.4%	.8%	.2%
rottring euroCAD	.9	.6	.4	25	.5%	.6%	.6%	.4%
PAFEC	.9	.0	.9	0	.4%	.0%	1.4%	.0%
Tebis	.8	.1	.6	4	.4%	.1%	.9%	.1%
MacNeal-Schwendler	.8	.0	.8	0	.4%	.0%	1.2%	.0%
ISYKON Software	.8	.4	.3	11	.4%	.4%	.4%	.2%

(Continued)

TABLE NUMBER: 93
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company =====					----- Market Share -----			
	Total Revenue -----	Hardware Revenue -----	Software Revenue -----	Wkstns Shipped -----	Total Revenue -----	Hardware Revenue -----	Software Revenue -----	Wkstns Shipped -----
Parametric Technology	.8	.0	.7	0	.4%	.0%	1.1%	.0%
Ziegler	.7	.0	.7	0	.3%	.0%	1.1%	.0%
Gerber Systems	.6	.3	.2	8	.3%	.3%	.3%	.1%
PDA Engineering	.6	.0	.6	0	.3%	.0%	.9%	.0%
Intergraph	.5	.3	.1	5	.3%	.3%	.1%	.1%
SDRC	.5	.0	.5	0	.2%	.0%	.8%	.0%
Framasoft	.4	.0	.3	0	.2%	.0%	.4%	.0%
Wiechers Datentechnik	.4	.3	.1	59	.2%	.3%	.1%	1.0%
Intercad	.3	.1	.1	14	.1%	.1%	.1%	.2%
CAMTEK	.3	.0	.2	0	.1%	.0%	.3%	.0%
Vision 3D	.2	.1	.1	2	.1%	.1%	.1%	.0%
Marcus Computer Systeme	.2	.1	.1	0	.1%	.1%	.1%	.0%
Serbi	.2	.0	.2	0	.1%	.0%	.3%	.0%
Albert Nestler	.2	.1	.1	2	.1%	.0%	.1%	.0%
Olivetti	.2	.1	.0	22	.1%	.1%	.0%	.4%
Robocom	.1	.0	.1	0	.1%	.0%	.2%	.0%
CAD Lab	.1	.0	.1	0	.1%	.0%	.1%	.0%
Superdraft	.1	.1	.1	6	.1%	.1%	.1%	.1%
MCS	.1	.0	.1	0	.0%	.0%	.1%	.0%
Masta Corporation	.1	.0	.1	1	.0%	.0%	.1%	.0%
Catalpa	.1	.0	.0	1	.0%	.0%	.1%	.0%
Mentor Graphics	.1	.0	.0	1	.0%	.0%	.0%	.0%
Cisigraph	.0	.0	.0	0	.0%	.0%	.0%	.0%
Lamp Software	.0	.0	.0	1	.0%	.0%	.0%	.0%
XAO Industrie	.0	.0	.0	1	.0%	.0%	.0%	.0%
debis Systemhaus	.0	.0	.0	1	.0%	.0%	.0%	.0%
CAD-Capture	.0	.0	.0	0	.0%	.0%	.0%	.0%
FHECOR*	.0	.0	.0	0	.0%	.0%	.0%	.0%

(Continued)

TABLE NUMBER: 93 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Mechanical
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Market Share			
					Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	12.6	10.0	2.1	1,366	6.2%	9.4%	3.4%	23.0%
All Companies	202.3	105.6	62.4	5,930	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	136.1	77.5	32.6	4,593	67.3%	73.4%	52.2%	77.5%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	66.2	28.1	29.8	1,337	32.7%	26.6%	47.8%	22.5%
All Hardware Companies	34.0	29.8	.0	3,300	16.8%	28.2%	.0%	55.6%
All Turnkey & SW Companies	168.3	75.8	62.4	2,630	83.2%	71.8%	100.0%	44.4%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 94
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Kewill Systems	6.6	2.0	3.6	133	11.7%	6.9%	16.4%	5.0%
Siemens	5.3	2.6	1.8	70	9.3%	9.2%	8.3%	2.6%
Nemetschek	4.3	1.7	2.6	70	7.7%	6.0%	11.7%	2.6%
IBM	4.1	2.8	.7	249	7.3%	9.7%	3.1%	9.4%
Caditron	3.6	1.8	1.5	56	6.4%	6.3%	6.5%	2.1%
Hewlett-Packard	3.2	2.6	.0	278	5.6%	9.1%	.0%	10.5%
Autodesk	3.0	.0	3.0	0	5.4%	.0%	13.6%	.0%
Star Informatic	3.0	2.6	.8	138	5.3%	9.1%	3.6%	5.2%
ISICAD	1.9	.7	1.0	10	3.4%	2.4%	4.4%	.4%
Compaq	1.8	1.8	.0	291	3.1%	6.1%	.0%	11.0%
Soft-Tech Software Technologie	1.4	.1	1.2	36	2.5%	.5%	5.2%	1.4%
Apple Computer	1.4	1.3	.0	272	2.5%	4.4%	.0%	10.3%
Microway	1.4	1.0	.5	13	2.5%	3.3%	2.2%	.5%
McDonnell Douglas	1.3	.7	.5	20	2.3%	2.3%	2.2%	.7%
Kockums Computer Systems	1.1	.3	.6	52	1.9%	.9%	2.6%	2.0%
Intergraph	1.0	.5	.2	10	1.8%	1.9%	.9%	.4%
Computervision	1.0	.4	.3	11	1.8%	1.4%	1.3%	.4%
BATISOFT	1.0	.2	.5	31	1.7%	.5%	2.2%	1.2%
RIB/RZB	.9	.1	.7	5	1.7%	.3%	3.3%	.2%
Digital	.9	.7	.0	6	1.6%	2.4%	.0%	.2%
Lamp Software	.4	.1	.3	20	.8%	.4%	1.3%	.8%
Sun	.3	.3	.0	12	.5%	.9%	.0%	.5%
Datagraphic	.2	.1	.1	4	.4%	.4%	.4%	.1%
Ziegler	.2	.0	.2	0	.4%	.0%	1.0%	.0%
Control Data	.2	.1	.0	2	.3%	.3%	.1%	.1%
Robocom	.1	.0	.1	0	.2%	.0%	.6%	.0%
Computer Services Consultants	.1	.0	.1	0	.2%	.0%	.6%	.0%
Hochtief	.1	.0	.1	1	.2%	.1%	.4%	.0%
Dassault*	.1	.0	.1	0	.2%	.0%	.4%	.0%
Gable CAD Systems	.1	.0	.0	1	.1%	.1%	.2%	.0%
Olivetti	.1	.1	.0	13	.1%	.2%	.0%	.5%
PAFEC	.1	.0	.1	0	.1%	.0%	.4%	.0%

(Continued)

TABLE NUMBER: 94 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: AEC
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					Market Share			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
t2 Solutions	.1	.0	.0	1	.1%	.1%	.1%	.1%
Serbi	.1	.0	.1	0	.1%	.0%	.2%	.0%
Ground Modelling Systems	.0	.0	.0	0	.1%	.1%	.1%	.0%
FHECOR*	.0	.0	.0	0	.1%	.0%	.1%	.0%
CAD-Capture	.0	.0	.0	0	.0%	.0%	.0%	.0%
CADMATIC	.0	.0	.0	0	.0%	.0%	.0%	.0%
Other Companies	5.9	4.2	1.5	839	10.5%	14.7%	6.7%	31.7%
All Companies	56.4	28.7	22.2	2,645	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	25.9	15.9	7.2	2,001	46.0%	55.4%	32.5%	75.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	30.5	12.8	15.0	643	54.0%	44.6%	67.5%	24.3%
All Hardware Companies	12.7	11.6	.0	1,910	22.5%	40.3%	.0%	72.2%
All Turnkey & SW Companies	43.7	17.1	22.2	734	77.5%	59.7%	100.0%	27.8%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 95
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Siemens	20.4	10.5	7.3	281	51.3%	53.0%	50.2%	24.9%
STI-Straessle	4.9	1.1	2.7	45	12.2%	5.7%	18.6%	4.0%
IBM	1.6	1.2	.2	169	4.0%	6.1%	1.4%	15.0%
Intergraph	1.3	.7	.3	14	3.3%	3.4%	1.8%	1.2%
Compaq	1.1	1.1	.0	190	2.9%	5.8%	.0%	16.9%
Digital	1.0	.7	.0	7	2.6%	3.8%	.0%	.6%
Laser-Scan	.9	.2	.5	3	2.2%	1.1%	3.1%	.3%
Autodesk	.7	.0	.7	0	1.7%	.0%	4.8%	.0%
McDonnell Douglas	.5	.2	.2	12	1.2%	1.2%	1.2%	1.1%
Computervision	.5	.2	.1	7	1.1%	1.1%	.6%	.6%
Macao Systems	.4	.3	.2	4	1.1%	1.3%	1.1%	.4%
Apple Computer	.4	.3	.0	75	1.0%	1.7%	.0%	6.6%
PAFEC	.3	.0	.3	0	.8%	.0%	2.1%	.0%
LEICA	.3	.0	.2	0	.7%	.0%	1.6%	.0%
Sun	.3	.3	.0	12	.7%	1.3%	.0%	1.0%
Caditron	.3	.1	.1	4	.7%	.6%	.7%	.4%
Hewlett-Packard	.3	.2	.0	23	.7%	1.1%	.0%	2.0%
ESRI	.2	.0	.2	0	.6%	.0%	1.5%	.0%
RIB/RZB	.2	.0	.2	1	.6%	.1%	1.2%	.1%
Control Data	.2	.2	.0	5	.6%	.8%	.3%	.5%
Ziegler	.2	.0	.2	0	.5%	.0%	1.3%	.0%
Ground Modelling Systems	.2	.1	.1	1	.4%	.5%	.6%	.1%
Smallworld Systems	.1	.1	.1	4	.3%	.3%	.6%	.3%
Silicon Graphics	.0	.0	.0	1	.1%	.2%	.0%	.1%
Lamp Software	.0	.0	.0	1	.1%	.0%	.1%	.1%
Robocom	.0	.0	.0	0	.1%	.0%	.2%	.0%
CAD-Capture	.0	.0	.0	0	.0%	.0%	.0%	.0%
Olivetti	.0	.0	.0	2	.0%	.1%	.0%	.2%
Solbourne	.0	.0	.0	1	.0%	.1%	.0%	.1%

(Continued)

TABLE NUMBER: 95 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: GIS/Mapping
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					Market Share			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	3.5	2.2	1.0	260	8.8%	11.0%	6.9%	23.0%
All Companies	39.9	19.7	14.4	1,127	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	11.6	7.4	2.7	775	29.2%	37.5%	18.5%	68.7%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	28.3	12.3	11.8	353	70.8%	62.5%	81.5%	31.3%
All Hardware Companies	5.6	5.1	.0	719	14.0%	25.6%	.0%	63.8%
All Turnkey & SW Companies	34.3	14.7	14.4	408	86.0%	74.4%	100.0%	36.2%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 96
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
ABB Cade International	8.4	4.9	2.5	36	13.7%	17.7%	11.2%	2.0%
Hewlett-Packard	7.0	5.0	.5	458	11.4%	18.0%	2.3%	25.6%
Mentor Graphics	6.1	1.7	2.6	60	9.9%	6.2%	11.4%	3.4%
Dazix	4.9	.8	2.0	36	8.1%	2.9%	8.8%	2.0%
Sun	3.7	3.2	.0	159	6.0%	11.6%	.0%	8.9%
Racal-Redac	2.8	.1	2.2	13	4.5%	.4%	10.0%	.7%
Digital	2.4	1.7	.0	20	3.8%	6.1%	.0%	1.1%
Compaq	2.2	2.2	.0	364	3.6%	7.9%	.0%	20.4%
IBM	1.6	1.3	.2	218	2.6%	4.7%	.7%	12.2%
VLSI Technology	1.6	.1	1.3	5	2.6%	.2%	5.9%	.3%
Valid	1.6	.1	1.0	8	2.6%	.4%	4.2%	.5%
Kloekner-Moeller	1.6	.9	.6	25	2.5%	3.4%	2.4%	1.4%
Computervision	1.4	.6	.3	11	2.2%	2.0%	1.5%	.6%
Caditron	1.3	.6	.5	20	2.1%	2.3%	2.3%	1.1%
LPKF	.9	.6	.2	36	1.5%	2.1%	1.0%	2.0%
Aucotec	.8	.3	.4	12	1.3%	1.0%	1.9%	.7%
Ziegler	.6	.0	.6	0	1.0%	.0%	2.8%	.0%
Autodesk	.5	.0	.5	0	.9%	.0%	2.4%	.0%
Calay	.4	.1	.3	7	.7%	.5%	1.1%	.4%
Zycad	.4	.3	.0	3	.6%	1.1%	.0%	.2%
CAD-UL	.3	.0	.3	0	.5%	.0%	1.4%	.0%
Apple Computer	.3	.2	.0	54	.5%	.9%	.0%	3.0%
ALS Design	.3	.0	.3	0	.4%	.0%	1.1%	.0%
Schlumberger	.2	.1	.1	2	.3%	.2%	.3%	.1%
rotring euroCAD	.2	.1	.1	4	.3%	.3%	.3%	.2%
Intergraph	.2	.1	.0	2	.2%	.3%	.1%	.1%
BETRONEX	.1	.0	.1	0	.1%	.0%	.4%	.0%
DAT Standard Information syste	.1	.0	.1	0	.1%	.0%	.3%	.0%
Masta Corporation	.1	.0	.1	1	.1%	.0%	.2%	.1%
Intercad	.1	.0	.0	3	.1%	.1%	.1%	.2%
Solbourne	.1	.1	.0	6	.1%	.2%	.0%	.3%
Academi Systems	.1	.0	.0	0	.1%	.0%	.1%	.0%

(Continued)

TABLE NUMBER: 96 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic Design Automation
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company					----- Market Share -----			
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
MacNeal-Schwendler	.1	.0	.1	0	.1%	.0%	.2%	.0%
Serbi	.1	.0	.1	0	.1%	.0%	.2%	.0%
debis Systemhaus	.0	.0	.0	1	.0%	.0%	.0%	.0%
Inca	.0	.0	.0	0	.0%	.0%	.1%	.0%
Other Companies	9.3	2.6	5.7	222	15.2%	9.4%	25.4%	12.4%
All Companies	61.2	27.6	22.5	1,787	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	43.3	19.9	14.2	1,628	70.8%	72.1%	63.1%	91.1%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	17.9	7.7	8.3	159	29.2%	27.9%	36.9%	8.9%
All Hardware Companies	16.6	14.4	.0	1,428	27.0%	52.2%	.0%	79.9%
All Turnkey & SW Companies	44.7	13.2	22.5	358	73.0%	47.8%	100.0%	20.1%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 97
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company	Total				Market Share			
	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
ABB Cade International	5.9	3.5	1.8	25	15.4%	19.9%	12.3%	2.1%
Hewlett-Packard	5.0	3.8	.3	354	13.1%	21.8%	2.0%	28.7%
Mentor Graphics	3.7	1.1	1.6	37	9.7%	6.1%	10.9%	3.0%
Dazix	3.0	.6	1.2	22	7.8%	3.4%	8.3%	1.8%
Sun	1.7	1.5	.0	73	4.5%	8.4%	.0%	5.9%
Kloeckner-Moeller	1.6	.9	.6	25	4.1%	5.3%	3.9%	2.0%
Compaq	1.5	1.5	.0	257	4.0%	8.7%	.0%	20.8%
Caditron	1.3	.6	.5	20	3.4%	3.6%	3.6%	1.6%
VLSI Technology	1.0	.0	.8	3	2.5%	.2%	5.6%	.2%
Digital	.9	.7	.0	8	2.5%	3.8%	.0%	.7%
Racal-Redac	.9	.1	.7	4	2.4%	.3%	5.2%	.3%
Valid	.9	.1	.6	5	2.4%	.3%	3.9%	.4%
Aucotec	.8	.3	.4	12	2.1%	1.5%	3.0%	1.0%
IBM	.8	.8	.0	177	2.1%	4.2%	.0%	14.4%
Autodesk	.5	.0	.5	0	1.3%	.0%	3.4%	.0%
Computervision	.5	.2	.1	4	1.2%	1.1%	.8%	.3%
Zycad	.4	.3	.0	3	.9%	1.7%	.0%	.2%
Ziegler	.4	.0	.4	0	.9%	.0%	2.5%	.0%
ALS Design	.2	.0	.2	0	.5%	.0%	1.3%	.0%
rotring euroCAD	.2	.1	.1	4	.4%	.5%	.5%	.3%
Apple Computer	.1	.1	.0	27	.4%	.7%	.0%	2.2%
Calay	.1	.0	.1	1	.2%	.2%	.4%	.1%
DAT Standard Information syste	.1	.0	.1	0	.2%	.0%	.5%	.0%
Intergraph	.1	.0	.0	1	.2%	.2%	.1%	.1%
Intercad	.1	.0	.0	3	.2%	.2%	.1%	.3%
MacNeal-Schwendler	.1	.0	.1	0	.1%	.0%	.4%	.0%
Serbi	.1	.0	.1	0	.1%	.0%	.4%	.0%
debis Systemhaus	.0	.0	.0	1	.1%	.0%	.1%	.1%
Inca	.0	.0	.0	0	.1%	.0%	.1%	.0%
Masta Corporation	.0	.0	.0	0	.1%	.0%	.1%	.0%
Solbourne	.0	.0	.0	1	.1%	.1%	.0%	.1%

(Continued)

TABLE NUMBER: 97 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: Electronic CAE
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company =====	----- Market Share -----							
	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====
Other Companies	6.5	1.4	4.4	166	17.1%	7.9%	30.9%	13.5%
All Companies	38.1	17.7	14.2	1,233	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	26.6	12.1	9.4	1,137	69.9%	68.5%	66.1%	92.2%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	11.5	5.6	4.8	97	30.1%	31.5%	33.9%	7.8%
All Hardware Companies	10.1	8.8	.0	1,027	26.5%	50.1%	.0%	83.3%
All Turnkey & SW Companies	28.0	8.8	14.2	207	73.5%	49.9%	100.0%	16.7%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
June 1991

TABLE NUMBER: 98
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: IC Layout
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Sun	1.1	1.0	.0	49	23.0%	50.3%	.0%	49.7%
Mentor Graphics	1.0	.3	.4	10	19.9%	14.7%	20.8%	9.9%
VLSI Technology	.6	.0	.5	2	13.0%	1.0%	25.7%	1.8%
Digital	.4	.3	.0	3	7.7%	13.7%	.0%	3.3%
Hewlett-Packard	.3	.3	.0	27	6.1%	12.7%	.0%	27.2%
Valid	.2	.0	.1	1	3.9%	.5%	5.9%	1.0%
Solbourne	.0	.0	.0	3	.8%	2.0%	.0%	3.2%
Other Companies	1.3	.1	1.0	4	25.6%	5.1%	47.5%	4.0%
All Companies	4.9	2.0	2.0	99	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	4.9	2.0	2.0	99	100.0%	100.0%	100.0%	100.0%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All Hardware Companies	1.9	1.6	.0	86	39.4%	83.2%	.0%	87.1%
All Turnkey & SW Companies	3.0	.3	2.0	13	60.6%	16.8%	100.0%	12.9%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

TABLE NUMBER: 99
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company =====	Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====	Market Share -----			
					Total Revenue =====	Hardware Revenue =====	Software Revenue =====	Wkstns Shipped =====
ABB Cade International	2.5	1.4	.8	11	13.8%	17.4%	12.2%	2.4%
Dazix	2.0	.2	.8	15	10.9%	2.5%	12.7%	3.2%
Racal-Redac	1.9	.1	1.5	8	10.1%	.9%	24.0%	1.9%
Hewlett-Packard	1.7	.9	.2	77	9.0%	11.1%	3.7%	17.0%
Mentor Graphics	1.4	.4	.6	14	7.8%	4.4%	9.5%	3.1%
Digital	1.0	.7	.0	9	5.6%	9.3%	.0%	2.0%
Computervision	.9	.4	.2	7	5.0%	4.7%	3.5%	1.6%
LPKF	.9	.6	.2	36	4.9%	7.3%	3.5%	7.9%
Sun	.9	.7	.0	37	4.7%	9.3%	.0%	8.1%
IBM	.8	.5	.2	40	4.5%	6.8%	2.4%	8.9%
Compaq	.6	.6	.0	107	3.5%	8.1%	.0%	23.6%
Valid	.5	.0	.3	2	2.6%	.4%	4.5%	.5%
Calay	.3	.1	.2	6	1.9%	1.4%	3.2%	1.2%
CAD-UL	.3	.0	.3	0	1.7%	.0%	5.0%	.0%
Ziegler	.3	.0	.3	0	1.5%	.0%	4.5%	.0%
Schlumberger	.2	.1	.1	2	.9%	.6%	1.0%	.4%
Apple Computer	.1	.1	.0	27	.8%	1.5%	.0%	6.0%
BETRONEX	.1	.0	.1	0	.5%	.0%	1.4%	.0%
Intergraph	.1	.0	.0	1	.4%	.4%	.2%	.2%
ALS Design	.1	.0	.1	0	.3%	.0%	1.0%	.0%
Autodesk	.1	.0	.1	0	.3%	.0%	1.0%	.0%
Masta Corporation	.1	.0	.0	1	.3%	.0%	.6%	.2%
Academi Systems	.1	.0	.0	0	.3%	.0%	.5%	.0%
Solbourne	.0	.0	.0	1	.1%	.1%	.0%	.3%

(Continued)

TABLE NUMBER: 99 (Continued)
 TITLE: 1990 Final Market Share Estimates
 APPLICATION: PCB/Hybrid/MCM
 PLATFORM: All Platforms
 REGION: Rest of Europe
 UNITS: Millions of Dollars/Actual Units

Company	----- Market Share -----							
	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped	Total Revenue	Hardware Revenue	Software Revenue	Wkstns Shipped
Other Companies	1.6	1.1	.4	52	8.6%	13.9%	5.8%	11.5%
All Companies	18.2	7.9	6.2	454	100.0%	100.0%	100.0%	100.0%
All U.S.-Based Companies	11.8	5.8	2.8	392	64.7%	73.0%	44.1%	86.3%
All Asian-Based Companies	.0	.0	.0	0	.0%	.0%	.0%	.0%
All European-Based Companies	6.4	2.1	3.5	62	35.3%	27.0%	55.9%	13.7%
All Hardware Companies	4.5	3.9	.0	315	24.8%	49.2%	.0%	69.4%
All Turnkey & SW Companies	13.7	4.0	6.2	139	75.2%	50.8%	100.0%	30.6%

*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals

Source: Dataquest
 June 1991

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Company History
Europe

Source:
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CAD/CAM/CAE

Company History
Europe

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June 1991

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*Contains reseller or OEM revenue: All or portions of this revenue line are not included in market totals.

Company History—Europe

Company History

The following is a description of the information reported in the *Company History* books:

- **Source**—Five-year historical information on all companies with more than \$15 million in worldwide revenue
- **Europe**—Four-year historical information on all European-based companies and all other companies with more than \$15 million in worldwide revenue
- **Asia**—Four-year historical information on all Asian-based companies and all other companies with more than \$15 million in worldwide revenue

Market Database Methodology

Dataquest's CAD/CAM/CAE industry service is committed to consistently delivering to clients the most accurate data available on the CAD/CAM/CAE industry, both in terms of market history and forecast. Our annual delivery schedule is designed to meet that commitment, as follows:

- **First quarter (January 31):** We will provide complete preliminary market share tables for the year just completed. Historical database is opened for changes for a six-month period.
- **Second quarter (March 31):** We provide complete preliminary forecast tables, including a new five-year forecast period.

- **Third quarter (July 1):** We send complete final updated market share tables based on additional data collection and analysis over the previous six months as well as company history tables. At this point, the market share database is frozen and will not be changed until the end of the year. For the next six months, supplementary market data will be based on this final market data.
- **Fourth quarter (October 1):** We provide complete final forecast tables, taking into consideration changes in the market during the previous six months.

Since January, when the preliminary market share numbers were published, over 35 new companies have been added to the market share database. This brings the total number of companies recognized in the CAD/CAM/CAE market to 430. The market share numbers also have been rechecked and verified for all vendors worldwide. Year-end 1990 financial results released this past spring have also been checked and incorporated into the final numbers.

Additionally, a number of companies significantly improved or made changes to their reporting methods during this past update cycle. These changes have been incorporated into this update. Dataquest's policy is to continually update its market information for any year, based on any new data received, in order to arrive at the most accurate market representation possible.

TABLE NUMBER: 1
 TITLE: Company History
 COMPANY: ABB Cade International
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	6.9	8.0	13.6	15.2	48.4%
Workstation Shipments	20	23	53	66	81.7%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	9.5	10.6	NA
Workstation Shipments	0	0	37	46	NA
IC Layout					
Total Revenue	2.8	2.9	.0	.0	-100.0%
Workstation Shipments	12	13	0	0	-100.0%
PCB/Hybrid/MCM					
Total Revenue	4.1	5.1	4.1	4.6	4.9%
Workstation Shipments	8	9	16	20	59.5%
Technical Workstation					
Total Revenue	6.9	8.0	13.6	15.2	48.4%
Workstation Shipments	20	23	53	66	81.7%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 2
 TITLE: Company History
 COMPANY: Academi Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR
	====	====	====	====	=====
All Applications					
Total Revenue	.9	.9	1.9	2.3	61.7%
Workstation Shipments	14	17	23	9	-17.3%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.1	.0	-100.0%
Workstation Shipments	1	1	1	0	-100.0%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.8	.9	1.8	2.3	65.5%
Workstation Shipments	13	16	22	9	-15.1%
Technical Workstation					
Total Revenue	.8	.8	1.6	.9	10.0%
Workstation Shipments	12	14	19	4	-43.4%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.1	.1	.3	1.4	239.1%
Workstation Shipments	2	3	3	6	68.6%

Source: Dataquest
 June 1991

TABLE NUMBER: 3
 TITLE: Company History
 COMPANY: Accugraph
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	.6	.7	1.1	1.0	28.9%
Workstation Shipments	20	19	32	25	11.2%
Mechanical					
Total Revenue	.6	.7	.2	.1	-65.6%
Workstation Shipments	20	19	7	2	-70.6%
AEC					
Total Revenue	.0	.0	.8	.9	NA
Workstation Shipments	0	0	24	23	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	1	1	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.3	.4	.9	.9	62.4%
Workstation Shipments	7	11	23	24	81.2%
Host/Server					
Total Revenue	.1	.1	.1	.0	-64.6%
Workstation Shipments	6	1	6	1	-64.8%
Personal Computer					
Total Revenue	.2	.2	.1	.1	-25.5%
Workstation Shipments	7	6	3	0	-78.7%

Source: Dataquest
 June 1991

TABLE NUMBER: 4
 TITLE: Company History
 COMPANY: ACERI SA
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	.4	.8	.6	NA
Workstation Shipments	NA	10	14	3	NA
Mechanical					
Total Revenue	NA	.4	.8	.6	NA
Workstation Shipments	NA	10	14	3	NA
AEC					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
GIS/Mapping					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Electronic CAE					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
IC Layout					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Host/Server					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Personal Computer					
Total Revenue	NA	.4	.8	.6	NA
Workstation Shipments	NA	10	14	3	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 5
 TITLE: Company History
 COMPANY: ADRA Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.3	1.7	2.1	2.5	37.1%
Workstation Shipments	21	29	37	45	44.6%
Mechanical					
Total Revenue	1.3	1.7	2.1	2.5	37.1%
Workstation Shipments	21	29	37	45	44.6%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.0	1.3	1.6	1.9	37.2%
Workstation Shipments	21	29	37	45	44.6%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.3	.4	.5	.6	36.8%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 6
 TITLE: Company History
 COMPANY: Albert Nestler
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	4.1	5.4	6.1	7.4	34.4%
Workstation Shipments	100	138	151	95	-2.5%
Mechanical					
Total Revenue	4.1	5.4	6.1	7.4	34.4%
Workstation Shipments	100	138	151	95	-2.5%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	3.7	4.9	5.4	7.4	41.7%
Workstation Shipments	75	106	134	95	12.9%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.4	.5	.7	.0	-100.0%
Workstation Shipments	25	32	17	0	-100.0%

Source: Dataquest
 June 1991

TABLE NUMBER: 7
 TITLE: Company History
 COMPANY: Alias Research
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.1	2.4	3.0	5.7	64.0%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	2.1	2.4	3.0	5.7	64.0%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	2.1	2.4	3.0	5.7	64.0%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 8
 TITLE: Company History
 COMPANY: Alper Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	1.3	2.7	NA
Workstation Shipments	NA	NA	9	18	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	1.3	2.7	NA
Workstation Shipments	NA	NA	9	18	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	1.3	2.7	NA
Workstation Shipments	NA	NA	9	18	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 9
 TITLE: Company History
 COMPANY: ALS Design
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.9	2.4	2.9	2.6	15.1%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	1.0	1.2	1.4	1.9	41.1%
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	1.0	1.2	1.4	.6	-18.8%
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	1.9	2.4	2.9	2.6	15.1%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		10				
TITLE:		Company History				
COMPANY:		AnaCAD				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR
		====	====	====	====	87-90
						=====
All Applications						
	Total Revenue	2.2	2.7	3.3	3.9	33.8%
	Workstation Shipments	0	0	0	0	NA
Mechanical						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
AEC						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
GIS/Mapping						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
Electronic CAE						
	Total Revenue	2.2	2.7	3.3	3.9	33.8%
	Workstation Shipments	0	0	0	0	NA
IC Layout						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
Technical Workstation						
	Total Revenue	2.2	2.7	3.3	3.9	33.8%
	Workstation Shipments	0	0	0	0	NA
Host/Server						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
Personal Computer						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA

Source: Dataquest
June 1991

TABLE NUMBER: 11
 TITLE: Company History
 COMPANY: Anilam Electronics
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	1.0	1.2	1.4	2.2	49.7%
Workstation Shipments	13	15	18	28	49.1%
Mechanical					
Total Revenue	1.0	1.2	1.4	2.2	49.7%
Workstation Shipments	13	15	18	28	49.1%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	1.0	1.2	1.4	2.2	49.7%
Workstation Shipments	13	15	18	28	49.1%

Source: Dataquest
 June 1991

TABLE NUMBER: 12
 TITLE: Company History
 COMPANY: Aplein*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	1.5	1.7	NA
Workstation Shipments	NA	NA	17	20	NA
Mechanical					
Total Revenue	NA	NA	.4	.5	NA
Workstation Shipments	NA	NA	5	6	NA
AEC					
Total Revenue	NA	NA	1.0	1.2	NA
Workstation Shipments	NA	NA	12	14	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	1.5	1.7	NA
Workstation Shipments	NA	NA	17	20	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 13
 TITLE: Company History
 COMPANY: Apple Computer
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	15.0	23.5	49.9	59.0	98.4%
Workstation Shipments	5,371	5,471	9,600	11,340	45.3%
Mechanical					
Total Revenue	7.9	13.2	20.5	24.2	74.7%
Workstation Shipments	2,846	3,080	3,936	4,649	27.8%
AEC					
Total Revenue	5.4	5.6	20.0	23.6	109.2%
Workstation Shipments	1,933	1,295	3,840	4,536	53.2%
GIS/Mapping					
Total Revenue	.5	2.6	5.5	6.5	279.2%
Workstation Shipments	161	595	1,056	1,247	178.2%
Electronic CAE					
Total Revenue	.5	.7	2.0	2.4	128.5%
Workstation Shipments	161	168	384	454	67.8%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.8	1.4	2.0	2.4	77.0%
Workstation Shipments	269	333	384	454	30.0%
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	15.0	23.5	49.9	59.0	98.4%
Workstation Shipments	5,371	5,471	9,600	11,340	45.3%

Source: Dataquest
 June 1991

TABLE NUMBER: 14
 TITLE: Company History
 COMPANY: ARKTEC
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	1.2	1.4	NA
Workstation Shipments	NA	NA	33	40	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	1.2	1.4	NA
Workstation Shipments	NA	NA	33	40	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.4	.4	NA
Workstation Shipments	NA	NA	7	18	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.8	1.0	NA
Workstation Shipments	NA	NA	26	22	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 15
 TITLE: Company History
 COMPANY: Asicom*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	2.1	3.1	NA
Workstation Shipments	NA	NA	67	100	NA
Mechanical					
Total Revenue	NA	NA	1.2	1.9	NA
Workstation Shipments	NA	NA	40	60	NA
AEC					
Total Revenue	NA	NA	.5	.8	NA
Workstation Shipments	NA	NA	17	25	NA
GIS/Mapping					
Total Revenue	NA	NA	.2	.3	NA
Workstation Shipments	NA	NA	7	10	NA
Electronic CAE					
Total Revenue	NA	NA	.1	.2	NA
Workstation Shipments	NA	NA	3	5	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.2	.4	NA
Workstation Shipments	NA	NA	7	11	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	1.8	2.8	NA
Workstation Shipments	NA	NA	60	89	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 16
 TITLE: Company History
 COMPANY: Assigraph
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	7.0	6.2	2.9	2.8	-37.3%
Workstation Shipments	48	35	35	21	-33.5%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	3.5	3.2	1.9	2.8	-11.3%
Workstation Shipments	24	18	24	21	-6.0%
IC Layout					
Total Revenue	1.4	1.1	.0	.0	-100.0%
Workstation Shipments	10	6	0	0	-100.0%
PCB/Hybrid/MCM					
Total Revenue	2.1	1.9	1.0	.0	-100.0%
Workstation Shipments	14	11	11	0	-100.0%
Technical Workstation					
Total Revenue	2.8	3.3	1.9	1.4	-29.8%
Workstation Shipments	17	20	0	11	-21.3%
Host/Server					
Total Revenue	4.2	2.9	1.0	1.4	-42.8%
Workstation Shipments	31	16	35	11	-41.4%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 17
 TITLE: Company History
 COMPANY: Aucos elektronische Gerate
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	.8	1.0	NA
Workstation Shipments	NA	NA	83	100	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.8	1.0	NA
Workstation Shipments	NA	NA	83	100	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.8	1.0	NA
Workstation Shipments	NA	NA	83	100	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 18
 TITLE: Company History
 COMPANY: Aucotec
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	4.6	6.0	6.6	10.5	51.4%
Workstation Shipments	418	550	127	167	-36.8%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	4.6	6.0	6.6	10.5	51.4%
Workstation Shipments	418	550	127	167	-36.8%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.2	.3	.3	3.5	287.9%
Workstation Shipments	21	28	4	55	62.3%
Host/Server					
Total Revenue	.2	.3	.3	.0	-100.0%
Workstation Shipments	21	28	3	0	-93.1%
Personal Computer					
Total Revenue	4.1	5.4	5.9	7.0	30.7%
Workstation Shipments	376	495	120	112	-45.4%

Source: Dataquest
 June 1991

TABLE NUMBER: 19
 TITLE: Company History
 COMPANY: Auto-Trol
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	9.4	8.8	7.5	11.8	12.0%
Workstation Shipments	116	91	78	138	9.2%
Mechanical					
Total Revenue	6.1	5.3	7.5	8.4	17.5%
Workstation Shipments	75	54	78	99	14.5%
AEC					
Total Revenue	3.3	3.5	.0	3.4	1.2%
Workstation Shipments	41	36	0	39	-1.4%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/NCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	9.4	8.8	7.5	11.8	12.0%
Workstation Shipments	110	91	78	138	11.9%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	6	0	0	0	-100.0%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 20
 TITLE: Company History
 COMPANY: Autodesk
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	21.3	38.2	56.5	80.9	95.0%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	9.5	15.9	23.2	30.7	80.3%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	9.2	15.0	23.2	35.6	97.2%
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	1.5	2.7	5.1	8.1	134.4%
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	3.5	4.5	5.7	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	1.2	1.0	.6	.8	-18.0%
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.2	1.9	1.7	6.7	464.0%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	21.1	36.2	54.8	74.2	87.7%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 21
 TITLE: Company History
 COMPANY: BATISOFT
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.9	3.4	4.0	7.0	54.9%
Workstation Shipments	197	207	227	225	6.8%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	2.9	3.4	4.0	7.0	54.9%
Workstation Shipments	197	207	227	225	6.8%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	2.9	3.4	4.0	7.0	54.9%
Workstation Shipments	197	207	227	225	6.8%

Source: Dataquest
 June 1991

TABLE NUMBER: 22
 TITLE: Company History
 COMPANY: BETRONEX
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	****
All Applications					
Total Revenue	1.9	2.3	3.1	2.2	5.3%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	1.9	2.3	3.1	2.2	5.3%
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	1.9	2.3	3.1	2.2	5.3%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 23
 TITLE: Company History
 COMPANY: CAD Centre
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	8.5	10.9	9.2	12.1	19.3%
Workstation Shipments	66	83	0	0	-100.0%
Mechanical					
Total Revenue	2.4	3.4	1.1	1.5	-21.8%
Workstation Shipments	18	26	0	0	-100.0%
AEC					
Total Revenue	6.1	7.5	8.1	10.6	31.9%
Workstation Shipments	48	57	0	0	-100.0%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	8.5	10.9	9.2	12.1	19.3%
Workstation Shipments	66	83	0	0	-100.0%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 24
 TITLE: Company History
 COMPANY: CAD Lab
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	6.5	10.0	11.5	11.5	32.9%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	4.6	7.0	9.2	11.5	58.8%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	2.0	3.0	2.3	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	5.9	9.0	10.9	11.0	37.4%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.7	1.0	.6	.4	-17.7%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 25
 TITLE: Company History
 COMPANY: CAD TECH Iberica*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	NA	1.1	NA
Workstation Shipments	NA	NA	NA	59	NA
Mechanical					
Total Revenue	NA	NA	NA	1.1	NA
Workstation Shipments	NA	NA	NA	59	NA
AEC					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	.3	NA
Workstation Shipments	NA	NA	NA	14	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	.0	NA
Personal Computer					
Total Revenue	NA	NA	NA	.8	NA
Workstation Shipments	NA	NA	NA	45	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 26
 TITLE: Company History
 COMPANY: CAD-Capture
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	.4	.5	NA
Workstation Shipments	NA	NA	0	0	NA
Mechanical					
Total Revenue	NA	NA	.1	.2	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.1	.2	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.1	.2	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.4	.5	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 27
 TITLE: Company History
 COMPANY: CAD-UL
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	.7	1.0	1.1	1.7	55.8%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.7	1.0	1.1	1.7	55.8%
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.7	1.0	1.1	1.7	55.8%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		28				
TITLE:		Company History				
COMPANY:		CADAM				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR 87-90
		====	====	====	====	=====
All Applications						
Total Revenue		11.2	13.3	13.0	16.0	19.6%
Workstation Shipments		34	188	610	1,000	443.1%
Mechanical						
Total Revenue		2.6	5.7	9.7	12.0	114.6%
Workstation Shipments		20	145	458	750	515.0%
AEC						
Total Revenue		1.3	1.1	1.9	2.4	37.8%
Workstation Shipments		14	28	92	150	226.5%
GIS/Mapping						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Electronic CAE						
Total Revenue		.1	.0	.0	.0	-100.0%
Workstation Shipments		0	0	0	0	NA
IC Layout						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
PCB/Hybrid/MCM						
Total Revenue		7.2	6.5	1.3	1.6	-52.8%
Workstation Shipments		0	15	61	100	NA
Technical Workstation						
Total Revenue		.1	.7	1.3	2.0	311.3%
Workstation Shipments		0	0	0	0	-100.0%
Host/Server						
Total Revenue		5.0	2.5	2.4	2.1	-35.1%
Workstation Shipments		22	8	0	0	-100.0%
Personal Computer						
Total Revenue		6.1	10.1	9.3	11.9	40.1%
Workstation Shipments		12	181	610	1,000	821.4%

Source: Dataquest
June 1991

TABLE NUMBER: 29
 TITLE: Company History
 COMPANY: Cadence
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	7.3	9.3	12.9	31.3	107.5%
Workstation Shipments	2	0	0	0	-100.0%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	1.4	4.5	12.8	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	7.2	7.7	8.4	17.9	57.2%
Workstation Shipments	2	0	0	0	-100.0%
PCB/Hybrid/MCM					
Total Revenue	.1	.2	.0	.6	252.1%
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	7.1	7.4	9.3	27.5	97.3%
Workstation Shipments	2	0	0	0	-100.0%
Host/Server					
Total Revenue	.2	1.9	3.6	3.8	335.3%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:	30				
TITLE:	Company History				
COMPANY:	Caditron				
REGION:	Europe				
UNITS:	Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR
	****	****	****	****	87-90

All Applications					
Total Revenue	5.6	7.1	9.8	13.0	51.9%
Workstation Shipments	110	128	154	200	34.8%
Mechanical					
Total Revenue	3.4	4.2	5.9	7.8	51.8%
Workstation Shipments	66	77	92	120	34.8%
AEC					
Total Revenue	1.6	2.0	2.8	3.6	52.1%
Workstation Shipments	31	36	43	56	34.8%
GIS/Mapping					
Total Revenue	.1	.1	.2	.3	53.7%
Workstation Shipments	2	3	3	4	34.7%
Electronic CAE					
Total Revenue	.6	.7	1.0	1.3	51.8%
Workstation Shipments	11	13	15	20	34.8%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	5.6	7.1	9.8	13.0	51.9%
Workstation Shipments	110	128	154	200	34.8%

Source: Dataquest
June 1991

TABLE NUMBER: 31
 TITLE: Company History
 COMPANY: CADMATIC
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	.5	.7	NA
Workstation Shipments	NA	NA	4	4	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.5	.7	NA
Workstation Shipments	NA	NA	4	4	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.2	.2	NA
Workstation Shipments	NA	NA	1	2	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.4	.5	NA
Workstation Shipments	NA	NA	2	3	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		32				
TITLE:		Company History				
COMPANY:		Cadtronic				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR	
	----	----	----	----	-----	
All Applications						
Total Revenue	2.6	2.8	2.5	2.8	4.5%	
Workstation Shipments	90	36	51	84	-3.4%	
Mechanical						
Total Revenue	.5	.3	.3	.4	-9.1%	
Workstation Shipments	18	4	3	13	-16.3%	
AEC						
Total Revenue	1.6	1.7	1.5	1.0	-20.3%	
Workstation Shipments	54	22	30	29	-26.2%	
GIS/Mapping						
Total Revenue	.5	.9	.8	1.4	65.3%	
Workstation Shipments	18	11	19	42	52.8%	
Electronic CAE						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
IC Layout						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
PCB/Hybrid/MCM						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
Technical Workstation						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
Host/Server						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
Personal Computer						
Total Revenue	2.6	2.8	2.5	2.8	4.5%	
Workstation Shipments	90	36	51	84	-3.4%	

Source: Dataquest
June 1991

TABLE NUMBER: 33
 TITLE: Company History
 COMPANY: Calay
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	13.6	9.0	13.5	14.4	2.6%
Workstation Shipments	105	108	134	234	49.2%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	2.9	NA
Workstation Shipments	0	0	0	47	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	13.6	9.0	13.5	11.5	-8.3%
Workstation Shipments	105	108	134	187	33.5%
Technical Workstation					
Total Revenue	13.6	9.0	13.5	14.4	2.6%
Workstation Shipments	105	108	134	234	49.2%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 34
 TITLE: Company History
 COMPANY: CAMTEK
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.5	1.9	2.2	2.5	28.8%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	1.5	1.9	2.2	2.5	28.8%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.1	1.3	1.5	1.8	28.6%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.5	.6	.7	.8	29.4%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 35
 TITLE: Company History
 COMPANY: Caroline Informatique
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	1.6	2.3	NA
Workstation Shipments	NA	NA	20	30	NA
Mechanical					
Total Revenue	NA	NA	1.6	2.3	NA
Workstation Shipments	NA	NA	20	30	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	1.3	1.8	NA
Workstation Shipments	NA	NA	17	25	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.3	.5	NA
Workstation Shipments	NA	NA	3	5	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 36
 TITLE: Company History
 COMPANY: Catalpa
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	.6	1.1	1.7	2.2	95.2%
Workstation Shipments	18	22	14	18	.0%
Mechanical					
Total Revenue	.6	1.1	1.7	2.2	95.2%
Workstation Shipments	18	22	14	18	.0%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.6	1.1	1.7	2.2	95.2%
Workstation Shipments	18	22	14	18	.0%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 37
 TITLE: Company History
 COMPANY: CENTUNION*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	.9	.9	NA
Workstation Shipments	NA	NA	11	12	NA
Mechanical					
Total Revenue	NA	NA	.4	.4	NA
Workstation Shipments	NA	NA	6	6	NA
AEC					
Total Revenue	NA	NA	.4	.4	NA
Workstation Shipments	NA	NA	6	6	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.9	.9	NA
Workstation Shipments	NA	NA	11	12	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 38
 TITLE: Company History
 COMPANY: Cimatron
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	10.7	13.3	11.1	11.6	4.2%
Workstation Shipments	278	340	331	344	11.2%
Mechanical					
Total Revenue	10.7	13.3	11.1	11.6	4.2%
Workstation Shipments	278	340	331	344	11.2%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	9.6	12.0	10.0	8.2	-7.9%
Workstation Shipments	250	306	298	241	-1.9%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	1.1	1.3	1.1	3.5	79.2%
Workstation Shipments	28	34	33	103	92.1%

Source: Dataquest
 June 1991

TABLE NUMBER: 39
 TITLE: Company History
 COMPANY: Cimline
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	10.0	14.6	12.1	10.3	1.6%
Workstation Shipments	142	371	303	197	17.8%
Mechanical					
Total Revenue	10.0	14.2	12.1	10.3	1.6%
Workstation Shipments	142	360	303	197	17.8%
AEC					
Total Revenue	.0	.4	.0	.0	NA
Workstation Shipments	0	11	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	10.0	14.6	12.1	10.3	1.6%
Workstation Shipments	142	371	303	197	17.8%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 40
 TITLE: Company History
 COMPANY: CIMTEK*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	5.9	7.1	NA
Workstation Shipments	NA	NA	57	67	NA
Mechanical					
Total Revenue	NA	NA	5.9	7.1	NA
Workstation Shipments	NA	NA	57	67	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	3.5	4.3	NA
Workstation Shipments	NA	NA	31	37	NA
Host/Server					
Total Revenue	NA	NA	.6	.7	NA
Workstation Shipments	NA	NA	4	6	NA
Personal Computer					
Total Revenue	NA	NA	1.8	2.1	NA
Workstation Shipments	NA	NA	22	24	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 41
 TITLE: Company History
 COMPANY: Cisigraph
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	23.3	20.0	29.3	31.1	15.6%
Workstation Shipments	824	400	327	288	-40.9%
Mechanical					
Total Revenue	23.3	20.0	29.3	31.1	15.6%
Workstation Shipments	824	400	327	288	-40.9%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	2.3	6.0	26.4	28.0	246.6%
Workstation Shipments	35	67	318	226	153.1%
Host/Server					
Total Revenue	19.8	14.0	2.9	3.1	-60.4%
Workstation Shipments	751	333	9	62	-71.4%
Personal Computer					
Total Revenue	1.2	.0	.0	.0	-100.0%
Workstation Shipments	38	0	0	0	-100.0%

Source: Dataquest
 June 1991

TABLE NUMBER: 42
 TITLE: Company History
 COMPANY: Clemessy
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	2.6	3.1	3.6	5.2	42.2%
Workstation Shipments	3	5	7	10	82.6%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	2.6	3.1	3.6	5.2	42.2%
Workstation Shipments	3	5	7	10	82.6%
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	2.1	2.5	2.9	4.2	42.3%
Workstation Shipments	1	2	3	4	82.6%
Host/Server					
Total Revenue	.5	.6	.7	1.1	42.1%
Workstation Shipments	2	3	4	6	82.6%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 43
 TITLE: Company History
 COMPANY: Club Informatico SA*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	3.8	4.7	5.9	6.7	33.5%
Workstation Shipments	92	104	130	260	68.1%
Mechanical					
Total Revenue	.6	.8	1.0	.9	16.6%
Workstation Shipments	16	18	22	34	47.0%
AEC					
Total Revenue	3.1	3.9	4.9	5.8	36.7%
Workstation Shipments	76	86	108	226	72.1%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	3.8	4.7	5.9	6.7	33.5%
Workstation Shipments	92	104	130	260	68.1%

Source: Dataquest
 June 1991

TABLE NUMBER:	44				
TITLE:	Company History				
COMPANY:	Compaq				
REGION:	Europe				
UNITS:	Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	95.4	61.4	139.0	197.7	43.9%
Workstation Shipments	21,345	11,795	23,166	32,937	24.2%
Mechanical					
Total Revenue	37.9	20.9	49.8	70.8	36.7%
Workstation Shipments	8,785	4,010	8,294	11,791	15.9%
AEC					
Total Revenue	20.6	10.4	30.7	43.7	45.5%
Workstation Shipments	4,870	2,005	5,120	7,279	22.3%
GIS/Mapping					
Total Revenue	6.1	6.1	20.1	28.6	115.7%
Workstation Shipments	1,179	1,179	3,348	4,759	100.9%
Electronic CAE					
Total Revenue	15.7	12.3	27.1	38.5	56.7%
Workstation Shipments	3,314	2,359	4,517	6,423	39.2%
IC Layout					
Total Revenue	.6	.6	.0	.0	-100.0%
Workstation Shipments	118	118	0	0	-100.0%
PCB/Hybrid/MCM					
Total Revenue	14.4	11.0	11.3	16.1	5.6%
Workstation Shipments	3,078	2,123	1,888	2,684	-6.6%
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	95.4	61.4	139.0	197.7	43.9%
Workstation Shipments	21,345	11,795	23,166	32,937	24.2%

Source: Dataquest
June 1991

TABLE NUMBER: 45
 TITLE: Company History
 COMPANY: Complansoft CAD
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.0	2.2	2.6	3.1	25.9%
Workstation Shipments	133	153	179	216	27.2%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	2.0	2.2	2.6	3.1	25.9%
Workstation Shipments	133	153	179	216	27.2%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	2.0	2.2	2.6	3.1	25.9%
Workstation Shipments	133	153	179	216	27.2%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 46
 TITLE: Company History
 COMPANY: Computational Mechanics
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	.4	.4	.5	.7	39.4%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.4	.4	.5	.7	39.4%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.1	.1	.1	.2	81.3%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.3	.3	.4	.5	27.3%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 47
 TITLE: Company History
 COMPANY: Computervision
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	382.3	382.2	471.7	575.5	22.7%
Workstation Shipments	2,769	2,869	4,475	5,925	46.3%
Mechanical					
Total Revenue	293.8	298.5	409.7	505.8	31.2%
Workstation Shipments	2,077	2,233	3,901	5,208	58.3%
AEC					
Total Revenue	59.8	51.1	20.3	24.3	-36.2%
Workstation Shipments	408	377	216	275	-17.9%
GIS/Mapping					
Total Revenue	3.3	7.7	11.6	11.4	86.3%
Workstation Shipments	29	59	139	165	136.7%
Electronic CAE					
Total Revenue	6.4	6.2	9.3	11.3	32.7%
Workstation Shipments	65	50	70	96	21.5%
IC Layout					
Total Revenue	.0	.1	.0	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	19.0	18.6	20.8	22.7	9.3%
Workstation Shipments	190	149	149	182	-2.0%
Technical Workstation					
Total Revenue	198.0	243.5	403.7	505.5	59.8%
Workstation Shipments	1,863	2,027	2,896	4,055	47.5%
Host/Server					
Total Revenue	170.3	127.5	59.1	61.8	-39.7%
Workstation Shipments	691	764	1,453	1,793	61.0%
Personal Computer					
Total Revenue	14.0	11.3	8.9	8.1	-23.9%
Workstation Shipments	215	78	127	77	-40.2%

Source: Dataquest
 June 1991

TABLE NUMBER: 48
 TITLE: Company History
 COMPANY: Computer Services Consultants
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	3.1	3.5	3.9	4.5	20.9%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	3.1	3.5	3.9	4.5	20.9%
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	3.1	3.5	3.9	4.5	20.9%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 49
 TITLE: Company History
 COMPANY: Contract Data Research
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	.5	.7	NA
Workstation Shipments	NA	NA	0	0	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.5	.7	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.5	.7	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:	50				
TITLE:	Company History				
COMPANY:	Control Data				
REGION:	Europe				
UNITS:	Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	59.5	93.4	93.7	90.9	23.6%
Workstation Shipments	566	1,000	1,000	1,201	45.7%
Mechanical					
Total Revenue	52.6	81.3	89.0	85.9	27.8%
Workstation Shipments	415	870	950	1,103	63.1%
AEC					
Total Revenue	1.2	1.9	1.9	2.0	30.1%
Workstation Shipments	4	20	20	27	145.7%
GIS/Mapping					
Total Revenue	.0	.0	2.8	3.0	NA
Workstation Shipments	0	0	30	71	NA
Electronic CAE					
Total Revenue	2.8	7.5	.0	.0	-100.0%
Workstation Shipments	2	80	0	0	-100.0%
IC Layout					
Total Revenue	.9	.0	.0	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	1.9	2.8	.0	.0	-100.0%
Workstation Shipments	144	30	0	0	-100.0%
Technical Workstation					
Total Revenue	5.8	24.5	31.8	38.7	157.7%
Workstation Shipments	104	434	589	900	194.6%
Host/Server					
Total Revenue	51.9	68.9	61.8	52.3	.4%
Workstation Shipments	318	567	410	301	-2.7%
Personal Computer					
Total Revenue	1.8	.0	.0	.0	-100.0%
Workstation Shipments	144	0	0	0	-100.0%

Source: Dataquest
June 1991

TABLE NUMBER: 51
 TITLE: Company History
 COMPANY: DAPCO
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	1.0	1.2	NA
Workstation Shipments	NA	NA	0	0	NA
Mechanical					
Total Revenue	NA	NA	.1	.1	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.2	.2	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.6	.7	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.1	.1	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	1.0	1.2	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 52
 TITLE: Company History
 COMPANY: Dassault*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	14.9	44.3	55.0	67.6	113.1%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	14.1	41.2	51.1	62.9	111.0%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.8	3.1	3.8	4.7	150.9%
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	2.2	14.2	17.6	21.7	211.0%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	12.6	30.1	37.4	45.9	90.6%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 53
 TITLE: Company History
 COMPANY: DAT Standard Information systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	4.4	5.5	7.7	7.6	30.8%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	3.7	4.6	7.3	6.4	32.1%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.1	.2	.4	.4	71.0%
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.1	.2	.0	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.5	.6	.0	.8	25.8%
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/NCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	4.4	5.5	7.7	7.6	30.8%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 54
 TITLE: Company History
 COMPANY: Data I/O
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	2.3	1.5	1.1	1.6	-16.3%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	1.9	1.5	1.1	1.6	-6.4%
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.5	.0	.0	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.2	.1	.2	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.1	.1	.1	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	2.3	1.3	1.0	1.3	-25.0%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 55
 TITLE: Company History
 COMPANY: Data Technology/DATECH*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	16.4	20.5	25.6	34.0	43.8%
Workstation Shipments	483	580	832	981	42.5%
Mechanical					
Total Revenue	7.9	9.8	12.8	17.0	46.8%
Workstation Shipments	232	278	416	491	45.5%
AEC					
Total Revenue	6.1	7.6	9.5	12.6	44.0%
Workstation Shipments	179	215	308	363	42.5%
GIS/Mapping					
Total Revenue	1.5	1.8	2.3	3.1	43.8%
Workstation Shipments	43	52	75	88	42.5%
Electronic CAE					
Total Revenue	.7	.8	.5	.7	.7%
Workstation Shipments	19	23	17	20	.8%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.3	.4	.5	.7	43.5%
Workstation Shipments	10	12	17	20	42.4%
Technical Workstation					
Total Revenue	1.5	1.8	2.3	3.1	44.0%
Workstation Shipments	43	52	0	0	-100.0%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	14.9	18.7	23.3	30.9	43.8%
Workstation Shipments	440	528	832	981	49.4%

Source: Dataquest
 June 1991

TABLE NUMBER: 56
 TITLE: Company History
 COMPANY: Datagraphic
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	3.6	3.4	NA
Workstation Shipments	NA	NA	60	55	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	3.6	3.4	NA
Workstation Shipments	NA	NA	60	55	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	3.6	3.4	NA
Workstation Shipments	NA	NA	60	55	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 57
 TITLE: Company History
 COMPANY: DATAID Technologies*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	5.1	6.4	7.9	10.5	43.4%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	4.1	5.1	6.4	8.4	43.2%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	1.0	1.3	1.6	2.1	44.2%
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCS/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	3.1	3.8	4.8	6.3	43.4%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	1.5	1.9	2.4	3.1	43.7%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.5	.6	.8	1.0	42.8%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:	58				
TITLE:	Company History				
COMPANY:	Dazix				
REGION:	Europe				
UNITS:	Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	53.9	79.7	55.3	44.9	-8.7%
Workstation Shipments	334	712	551	331	-.4%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	42.6	50.2	44.3	26.9	-20.5%
Workstation Shipments	290	485	441	198	-17.3%
IC Layout					
Total Revenue	4.6	2.6	.0	.0	-100.0%
Workstation Shipments	14	17	0	0	-100.0%
PCB/Hybrid/MCM					
Total Revenue	6.7	26.9	11.1	18.0	64.1%
Workstation Shipments	29	210	110	132	113.0%
Technical Workstation					
Total Revenue	35.9	73.0	55.3	44.9	11.9%
Workstation Shipments	166	679	551	331	41.0%
Host/Server					
Total Revenue	8.1	5.4	.0	.0	-100.0%
Workstation Shipments	42	33	0	0	-100.0%
Personal Computer					
Total Revenue	10.0	1.3	.0	.0	-100.0%
Workstation Shipments	125	0	0	0	-100.0%

Source: Dataquest
June 1991

TABLE NUMBER: 59
 TITLE: Company History
 COMPANY: debis Systemhaus
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	3.9	4.5	5.2	5.2	14.4%
Workstation Shipments	136	156	180	180	15.0%
Mechanical					
Total Revenue	2.0	2.2	2.6	2.6	14.4%
Workstation Shipments	68	78	90	90	15.0%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	2.0	2.2	2.6	2.6	14.4%
Workstation Shipments	68	78	90	90	15.0%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	3.0	3.4	4.0	4.0	14.5%
Workstation Shipments	96	110	127	127	15.0%
Host/Server					
Total Revenue	.5	.5	.6	.6	14.2%
Workstation Shipments	10	11	13	13	15.0%
Personal Computer					
Total Revenue	.5	.5	.6	.6	14.2%
Workstation Shipments	30	34	40	40	15.1%

Source: Dataquest
 June 1991

TABLE NUMBER: 60
 TITLE: Company History
 COMPANY: DECAD
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	.9	2.4	1.4	1.3	23.4%
Workstation Shipments	0	9	11	5	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.9	2.4	1.4	1.3	23.4%
Workstation Shipments	0	9	11	5	NA
Technical Workstation					
Total Revenue	.8	2.3	1.3	1.3	24.5%
Workstation Shipments	0	7	10	4	NA
Host/Server					
Total Revenue	.0	.1	.1	.0	.0%
Workstation Shipments	0	2	1	1	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 61
 TITLE: Company History
 COMPANY: DECISA*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	3.9	5.9	NA
Workstation Shipments	NA	NA	69	104	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	1.6	2.4	NA
Workstation Shipments	NA	NA	28	39	NA
IC Layout					
Total Revenue	NA	NA	.8	1.2	NA
Workstation Shipments	NA	NA	14	18	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	1.6	2.4	NA
Workstation Shipments	NA	NA	28	47	NA
Technical Workstation					
Total Revenue	NA	NA	2.9	4.4	NA
Workstation Shipments	NA	NA	51	68	NA
Host/Server					
Total Revenue	NA	NA	.4	.6	NA
Workstation Shipments	NA	NA	7	6	NA
Personal Computer					
Total Revenue	NA	NA	.6	1.0	NA
Workstation Shipments	NA	NA	11	30	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 62
 TITLE: Company History
 COMPANY: Delcam International
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	6.9	8.9	10.5	13.1	38.3%
Workstation Shipments	107	145	172	218	42.8%
Mechanical					
Total Revenue	6.9	8.9	10.5	13.1	38.3%
Workstation Shipments	107	145	172	218	42.8%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	6.9	8.9	10.5	13.1	38.3%
Workstation Shipments	107	145	172	218	42.8%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 63
 TITLE: Company History
 COMPANY: Dell Computer
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	----	----	----	----	-----
All Applications					
Total Revenue	.5	.7	.8	2.8	127.7%
Workstation Shipments	163	178	194	698	107.2%
Mechanical					
Total Revenue	.2	.3	.3	1.1	127.6%
Workstation Shipments	67	73	79	286	107.2%
AEC					
Total Revenue	.2	.3	.3	1.1	130.9%
Workstation Shipments	63	69	76	279	109.8%
GIS/Mapping					
Total Revenue	.0	.1	.1	.2	123.6%
Workstation Shipments	11	12	14	49	107.1%
Electronic CAE					
Total Revenue	.0	.1	.1	.2	106.2%
Workstation Shipments	11	12	14	42	91.8%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.1	.2	138.0%
Workstation Shipments	10	11	12	42	107.2%
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.5	.7	.8	2.8	127.7%
Workstation Shipments	163	178	194	698	107.2%

Source: Dataquest
 June 1991

TABLE NUMBER: 64
 TITLE: Company History
 COMPANY: DELTA CAD*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	----	----	----	----	-----
All Applications					
Total Revenue	NA	NA	NA	1.0	NA
Workstation Shipments	NA	NA	NA	12	NA
Mechanical					
Total Revenue	NA	NA	NA	.9	NA
Workstation Shipments	NA	NA	NA	11	NA
AEC					
Total Revenue	NA	NA	NA	.1	NA
Workstation Shipments	NA	NA	NA	1	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Personal Computer					
Total Revenue	NA	NA	NA	1.0	NA
Workstation Shipments	NA	NA	NA	12	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 65
 TITLE: Company History
 COMPANY: Digital
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	237.5	324.0	359.8	359.8	23.1%
Workstation Shipments	927	668	2,612	2,640	68.7%
Mechanical					
Total Revenue	142.5	175.0	194.2	194.2	16.7%
Workstation Shipments	556	361	1,327	1,342	55.3%
AEC					
Total Revenue	16.6	35.6	39.6	35.9	47.0%
Workstation Shipments	65	73	270	248	95.7%
GIS/Mapping					
Total Revenue	23.8	32.4	36.0	39.6	29.1%
Workstation Shipments	93	67	246	273	71.4%
Electronic CAE					
Total Revenue	35.6	38.9	36.0	36.0	.5%
Workstation Shipments	139	80	307	311	49.4%
IC Layout					
Total Revenue	7.1	16.2	14.4	14.4	42.2%
Workstation Shipments	28	33	123	124	111.4%
PCB/Hybrid/MCM					
Total Revenue	11.9	25.9	39.7	39.6	82.5%
Workstation Shipments	46	53	338	342	171.4%
Technical Workstation					
Total Revenue	30.9	32.4	79.1	79.1	59.9%
Workstation Shipments	927	668	2,612	2,640	68.7%
Host/Server					
Total Revenue	206.6	291.6	280.7	280.7	16.6%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 66
 TITLE: Company History
 COMPANY: Dolphin Integration
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	NA	.1	NA
Workstation Shipments	NA	NA	NA	0	NA
Mechanical					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
AEC					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Personal Computer					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 67
 TITLE: Company History
 COMPANY: EEsof
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	----	----	----	----	-----
All Applications					
Total Revenue	1.3	2.8	5.4	7.8	147.8%
Workstation Shipments	0	3	4	5	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	1.3	2.8	5.4	7.8	147.8%
Workstation Shipments	0	3	4	5	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/NCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.4	.7	1.8	3.5	203.9%
Workstation Shipments	0	1	1	5	NA
Host/Server					
Total Revenue	.0	.0	.0	.4	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.9	2.1	3.6	3.9	109.3%
Workstation Shipments	0	2	3	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 68
 TITLE: Company History
 COMPANY: Elstree Computing
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	1.1	1.4	1.8	NA
Workstation Shipments	NA	35	43	50	NA
Mechanical					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
AEC					
Total Revenue	NA	1.1	1.4	1.8	NA
Workstation Shipments	NA	35	43	50	NA
GIS/Mapping					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Electronic CAE					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
IC Layout					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Host/Server					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Personal Computer					
Total Revenue	NA	1.1	1.4	1.8	NA
Workstation Shipments	NA	35	43	50	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 69
 TITLE: Company History
 COMPANY: Engineering Computer Services*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	8.9	10.5	13.5	13.7	24.1%
Workstation Shipments	200	215	247	215	3.7%
Mechanical					
Total Revenue	8.9	10.5	13.5	13.7	24.1%
Workstation Shipments	200	215	247	215	3.7%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	3.7	5.3	7.3	7.4	40.7%
Workstation Shipments	64	57	78	116	34.7%
Host/Server					
Total Revenue	1.8	.0	.0	.0	-100.0%
Workstation Shipments	21	0	0	0	-100.0%
Personal Computer					
Total Revenue	3.4	5.3	6.2	6.3	36.5%
Workstation Shipments	115	158	169	99	-7.2%

Source: Dataquest
 June 1991

TABLE NUMBER: 70
 TITLE: Company History
 COMPANY: Eptisa*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	2.5	2.9	NA
Workstation Shipments	NA	NA	0	2	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	2.5	2.9	NA
Workstation Shipments	NA	NA	0	2	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	1.8	2.1	NA
Workstation Shipments	NA	NA	0	1	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.8	.9	NA
Workstation Shipments	NA	NA	0	1	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 71
 TITLE: Company History
 COMPANY: ESDU International
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR
	****	****	****	****	87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	NA	.2	NA
Workstation Shipments	NA	NA	NA	0	NA
Mechanical					
Total Revenue	NA	NA	NA	.2	NA
Workstation Shipments	NA	NA	NA	0	NA
AEC					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Personal Computer					
Total Revenue	NA	NA	NA	.2	NA
Workstation Shipments	NA	NA	NA	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 72
 TITLE: Company History
 COMPANY: ESR
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	7.1	11.2	15.7	NA
Workstation Shipments	NA	7	0	0	NA
Mechanical					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
AEC					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
GIS/Mapping					
Total Revenue	NA	7.1	11.2	15.7	NA
Workstation Shipments	NA	7	0	0	NA
Electronic CAE					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
IC Layout					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	1.7	4.4	8.9	NA
Workstation Shipments	NA	3	0	0	NA
Host/Server					
Total Revenue	NA	4.4	5.9	5.3	NA
Workstation Shipments	NA	4	0	0	NA
Personal Computer					
Total Revenue	NA	1.0	.9	1.4	NA
Workstation Shipments	NA	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 73
 TITLE: Company History
 COMPANY: Everex Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	.4	2.0	1.3	1.5	96.7%
Workstation Shipments	187	1,013	386	458	56.4%
Mechanical					
Total Revenue	.2	1.2	.3	.4	23.4%
Workstation Shipments	112	607	103	114	.9%
AEC					
Total Revenue	.1	.7	.5	.6	105.7%
Workstation Shipments	65	354	147	169	60.9%
GIS/Mapping					
Total Revenue	.0	.0	.1	.1	NA
Workstation Shipments	0	0	23	23	NA
Electronic CAE					
Total Revenue	.0	.1	.2	.3	429.2%
Workstation Shipments	5	31	58	87	298.0%
IC Layout					
Total Revenue	.0	.0	.1	.1	NA
Workstation Shipments	0	0	16	23	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.1	.1	260.6%
Workstation Shipments	4	21	39	41	220.9%
Technical Workstation					
Total Revenue	.0	.0	.0	.1	NA
Workstation Shipments	0	0	6	15	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.4	2.0	1.2	1.4	90.6%
Workstation Shipments	187	1,013	380	443	53.8%

Source: Dataquest
 June 1991

TABLE NUMBER:		74				
TITLE:		Company History				
COMPANY:		Exapt				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR 87-90
		****	****	****	****	*****
All Applications						
Total Revenue		11.4	12.1	12.4	12.3	3.9%
Workstation Shipments		173	189	212	211	10.6%
Mechanical						
Total Revenue		11.4	12.1	12.4	12.3	3.9%
Workstation Shipments		173	189	212	211	10.6%
AEC						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
GIS/Mapping						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Electronic CAE						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
IC Layout						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
PCB/Hybrid/MCM						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Technical Workstation						
Total Revenue		2.9	3.7	3.1	3.3	7.9%
Workstation Shipments		43	61	69	107	57.1%
Host/Server						
Total Revenue		8.5	8.5	9.3	9.0	2.5%
Workstation Shipments		129	128	143	104	-10.2%
Personal Computer						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA

Source: Dataquest
June 1991

TABLE NUMBER: 75
 TITLE: Company History
 COMPANY: FEA Limited
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	1.8	2.1	2.3	2.5	18.1%
Workstation Shipments	35	41	48	48	16.2%
Mechanical					
Total Revenue	1.8	2.1	2.3	2.5	18.1%
Workstation Shipments	35	41	48	48	16.2%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.7	.8	.9	1.0	18.2%
Workstation Shipments	14	16	19	19	16.2%
Host/Server					
Total Revenue	.2	.2	.2	.3	17.9%
Workstation Shipments	4	4	5	5	16.2%
Personal Computer					
Total Revenue	.9	1.0	1.2	1.3	18.1%
Workstation Shipments	18	20	24	24	16.2%

Source: Dataquest
 June 1991

TABLE NUMBER: 76
 TITLE: Company History
 COMPANY: FECS
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	.6	.7	1.2	1.1	33.3%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.6	.7	1.2	1.1	33.3%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.3	.3	.5	.6	52.3%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.4	.4	.7	.5	19.2%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 77
 TITLE: Company History
 COMPANY: Ferranti
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	32.3	31.1	22.3	21.8	-17.8%
Workstation Shipments	275	266	182	201	-14.5%
Mechanical					
Total Revenue	32.3	31.1	22.3	21.8	-17.8%
Workstation Shipments	275	266	182	201	-14.5%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.6	.8	22.3	21.8	483.6%
Workstation Shipments	8	11	182	201	400.3%
Host/Server					
Total Revenue	31.6	30.3	.0	.0	-100.0%
Workstation Shipments	267	255	0	0	-100.0%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 78
 TITLE: Company History
 COMPANY: FHECOR*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	NA	4.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Mechanical					
Total Revenue	NA	NA	NA	.6	NA
Workstation Shipments	NA	NA	NA	0	NA
AEC					
Total Revenue	NA	NA	NA	3.4	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Personal Computer					
Total Revenue	NA	NA	NA	4.0	NA
Workstation Shipments	NA	NA	NA	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 79
 TITLE: Company History
 COMPANY: Fides Industrielle Automation
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	4.8	9.2	6.6	10.0	44.0%
Workstation Shipments	31	46	62	75	56.0%
Mechanical					
Total Revenue	4.8	9.2	6.6	10.0	44.0%
Workstation Shipments	31	46	62	75	56.0%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.0	1.8	1.3	2.0	44.3%
Workstation Shipments	13	20	31	32	55.0%
Host/Server					
Total Revenue	3.9	7.3	5.3	8.0	43.9%
Workstation Shipments	17	26	31	43	56.9%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 80
 TITLE: Company History
 COMPANY: Framasoft
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.0	2.5	5.5	8.4	103.9%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	2.0	2.5	5.5	8.4	103.9%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.6	2.0	5.5	7.6	115.8%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.4	.5	.0	.9	45.8%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 81
 TITLE: Company History
 COMPANY: Gable CAD Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	1.8	2.1	2.8	2.6	20.0%
Workstation Shipments	14	17	23	32	53.0%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	1.8	2.1	2.8	2.6	20.0%
Workstation Shipments	14	17	23	32	53.0%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.6	1.9	2.5	2.6	25.1%
Workstation Shipments	13	16	21	32	56.0%
Host/Server					
Total Revenue	.1	.2	.2	.0	-100.0%
Workstation Shipments	1	1	2	0	-100.0%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 82
 TITLE: Company History
 COMPANY: Genasys II
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	1.4	3.2	NA
Workstation Shipments	NA	NA	5	11	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	1.4	3.2	NA
Workstation Shipments	NA	NA	5	11	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	1.3	2.9	NA
Workstation Shipments	NA	NA	4	10	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.1	.3	NA
Workstation Shipments	NA	NA	1	2	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 83
 TITLE: Company History
 COMPANY: Gerber Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	4.2	5.4	6.1	12.4	71.9%
Workstation Shipments	64	86	85	178	66.6%
Mechanical					
Total Revenue	4.2	5.4	6.1	12.4	71.9%
Workstation Shipments	64	86	85	178	66.6%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	4.2	5.4	6.1	12.4	71.9%
Workstation Shipments	64	86	85	178	66.6%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		84				
TITLE:		Company History				
COMPANY:		Ground Modelling Systems				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR
		====	====	====	====	87-90
						=====
All Applications						
Total Revenue		6.3	6.9	6.9	6.4	1.1%
Workstation Shipments		38	42	42	36	-2.4%
Mechanical						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
AEC						
Total Revenue		1.3	1.4	1.4	1.3	1.2%
Workstation Shipments		8	8	8	7	-2.4%
GIS/Mapping						
Total Revenue		5.0	5.6	5.6	5.1	1.1%
Workstation Shipments		30	34	34	29	-2.4%
Electronic CAE						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
IC Layout						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
PCB/Hybrid/NCM						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Technical Workstation						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Host/Server						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Personal Computer						
Total Revenue		6.3	6.9	6.9	6.4	1.1%
Workstation Shipments		38	42	42	36	-2.4%

Source: Dataquest
June 1991

TABLE NUMBER: 85
 TITLE: Company History
 COMPANY: Hehn & Kolb
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	9.8	12.2	14.6	15.4	25.7%
Workstation Shipments	150	175	210	220	21.1%
Mechanical					
Total Revenue	9.8	12.2	14.6	15.4	25.7%
Workstation Shipments	150	175	210	220	21.1%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	8.8	10.9	13.1	13.9	25.8%
Workstation Shipments	135	158	189	190	18.8%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	1.0	1.2	1.5	1.5	25.4%
Workstation Shipments	15	18	21	30	40.5%

Source: Dataquest
 June 1991

TABLE NUMBER:		86				
TITLE:		Company History				
COMPANY:		Hewlett-Packard				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR 87-90
		====	====	====	====	=====
All Applications						
Total Revenue		64.8	159.3	368.5	409.6	151.4%
Workstation Shipments		1,852	6,144	21,459	24,338	262.5%
Mechanical						
Total Revenue		49.9	106.7	228.6	263.4	129.7%
Workstation Shipments		1,487	3,399	11,255	13,286	198.9%
AEC						
Total Revenue		.0	13.9	40.1	47.4	NA
Workstation Shipments		0	1,029	3,544	4,173	NA
GIS/Mapping						
Total Revenue		.0	1.5	2.0	3.9	NA
Workstation Shipments		0	114	177	336	NA
Electronic CAE						
Total Revenue		6.5	17.5	67.0	67.6	223.2%
Workstation Shipments		174	868	4,738	4,921	432.1%
IC Layout						
Total Revenue		.7	1.6	5.8	5.4	188.8%
Workstation Shipments		13	55	530	490	510.5%
PCB/Hybrid/MCM						
Total Revenue		7.8	18.1	25.0	22.0	68.3%
Workstation Shipments		178	679	1,216	1,131	152.4%
Technical Workstation						
Total Revenue		64.8	140.9	301.0	327.6	124.8%
Workstation Shipments		1,852	3,176	11,797	12,438	159.2%
Host/Server						
Total Revenue		.0	.0	7.6	6.8	NA
Workstation Shipments		0	0	384	340	NA
Personal Computer						
Total Revenue		.0	18.4	59.9	75.3	NA
Workstation Shipments		0	2,968	9,277	11,560	NA

Source: Dataquest
June 1991

TABLE NUMBER: 87
 TITLE: Company History
 COMPANY: Hochtief
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.9	2.3	2.8	4.0	44.9%
Workstation Shipments	12	15	24	34	66.3%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	1.9	2.3	2.8	4.0	44.9%
Workstation Shipments	12	15	24	34	66.3%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.1	.1	.1	.2	49.1%
Workstation Shipments	0	0	1	1	65.4%
Personal Computer					
Total Revenue	1.8	2.2	2.6	3.8	44.7%
Workstation Shipments	12	15	23	33	66.3%

Source: Dataquest
 June 1991

TABLE NUMBER:		88				
TITLE:		Company History				
COMPANY:		IBM				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR
		====	====	====	====	=====
All Applications						
Total Revenue		380.3	604.0	588.9	651.4	30.9%
Workstation Shipments		17,942	19,399	21,431	26,886	22.4%
Mechanical						
Total Revenue		312.3	514.8	472.1	515.3	28.5%
Workstation Shipments		9,924	11,515	11,534	14,326	20.1%
AEC						
Total Revenue		27.7	36.2	57.4	63.8	51.7%
Workstation Shipments		3,430	3,253	3,752	4,728	17.4%
GIS/Mapping						
Total Revenue		16.4	22.9	27.7	36.7	49.4%
Workstation Shipments		1,532	1,573	2,660	3,435	49.7%
Electronic CAE						
Total Revenue		10.7	7.2	13.9	15.9	21.9%
Workstation Shipments		1,569	1,486	2,807	3,545	50.3%
IC Layout						
Total Revenue		1.3	1.2	.0	.0	-100.0%
Workstation Shipments		250	248	0	0	-100.0%
PCB/Hybrid/MCM						
Total Revenue		12.0	21.7	17.9	19.8	28.5%
Workstation Shipments		1,237	1,325	678	852	-17.0%
Technical Workstation						
Total Revenue		15.9	26.7	47.1	57.3	89.9%
Workstation Shipments		270	593	1,126	1,486	134.5%
Host/Server						
Total Revenue		270.2	506.5	468.6	510.7	37.5%
Workstation Shipments		3,311	5,335	5,533	6,740	42.7%
Personal Computer						
Total Revenue		94.3	70.9	73.2	83.5	-5.9%
Workstation Shipments		14,360	13,471	14,772	18,660	14.0%

Source: Dataquest
June 1991

TABLE NUMBER: 89
 TITLE: Company History
 COMPANY: ICL
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	16.6	20.9	15.4	22.9	17.3%
Workstation Shipments	380	380	479	629	28.7%
Mechanical					
Total Revenue	7.5	9.9	7.3	8.7	7.8%
Workstation Shipments	171	180	229	239	18.2%
AEC					
Total Revenue	.8	.0	.0	.0	-100.0%
Workstation Shipments	19	0	0	0	-100.0%
GIS/Mapping					
Total Revenue	7.5	9.9	7.3	13.5	34.3%
Workstation Shipments	171	180	229	371	47.3%
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.8	1.1	.7	.7	-8.8%
Workstation Shipments	19	20	22	19	-.3%
Technical Workstation					
Total Revenue	16.6	20.9	15.4	22.9	17.3%
Workstation Shipments	380	380	479	629	28.7%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 90
 TITLE: Company History
 COMPANY: Inca
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	NA	.7	NA
Workstation Shipments	NA	NA	NA	0	NA
Mechanical					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
AEC					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.7	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	.2	NA
Workstation Shipments	NA	NA	NA	0	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Personal Computer					
Total Revenue	NA	NA	NA	.5	NA
Workstation Shipments	NA	NA	NA	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 91
 TITLE: Company History
 COMPANY: Instrumatic Espanola
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	----	----	----	----	-----
All Applications					
Total Revenue	NA	NA	.2	.2	NA
Workstation Shipments	NA	NA	0	0	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.2	.2	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.2	.2	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 92
 TITLE: Company History
 COMPANY: Integer
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	1.2	1.1	NA
Workstation Shipments	NA	NA	0	0	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	1.2	1.1	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	1.2	1.1	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 93
 TITLE: Company History
 COMPANY: Intercad
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	2.3	6.5	3.3	3.9	31.4%
Workstation Shipments	260	336	168	189	-14.8%
Mechanical					
Total Revenue	.0	3.1	2.3	3.1	NA
Workstation Shipments	0	161	118	151	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.9	1.3	1.0	.8	-5.3%
Workstation Shipments	100	67	50	38	-38.6%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	1.4	2.1	.0	.0	-100.0%
Workstation Shipments	160	108	0	0	-100.0%
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	.0	0	0	NA
Personal Computer					
Total Revenue	2.3	6.5	3.3	3.9	31.4%
Workstation Shipments	260	336	168	189	-14.8%

Source: Dataquest
 June 1991

TABLE NUMBER:	94				
TITLE:	Company History				
COMPANY:	Intergraph				
REGION:	Europe				
UNITS:	Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	133.0	232.4	279.4	368.2	66.4%
Workstation Shipments	1,278	2,545	2,855	3,846	73.5%
Mechanical					
Total Revenue	21.3	37.2	46.1	62.6	71.5%
Workstation Shipments	204	407	471	652	78.6%
AEC					
Total Revenue	55.9	93.0	111.8	125.2	49.7%
Workstation Shipments	537	1,018	1,141	1,309	56.2%
GIS/Mapping					
Total Revenue	50.5	93.0	111.8	162.0	79.0%
Workstation Shipments	486	1,018	1,141	1,691	86.6%
Electronic CAE					
Total Revenue	2.7	4.6	5.6	9.2	85.6%
Workstation Shipments	26	51	59	95	92.8%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	2.7	4.6	4.2	9.2	85.7%
Workstation Shipments	26	51	44	99	97.0%
Technical Workstation					
Total Revenue	30.9	151.1	221.0	304.8	214.1%
Workstation Shipments	241	1,525	2,373	3,371	273.8%
Host/Server					
Total Revenue	100.5	77.2	50.3	52.9	-27.4%
Workstation Shipments	1,037	1,020	482	475	-32.3%
Personal Computer					
Total Revenue	1.7	4.1	8.1	10.5	149.6%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
June 1991

TABLE NUMBER: 95
 TITLE: Company History
 COMPANY: Investronica SA
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	17.2	19.6	23.6	25.5	21.8%
Workstation Shipments	758	872	943	1,018	15.9%
Mechanical					
Total Revenue	17.2	19.6	23.6	25.5	21.8%
Workstation Shipments	758	872	943	1,018	15.9%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	17.2	19.6	23.6	25.5	21.8%
Workstation Shipments	758	872	943	1,018	15.9%

Source: Dataquest
 June 1991

TABLE NUMBER:	96				
TITLE:	Company History				
COMPANY:	ISICAD				
REGION:	Europe				
UNITS:	Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	8.7	20.7	31.2	34.3	98.5%
Workstation Shipments	135	213	334	300	49.0%
Mechanical					
Total Revenue	6.8	16.5	12.5	15.4	50.6%
Workstation Shipments	61	169	140	143	53.1%
AEC					
Total Revenue	1.9	4.3	18.7	18.9	215.0%
Workstation Shipments	74	44	194	157	45.5%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	8.6	18.7	27.1	27.2	78.3%
Workstation Shipments	77	213	334	300	97.6%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.1	2.1	4.1	7.1	636.4%
Workstation Shipments	58	0	0	0	-100.0%

Source: Dataquest
June 1991

TABLE NUMBER: 97
 TITLE: Company History
 COMPANY: ISKA
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	1.5	1.9	2.9	NA
Workstation Shipments	NA	29	35	53	NA
Mechanical					
Total Revenue	NA	.9	1.9	2.0	NA
Workstation Shipments	NA	17	35	37	NA
AEC					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
GIS/Mapping					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Electronic CAE					
Total Revenue	NA	.6	.0	.9	NA
Workstation Shipments	NA	11	0	16	NA
IC Layout					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
PCB/Hybrid/NCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	1.5	1.9	2.9	NA
Workstation Shipments	NA	29	35	53	NA
Host/Server					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Personal Computer					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 98
 TITLE: Company History
 COMPANY: ISYKON Software
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	5.8	7.5	11.7	15.4	63.1%
Workstation Shipments	95	125	220	220	52.2%
Mechanical					
Total Revenue	5.8	7.5	11.7	15.4	63.1%
Workstation Shipments	95	125	220	220	52.2%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	3.5	5.0	11.7	15.4	110.6%
Workstation Shipments	32	125	220	220	163.6%
Host/Server					
Total Revenue	2.3	2.5	.0	.0	-100.0%
Workstation Shipments	63	0	0	0	-100.0%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 99
 TITLE: Company History
 COMPANY: Italcad
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	18.0	13.0	24.0	30.0	29.1%
Workstation Shipments	180	220	250	280	24.7%
Mechanical					
Total Revenue	9.9	7.8	12.0	10.8	4.4%
Workstation Shipments	98	132	125	101	1.3%
AEC					
Total Revenue	5.4	3.2	9.8	14.4	63.3%
Workstation Shipments	52	55	103	134	61.4%
GIS/Mapping					
Total Revenue	2.7	1.9	2.2	4.8	33.1%
Workstation Shipments	30	33	23	45	22.0%
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	17.6	13.0	24.0	30.0	30.6%
Workstation Shipments	173	220	250	280	27.2%
Host/Server					
Total Revenue	.4	.0	.0	.0	-100.0%
Workstation Shipments	7	0	0	0	-100.0%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		100				
TITLE:		Company History				
COMPANY:		Kewill Systems				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR
		****	****	****	****	*****
All Applications						
Total Revenue		11.7	14.7	19.2	25.0	45.9%
Workstation Shipments		131	153	384	500	95.4%
Mechanical						
Total Revenue		5.9	7.4	9.6	12.5	45.9%
Workstation Shipments		65	77	192	250	95.4%
AEC						
Total Revenue		5.9	7.4	9.6	12.5	45.9%
Workstation Shipments		65	77	192	250	95.4%
GIS/Mapping						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Electronic CAE						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
IC Layout						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
PCB/Hybrid/MCM						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Technical Workstation						
Total Revenue		10.6	13.2	17.3	22.5	46.0%
Workstation Shipments		118	138	363	474	100.5%
Host/Server						
Total Revenue		.0	.0	1.9	2.5	NA
Workstation Shipments		0	0	21	26	NA
Personal Computer						
Total Revenue		1.2	1.5	.0	.0	-100.0%
Workstation Shipments		13	15	0	0	-100.0%

Source: Dataquest
June 1991

TABLE NUMBER: 101
 TITLE: Company History
 COMPANY: Kloeckner-Moeller
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	3.9	4.9	6.1	6.8	31.6%
Workstation Shipments	46	54	65	107	52.5%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	3.9	4.9	6.1	6.8	31.6%
Workstation Shipments	46	54	65	107	52.5%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	3.9	4.9	6.1	6.8	31.6%
Workstation Shipments	46	54	65	107	52.5%

Source: Dataquest
 June 1991

TABLE NUMBER: 102
 TITLE: Company History
 COMPANY: Kockums Computer Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	4.4	5.3	6.0	8.1	36.0%
Workstation Shipments	207	259	296	400	38.9%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	4.4	5.3	6.0	8.1	36.0%
Workstation Shipments	207	259	296	400	38.9%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	4.4	5.3	6.0	8.1	36.0%
Workstation Shipments	207	259	296	400	38.9%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 103
 TITLE: Company History
 COMPANY: Kontron Instruments
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	----	----	----	----	-----
All Applications					
Total Revenue	NA	NA	NA	.2	NA
Workstation Shipments	NA	NA	NA	4	NA
Mechanical					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
AEC					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/NCM					
Total Revenue	NA	NA	NA	.2	NA
Workstation Shipments	NA	NA	NA	4	NA
Technical Workstation					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Personal Computer					
Total Revenue	NA	NA	NA	.2	NA
Workstation Shipments	NA	NA	NA	4	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 104
 TITLE: Company History
 COMPANY: Lamp Software
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	----	----	----	----	-----
All Applications					
Total Revenue	NA	NA	1.4	1.8	NA
Workstation Shipments	NA	NA	67	88	NA
Mechanical					
Total Revenue	NA	NA	.1	.1	NA
Workstation Shipments	NA	NA	3	4	NA
AEC					
Total Revenue	NA	NA	1.3	1.6	NA
Workstation Shipments	NA	NA	60	79	NA
GIS/Mapping					
Total Revenue	NA	NA	.1	.1	NA
Workstation Shipments	NA	NA	3	4	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.4	.6	NA
Workstation Shipments	NA	NA	18	34	NA
Host/Server					
Total Revenue	NA	NA	.1	.1	NA
Workstation Shipments	NA	NA	1	2	NA
Personal Computer					
Total Revenue	NA	NA	.9	1.2	NA
Workstation Shipments	NA	NA	48	51	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 105
 TITLE: Company History
 COMPANY: Landmark Graphics
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	xxxx	xxxx	xxxx	xxxx	xxxxx
All Applications					
Total Revenue	2.1	2.4	10.0	14.6	165.8%
Workstation Shipments	16	19	75	89	136.6%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	2.1	2.4	10.0	14.6	165.8%
Workstation Shipments	16	19	75	89	136.6%
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.4	1.7	10.0	14.6	217.9%
Workstation Shipments	11	13	75	89	178.5%
Host/Server					
Total Revenue	.6	.7	.0	.0	-100.0%
Workstation Shipments	4	5	0	0	-100.0%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 106
 TITLE: Company History
 COMPANY: Laser-Scan
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	5.9	7.3	8.5	8.8	22.6%
Workstation Shipments	20	24	28	29	18.4%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue *	5.9	7.3	8.5	8.8	22.6%
Workstation Shipments	20	24	28	29	18.4%
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	5.3	6.6	7.7	7.9	22.5%
Workstation Shipments	17	20	23	25	20.0%
Host/Server					
Total Revenue	.6	.7	.9	.9	23.9%
Workstation Shipments	3	4	5	4	9.8%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 107
 TITLE: Company History
 COMPANY: LEICA
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	.3	.4	NA
Workstation Shipments	NA	NA	0	0	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.3	.4	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.3	.4	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 108
 TITLE: Company History
 COMPANY: Logic Control*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	NA	.4	NA
Workstation Shipments	NA	NA	NA	80	NA
Mechanical					
Total Revenue	NA	NA	NA	.4	NA
Workstation Shipments	NA	NA	NA	80	NA
AEC					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Personal Computer					
Total Revenue	NA	NA	NA	.4	NA
Workstation Shipments	NA	NA	NA	80	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 109
 TITLE: Company History
 COMPANY: LPKF
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	5.3	6.3	7.5	9.9	36.9%
Workstation Shipments	650	700	750	400	-21.6%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	5.3	6.3	7.5	9.9	36.9%
Workstation Shipments	650	700	750	400	-21.6%
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	5.3	6.3	7.5	9.9	36.9%
Workstation Shipments	650	700	750	400	-21.6%

Source: Dataquest
 June 1991

TABLE NUMBER: 110
 TITLE: Company History
 COMPANY: LSI Logic
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	=====	=====	=====	=====	=====
All Applications					
Total Revenue	3.0	5.5	5.0	3.6	10.2%
Workstation Shipments	0	19	19	9	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	3.0	5.0	4.5	3.2	3.9%
Workstation Shipments	0	17	17	8	NA
IC Layout					
Total Revenue	.0	.6	.6	.4	NA
Workstation Shipments	0	2	2	1	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.8	4.0	4.5	3.3	35.0%
Workstation Shipments	0	19	17	8	NA
Host/Server					
Total Revenue	1.2	1.5	.5	.4	-45.2%
Workstation Shipments	0	0	2	1	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 111
 TITLE: Company History
 COMPANY: Macao Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	NA	1.8	NA
Workstation Shipments	NA	NA	NA	17	NA
Mechanical					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
AEC					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	1.8	NA
Workstation Shipments	NA	NA	NA	17	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	1.1	NA
Workstation Shipments	NA	NA	NA	11	NA
Host/Server					
Total Revenue	NA	NA	NA	.7	NA
Workstation Shipments	NA	NA	NA	6	NA
Personal Computer					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 112
 TITLE: Company History
 COMPANY: MacNeal-Schwendler
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	6.8	8.4	9.5	16.6	55.9%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	6.8	8.4	9.5	15.8	52.1%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.8	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.3	.8	1.0	4.1	290.2%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	6.3	7.4	8.2	12.5	40.1%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.2	.2	.3	.0	-100.0%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 113
 TITLE: Company History
 COMPANY: Mannesmann PROCAD
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	12.5	15.0	15.7	NA
Workstation Shipments	NA	175	200	218	NA
Mechanical					
Total Revenue	NA	12.5	15.0	15.7	NA
Workstation Shipments	NA	175	200	218	NA
AEC					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
GIS/Mapping					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Electronic CAE					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
IC Layout					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	12.5	15.0	15.7	NA
Workstation Shipments	NA	175	200	218	NA
Host/Server					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Personal Computer					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		114				
TITLE:		Company History				
COMPANY:		Marcus Computer Systeme				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR
		====	====	====	====	=====
All Applications						
	Total Revenue	2.6	3.1	3.7	4.4	29.8%
	Workstation Shipments	100	110	125	137	17.0%
Mechanical						
	Total Revenue	2.6	3.1	3.7	4.4	29.8%
	Workstation Shipments	100	110	125	137	17.0%
AEC						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
GIS/Mapping						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
Electronic CAE						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
IC Layout						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
Technical Workstation						
	Total Revenue	2.1	2.5	3.0	3.4	27.7%
	Workstation Shipments	80	88	100	105	14.7%
Host/Server						
	Total Revenue	.0	.0	.0	.0	NA
	Workstation Shipments	0	0	0	0	NA
Personal Computer						
	Total Revenue	.5	.6	.7	1.0	38.0%
	Workstation Shipments	20	22	25	31	25.5%

Source: Dataquest
June 1991

TABLE NUMBER: 115
 TITLE: Company History
 COMPANY: Masta Corporation
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	NA	NA	1.1	.6	NA
Workstation Shipments	NA	NA	9	5	NA
Mechanical					
Total Revenue	NA	NA	.2	.1	NA
Workstation Shipments	NA	NA	2	1	NA
AEC					
Total Revenue	NA	NA	.7	.4	NA
Workstation Shipments	NA	NA	4	2	NA
GIS/Mapping					
Total Revenue	NA	NA	.1	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.1	.0	NA
Workstation Shipments	NA	NA	1	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.1	.1	NA
Workstation Shipments	NA	NA	2	1	NA
Technical Workstation					
Total Revenue	NA	NA	.4	.2	NA
Workstation Shipments	NA	NA	3	1	NA
Host/Server					
Total Revenue	NA	NA	.3	.2	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.5	.3	NA
Workstation Shipments	NA	NA	6	4	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 116
 TITLE: Company History
 COMPANY: Matra Datavision
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	41.3	56.4	51.3	68.1	28.5%
Workstation Shipments	450	685	560	743	28.5%
Mechanical					
Total Revenue	41.3	56.4	51.3	68.1	28.5%
Workstation Shipments	450	685	560	743	28.5%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	56.4	51.3	68.1	NA
Workstation Shipments	0	685	560	743	NA
Host/Server					
Total Revenue	41.3	.0	.0	.0	-100.0%
Workstation Shipments	450	0	0	0	-100.0%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		117				
TITLE:		Company History				
COMPANY:		McDonnell Douglas				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR 87-90
		====	====	====	====	=====
All Applications						
Total Revenue		45.5	75.6	86.9	124.9	65.7%
Workstation Shipments		869	1,545	1,499	2,099	55.4%
Mechanical						
Total Revenue		34.1	52.6	58.9	87.7	60.3%
Workstation Shipments		652	1,165	857	1,331	42.9%
AEC						
Total Revenue		5.7	21.5	17.7	18.6	80.8%
Workstation Shipments		109	355	309	279	60.2%
GIS/Mapping						
Total Revenue		5.7	1.5	10.4	18.7	80.9%
Workstation Shipments		109	25	333	490	112.4%
Electronic CAE						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
IC Layout						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
PCB/Hybrid/MCM						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Technical Workstation						
Total Revenue		1.4	24.4	61.8	96.0	740.3%
Workstation Shipments		48	534	695	1,110	381.1%
Host/Server						
Total Revenue		44.2	51.2	25.1	28.9	-19.1%
Workstation Shipments		821	1,011	804	989	9.8%
Personal Computer						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA

Source: Dataquest
June 1991

TABLE NUMBER: 118
 TITLE: Company History
 COMPANY: MCS
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.6	2.7	3.0	3.3	42.1%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	1.6	2.7	3.0	3.3	42.1%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.5	1.0	1.1	1.5	68.3%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.7	1.2	1.3	1.1	23.0%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.4	.5	.6	.7	35.4%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 119
 TITLE: Company History
 COMPANY: MEDESIGN
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	1.0	1.1	1.4	NA
Workstation Shipments	NA	11	12	15	NA
Mechanical					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
AEC					
Total Revenue	NA	1.0	1.1	1.4	NA
Workstation Shipments	NA	11	12	15	NA
GIS/Mapping					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Electronic CAE					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
IC Layout					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	1.0	1.1	1.4	NA
Workstation Shipments	NA	11	12	15	NA
Host/Server					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Personal Computer					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 120
 TITLE: Company History
 COMPANY: Mentor Graphics
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	105.3	77.8	105.8	120.7	7.1%
Workstation Shipments	1,290	991	1,400	1,196	-3.7%
Mechanical					
Total Revenue	1.0	.0	.0	1.2	7.4%
Workstation Shipments	16	0	0	12	-12.7%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	70.0	52.1	70.9	72.4	1.7%
Workstation Shipments	981	763	938	718	-14.5%
IC Layout					
Total Revenue	9.0	6.2	5.3	19.3	46.4%
Workstation Shipments	72	51	70	191	62.5%
PCB/Hybrid/MCM					
Total Revenue	25.2	19.5	29.6	27.8	4.9%
Workstation Shipments	221	177	392	275	11.6%
Technical Workstation					
Total Revenue	105.0	77.8	105.8	120.7	7.2%
Workstation Shipments	1,285	991	1,400	1,196	-3.5%
Host/Server					
Total Revenue	.3	.0	.0	.0	-100.0%
Workstation Shipments	5	0	0	0	-100.0%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		121				
TITLE:		Company History				
COMPANY:		Micrograph*				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR 87-90
		====	====	====	====	=====
All Applications						
Total Revenue		5.5	6.7	8.0	8.4	23.5%
Workstation Shipments		100	150	200	175	32.3%
Mechanical						
Total Revenue		3.0	3.7	4.4	4.6	23.8%
Workstation Shipments		55	83	110	96	32.3%
AEC						
Total Revenue		.6	.7	.8	.8	22.5%
Workstation Shipments		10	15	20	18	32.3%
GIS/Mapping						
Total Revenue		.4	.5	.6	1.0	51.5%
Workstation Shipments		8	12	16	21	62.0%
Electronic CAE						
Total Revenue		1.0	1.2	1.4	1.0	1.0%
Workstation Shipments		18	27	36	21	8.0%
IC Layout						
Total Revenue		.0	.0	.0	.9	NA
Workstation Shipments		0	0	0	19	NA
PCB/Hybrid/MCM						
Total Revenue		.5	.6	.7	.0	-100.0%
Workstation Shipments		9	14	18	0	-100.0%
Technical Workstation						
Total Revenue		.6	.7	.8	.8	22.8%
Workstation Shipments		14	21	29	18	10.7%
Host/Server						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Personal Computer						
Total Revenue		5.0	6.0	7.2	7.6	23.6%
Workstation Shipments		86	129	171	157	35.5%

Source: Dataquest
June 1991

TABLE NUMBER:		122				
TITLE:		Company History				
COMPANY:		Microway				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR
		====	====	====	====	=====
All Applications						
Total Revenue		6.6	7.9	9.1	10.5	26.1%
Workstation Shipments		61	71	82	95	24.8%
Mechanical						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
AEC						
Total Revenue		5.9	7.1	8.2	9.5	26.1%
Workstation Shipments		55	64	74	86	25.3%
GIS/Mapping						
Total Revenue		.7	.8	.9	1.1	26.1%
Workstation Shipments		6	7	8	9	20.5%
Electronic CAE						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
IC Layout						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
PCB/Hybrid/MCM						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Technical Workstation						
Total Revenue		4.2	5.1	5.8	6.7	26.2%
Workstation Shipments		39	45	52	57	20.5%
Host/Server						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Personal Computer						
Total Revenue		2.4	2.9	3.3	3.8	26.0%
Workstation Shipments		22	26	30	38	32.0%

Source: Dataquest
June 1991

TABLE NUMBER: 123
 TITLE: Company History
 COMPANY: Moss Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	====
All Applications					
Total Revenue	4.4	5.0	5.9	8.3	37.0%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	4.4	5.0	5.9	8.3	37.0%
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	4.4	5.0	5.9	8.3	37.0%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 124
 TITLE: Company History
 COMPANY: Mutoh Industries--NO OEM
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	2.7	NA	NA	.5	-59.2%
Workstation Shipments	185	NA	NA	11	-75.2%
Mechanical					
Total Revenue	2.7	NA	NA	.5	-59.2%
Workstation Shipments	185	NA	NA	11	-75.2%
AEC					
Total Revenue	.0	NA	NA	.0	NA
Workstation Shipments	0	NA	NA	0	NA
GIS/Mapping					
Total Revenue	.0	NA	NA	.0	NA
Workstation Shipments	0	NA	NA	0	NA
Electronic CAE					
Total Revenue	.0	NA	NA	.0	NA
Workstation Shipments	0	NA	NA	0	NA
IC Layout					
Total Revenue	.0	NA	NA	.0	NA
Workstation Shipments	0	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	NA	NA	.0	NA
Workstation Shipments	0	NA	NA	0	NA
Technical Workstation					
Total Revenue	1.1	NA	NA	.2	-60.3%
Workstation Shipments	45	NA	NA	2	-80.7%
Host/Server					
Total Revenue	.2	NA	NA	.0	-78.7%
Workstation Shipments	5	NA	NA	0	-93.7%
Personal Computer					
Total Revenue	1.4	NA	NA	.3	-56.1%
Workstation Shipments	136	NA	NA	10	-73.2%

Source: Dataquest
 June 1991

TABLE NUMBER: 125
 TITLE: Company History
 COMPANY: Nemetschek
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	13.7	17.5	20.6	30.9	50.1%
Workstation Shipments	242	279	333	500	43.7%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	13.7	17.5	20.6	30.9	50.1%
Workstation Shipments	242	279	333	500	43.7%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.4	1.8	2.1	3.1	49.9%
Workstation Shipments	16	18	22	33	43.7%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	12.3	15.7	18.5	27.8	50.2%
Workstation Shipments	226	261	311	467	43.7%

Source: Dataquest
 June 1991

TABLE NUMBER: 126
 TITLE: Company History
 COMPANY: Norsk Data
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	29.0	34.0	41.7	50.0	31.4%
Workstation Shipments	303	395	417	500	28.5%
Mechanical					
Total Revenue	29.0	28.6	31.6	38.0	14.6%
Workstation Shipments	303	332	312	372	10.8%
AEC					
Total Revenue	.0	3.9	7.5	9.0	NA
Workstation Shipments	0	45	80	97	NA
GIS/Mapping					
Total Revenue	.0	1.5	2.5	3.0	NA
Workstation Shipments	0	18	25	32	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	13.6	21.1	25.4	NA
Workstation Shipments	0	167	311	316	NA
Host/Server					
Total Revenue	29.0	19.7	20.2	24.3	-8.5%
Workstation Shipments	303	198	49	178	-23.4%
Personal Computer					
Total Revenue	.0	.7	.3	.4	NA
Workstation Shipments	0	29	57	7	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 127
 TITLE: Company History
 COMPANY: Number One Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR
	====	====	====	====	87-90
	====	====	====	====	====
All Applications					
Total Revenue	NA	NA	.6	.8	NA
Workstation Shipments	NA	NA	16	20	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	1	1	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.1	.1	NA
Workstation Shipments	NA	NA	2	3	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.5	.6	NA
Workstation Shipments	NA	NA	13	16	NA
Technical Workstation					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.6	.8	NA
Workstation Shipments	NA	NA	16	20	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		128				
TITLE:		Company History				
COMPANY:		Olivetti				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR
		====	====	====	====	=====
All Applications						
Total Revenue		12.9	14.0	5.0	5.0	-37.5%
Workstation Shipments		2,425	1,795	800	800	-42.6%
Mechanical						
Total Revenue		8.9	8.0	2.9	2.9	-43.2%
Workstation Shipments		1,572	1,023	456	436	-47.3%
AEC						
Total Revenue		2.6	4.2	1.5	1.5	-23.4%
Workstation Shipments		547	538	240	254	-31.9%
GIS/Mapping						
Total Revenue		1.0	1.5	.6	.6	-24.8%
Workstation Shipments		211	197	88	93	-33.6%
Electronic CAE						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
IC Layout						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
PCB/Hybrid/MCM						
Total Revenue		.4	.3	.1	.1	-52.3%
Workstation Shipments		95	36	16	17	-57.8%
Technical Workstation						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Host/Server						
Total Revenue		1.2	.9	.3	.3	-46.7%
Workstation Shipments		85	113	50	7	-72.1%
Personal Computer						
Total Revenue		11.7	13.1	4.7	4.7	-36.6%
Workstation Shipments		2,340	1,682	750	793	-41.8%

Source: Dataquest
June 1991

TABLE NUMBER: 129
 TITLE: Company History
 COMPANY: PAFEC
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	20.0	21.6	24.4	22.9	6.9%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	15.0	14.9	16.9	15.8	2.6%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	5.0	1.3	1.5	1.4	-47.7%
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	5.4	6.1	5.7	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	16.0	19.3	21.9	20.5	13.2%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	4.0	.0	.0	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	2.2	2.5	2.4	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 130
 TITLE: Company History
 COMPANY: Parametric Technology
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	.3	1.4	5.3	NA
Workstation Shipments	NA	0	0	0	NA
Mechanical					
Total Revenue	NA	.3	1.4	5.3	NA
Workstation Shipments	NA	0	0	0	NA
AEC					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
GIS/Mapping					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Electronic CAE					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
IC Layout					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	.3	1.4	5.3	NA
Workstation Shipments	NA	0	0	0	NA
Host/Server					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Personal Computer					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 131
 TITLE: Company History
 COMPANY: Pathtrace
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	2.1	2.5	3.8	3.3	25.1%
Workstation Shipments	72	64	88	46	-19.7%
Mechanical					
Total Revenue	2.1	2.5	3.8	3.3	25.1%
Workstation Shipments	72	64	88	46	-19.7%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	2.1	2.5	3.8	3.3	25.1%
Workstation Shipments	72	64	88	46	-19.7%

Source: Dataquest
 June 1991

TABLE NUMBER: 132
 TITLE: Company History
 COMPANY: PDA Engineering
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.6	6.4	5.6	8.8	84.9%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	2.6	6.4	5.6	8.8	84.9%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.9	2.6	3.1	5.9	156.3%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	1.7	3.9	2.5	2.9	31.6%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 133
 TITLE: Company History
 COMPANY: Racal-Redac
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	48.8	36.3	43.3	39.7	-9.8%
Workstation Shipments	134	105	163	181	16.3%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	5.9	6.7	10.8	13.2	50.0%
Workstation Shipments	21	17	41	60	69.5%
IC Layout					
Total Revenue	1.0	.0	.0	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	42.0	29.6	32.4	26.5	-20.5%
Workstation Shipments	113	88	122	121	3.4%
Technical Workstation					
Total Revenue	32.7	35.3	38.1	34.5	2.7%
Workstation Shipments	134	105	163	181	16.3%
Host/Server					
Total Revenue	.0	.9	1.3	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	16.1	.1	3.9	5.2	-43.4%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 134
 TITLE: Company History
 COMPANY: Radan Computational
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	4.2	10.2	6.4	8.9	46.0%
Workstation Shipments	0	205	214	300	NA
Mechanical					
Total Revenue	3.5	8.7	5.4	7.5	45.9%
Workstation Shipments	0	174	182	255	NA
AEC					
Total Revenue	.6	1.5	1.0	1.3	46.5%
Workstation Shipments	0	31	32	45	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	4.2	10.2	6.3	8.8	45.4%
Workstation Shipments	0	205	212	296	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.1	.1	NA
Workstation Shipments	0	0	2	4	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 135
 TITLE: Company History
 COMPANY: Research Machines
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	9.0	8.6	10.8	14.3	26.2%
Workstation Shipments	1,208	1,410	1,692	2,200	35.0%
Mechanical					
Total Revenue	4.0	3.7	5.2	6.9	30.4%
Workstation Shipments	544	606	812	1,056	39.4%
AEC					
Total Revenue	2.4	2.3	3.0	3.9	26.1%
Workstation Shipments	326	381	474	594	35.0%
GIS/Mapping					
Total Revenue	.5	.6	.8	1.0	36.1%
Workstation Shipments	72	99	118	154	45.8%
Electronic CAE					
Total Revenue	1.0	1.0	1.2	1.6	25.9%
Workstation Shipments	133	169	186	242	35.0%
IC Layout					
Total Revenue	.4	.4	.0	.0	-100.0%
Workstation Shipments	48	56	0	0	-100.0%
PCB/Hybrid/MCM					
Total Revenue	.6	.6	.6	1.0	27.0%
Workstation Shipments	85	99	102	154	35.0%
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	9.0	8.6	10.8	14.3	26.2%
Workstation Shipments	1,208	1,410	1,692	2,200	35.0%

Source: Dataquest
 June 1991

TABLE NUMBER: 136
 TITLE: Company History
 COMPANY: RIB/RZB
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	3.8	4.4	5.2	6.2	26.9%
Workstation Shipments	17	21	25	30	32.8%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	3.1	3.5	4.1	5.0	26.8%
Workstation Shipments	14	17	20	24	32.8%
GIS/Mapping					
Total Revenue	.8	.9	1.0	1.2	27.2%
Workstation Shipments	3	4	5	6	32.8%
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.2	1.3	1.6	1.9	26.8%
Workstation Shipments	4	5	5	8	44.7%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	2.7	3.1	3.6	4.3	26.9%
Workstation Shipments	13	17	20	22	29.4%

Source: Dataquest
 June 1991

TABLE NUMBER: 137
 TITLE: Company History
 COMPANY: Robocom
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.3	2.9	4.0	3.5	22.5%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	1.1	1.4	1.9	1.6	22.9%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.8	1.2	1.8	1.6	42.3%
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.5	.1	.3	.3	-23.6%
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.1	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.1	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	2.3	2.9	4.0	3.5	22.5%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		138				
TITLE:		Company History				
COMPANY:		rotring euroCAD				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR 87-90
		====	====	====	====	=====
All Applications						
Total Revenue		2.6	3.2	6.7	6.4	58.8%
Workstation Shipments		0	24	200	170	NA
Mechanical						
Total Revenue		.0	.0	4.5	5.5	NA
Workstation Shipments		0	0	139	147	NA
AEC						
Total Revenue		.0	.0	.0	.0	NA *
Workstation Shipments		0	0	0	0	NA
GIS/Mapping						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Electronic CAE						
Total Revenue		2.6	3.2	2.2	1.0	-38.6%
Workstation Shipments		0	24	61	23	NA
IC Layout						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
PCB/Hybrid/MCM						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Technical Workstation						
Total Revenue		2.6	3.2	2.7	3.3	14.4%
Workstation Shipments		0	24	91	96	NA
Host/Server						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA
Personal Computer						
Total Revenue		.0	.0	4.0	3.1	NA
Workstation Shipments		0	0	109	74	NA

Source: Dataquest
June 1991

TABLE NUMBER: 139
 TITLE: Company History
 COMPANY: S.T.L.D. s.r.l.
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	.6	.7	.8	NA
Workstation Shipments	NA	0	0	0	NA
Mechanical					
Total Revenue	NA	.6	.7	.8	NA
Workstation Shipments	NA	0	0	0	NA
AEC					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
GIS/Mapping					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Electronic CAE					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
IC Layout					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Host/Server					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Personal Computer					
Total Revenue	NA	.6	.7	.8	NA
Workstation Shipments	NA	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:	140				
TITLE:	Company History				
COMPANY:	Schlumberger				
REGION:	Europe				
UNITS:	Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	63.5	67.2	70.4	78.6	11.3%
Workstation Shipments	1,390	936	738	824	-23.0%
Mechanical					
Total Revenue	59.0	66.2	67.6	77.8	14.8%
Workstation Shipments	1,304	921	708	816	-20.9%
AEC					
Total Revenue	.0	.0	.7	.0	NA
Workstation Shipments	0	0	7	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	4.5	1.0	2.1	.8	-57.9%
Workstation Shipments	86	15	22	8	-69.1%
Technical Workstation					
Total Revenue	14.8	45.7	61.7	55.0	93.2%
Workstation Shipments	446	619	576	470	2.6%
Host/Server					
Total Revenue	48.7	21.5	8.7	22.8	-31.6%
Workstation Shipments	944	317	162	350	-39.1%
Personal Computer					
Total Revenue	.0	.0	.0	.8	NA
Workstation Shipments	0	0	0	5	NA

Source: Dataquest
June 1991

TABLE NUMBER: 141
 TITLE: Company History
 COMPANY: Scientific Calc.
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	****
All Applications					
Total Revenue	28.1	10.8	9.1	9.5	-41.8%
Workstation Shipments	46	35	42	34	-14.3%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.3	.5	NA
Workstation Shipments	0	0	1	2	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	28.1	10.8	8.8	9.0	-43.3%
Workstation Shipments	46	35	41	32	-16.9%
Technical Workstation					
Total Revenue	8.4	7.0	6.8	7.8	-3.6%
Workstation Shipments	30	32	33	25	-7.5%
Host/Server					
Total Revenue	19.7	3.8	2.3	1.7	-70.8%
Workstation Shipments	17	4	9	9	-28.1%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 142
 TITLE: Company History
 COMPANY: SDRC
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	6.1	12.6	15.8	24.1	99.3%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	6.1	12.6	15.8	24.1	99.3%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	3.7	8.6	12.7	21.0	137.9%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	2.4	4.0	3.2	3.1	15.1%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 143
 TITLE: Company History
 COMPANY: Seiko Instruments--NO OEM
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	NA	.3	NA
Workstation Shipments	NA	NA	NA	2	NA
Mechanical					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
AEC					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.3	NA
Workstation Shipments	NA	NA	NA	2	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	.3	NA
Workstation Shipments	NA	NA	NA	2	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Personal Computer					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 144
 TITLE: Company History
 COMPANY: Serbi
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.6	1.6	3.8	5.2	78.8%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.8	.8	1.9	3.1	95.1%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.4	.4	1.0	1.0	60.5%
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.4	.4	1.0	1.0	60.5%
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.1	.1	.2	.3	87.1%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	1.5	1.5	3.6	4.9	78.4%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 145
 TITLE: Company History
 COMPANY: Siemens
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	100.0	105.6	195.8	258.4	60.7%
Workstation Shipments	1,080	2,238	2,374	3,499	80.0%
Mechanical					
Total Revenue	62.0	72.9	41.5	52.4	-8.0%
Workstation Shipments	583	1,604	534	696	9.3%
AEC					
Total Revenue	5.0	14.3	17.8	23.0	114.5%
Workstation Shipments	49	270	200	305	150.1%
GIS/Mapping					
Total Revenue	33.0	14.3	127.1	151.4	114.2%
Workstation Shipments	448	270	1,518	2,079	115.4%
Electronic CAE					
Total Revenue	.0	.0	6.3	19.6	NA
Workstation Shipments	0	0	81	261	NA
IC Layout					
Total Revenue	.0	2.1	1.6	.0	NA
Workstation Shipments	0	47	20	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	2.1	1.6	11.9	NA
Workstation Shipments	0	47	20	158	NA
Technical Workstation					
Total Revenue	50.0	97.3	169.7	234.2	116.4%
Workstation Shipments	524	2,169	2,204	3,108	143.5%
Host/Server					
Total Revenue	50.0	8.3	26.1	24.2	-30.4%
Workstation Shipments	556	69	169	391	-16.1%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 146
 TITLE: Company History
 COMPANY: Silicon Graphics
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	7.7	10.2	23.1	32.4	105.0%
Workstation Shipments	220	241	522	724	81.4%
Mechanical					
Total Revenue	7.7	10.2	22.9	31.7	103.0%
Workstation Shipments	220	241	517	710	79.6%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.2	.6	NA
Workstation Shipments	0	0	5	15	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	7.7	10.2	21.7	31.7	103.0%
Workstation Shipments	220	241	494	713	80.1%
Host/Server					
Total Revenue	.0	.0	1.4	.6	NA
Workstation Shipments	0	0	28	11	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 147
 TITLE: Company History
 COMPANY: Silver-Lisco
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	11.2	9.0	3.2	2.9	-49.1%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	5.6	3.6	.9	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	4.8	5.4	2.3	2.9	-22.4%
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.8	.0	.0	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	8.2	7.4	2.9	2.9	-40.7%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	3.0	1.6	.3	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 148
 TITLE: Company History
 COMPANY: Sinus Software
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	1.1	1.4	1.9	NA
Workstation Shipments	NA	23	27	36	NA
Mechanical					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
AEC					
Total Revenue	NA	1.1	1.4	1.9	NA
Workstation Shipments	NA	23	27	36	NA
GIS/Mapping					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Electronic CAE					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
IC Layout					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	1.1	1.4	1.9	NA
Workstation Shipments	NA	23	27	36	NA
Host/Server					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Personal Computer					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 149
 TITLE: Company History
 COMPANY: Smallworld Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	NA	1.3	NA
Workstation Shipments	NA	NA	NA	36	NA
Mechanical					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
AEC					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
GIS/Mapping					
Total Revenue	NA	NA	NA	1.3	NA
Workstation Shipments	NA	NA	NA	36	NA
Electronic CAE					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
IC Layout					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Technical Workstation					
Total Revenue	NA	NA	NA	1.3	NA
Workstation Shipments	NA	NA	NA	36	NA
Host/Server					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA
Personal Computer					
Total Revenue	NA	NA	NA	.0	NA
Workstation Shipments	NA	NA	NA	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 150
 TITLE: Company History
 COMPANY: Soft*
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	1.1	1.4	NA
Workstation Shipments	NA	NA	0	0	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	1.1	1.4	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.8	1.0	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.3	.4	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 151
 TITLE: Company History
 COMPANY: Soft-Tech Software Technologies
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	4.5	5.2	6.0	9.0	41.0%
Workstation Shipments	107	129	150	225	45.0%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	4.5	5.2	6.0	9.0	41.0%
Workstation Shipments	107	129	150	225	45.0%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	4.5	5.2	6.0	9.0	41.0%
Workstation Shipments	107	129	150	225	45.0%

Source: Dataquest
 June 1991

TABLE NUMBER: 152
 TITLE: Company History
 COMPANY: Solbourne
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	NA	NA	3.0	3.2	NA
Workstation Shipments	NA	NA	202	237	NA
Mechanical					
Total Revenue	NA	NA	.1	.1	NA
Workstation Shipments	NA	NA	6	7	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	2	2	NA
GIS/Mapping					
Total Revenue	NA	NA	.5	.5	NA
Workstation Shipments	NA	NA	30	36	NA
Electronic CAE					
Total Revenue	NA	NA	.6	.6	NA
Workstation Shipments	NA	NA	40	47	NA
IC Layout					
Total Revenue	NA	NA	1.3	1.4	NA
Workstation Shipments	NA	NA	89	104	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.5	.5	NA
Workstation Shipments	NA	NA	34	40	NA
Technical Workstation					
Total Revenue	NA	NA	2.4	.6	NA
Workstation Shipments	NA	NA	161	45	NA
Host/Server					
Total Revenue	NA	NA	.6	2.6	NA
Workstation Shipments	NA	NA	40	192	NA
Personal Computer					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 153
 TITLE: Company History
 COMPANY: Spectrum Graphics
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	5.5	6.3	NA
Workstation Shipments	NA	NA	51	58	NA
Mechanical					
Total Revenue	NA	NA	.3	.3	NA
Workstation Shipments	NA	NA	3	3	NA
AEC					
Total Revenue	NA	NA	.8	.9	NA
Workstation Shipments	NA	NA	8	9	NA
GIS/Mapping					
Total Revenue	NA	NA	4.4	5.0	NA
Workstation Shipments	NA	NA	41	46	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	5.5	6.3	NA
Workstation Shipments	NA	NA	51	58	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		154				
TITLE:		Company History				
COMPANY:		Star Informatic				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR	
	****	****	****	****	87-90	

All Applications						
Total Revenue	6.5	7.5	9.3	12.0	36.2%	
Workstation Shipments	197	295	394	550	67.1%	
Mechanical						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
AEC						
Total Revenue	6.5	7.5	9.3	12.0	36.2%	
Workstation Shipments	197	295	394	550	67.1%	
GIS/Mapping						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
Electronic CAE						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
IC Layout						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
PCB/Hybrid/MCM						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
Technical Workstation						
Total Revenue	6.5	7.5	9.3	12.0	36.2%	
Workstation Shipments	197	295	394	550	67.1%	
Host/Server						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	
Personal Computer						
Total Revenue	.0	.0	.0	.0	NA	
Workstation Shipments	0	0	0	0	NA	

Source: Dataquest
June 1991

TABLE NUMBER: 155
 TITLE: Company History
 COMPANY: STI-Straessle
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	14.2	17.1	26.7	39.6	66.9%
Workstation Shipments	23	27	270	370	304.6%
Mechanical					
Total Revenue	9.9	12.0	19.3	28.8	70.1%
Workstation Shipments	13	16	214	269	357.3%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	4.3	5.1	7.4	10.8	59.2%
Workstation Shipments	10	12	56	101	222.0%
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	10.9	13.2	21.6	39.6	90.4%
Workstation Shipments	14	17	231	370	411.7%
Host/Server					
Total Revenue	3.3	4.0	5.1	.0	-100.0%
Workstation Shipments	8	10	39	0	-100.0%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:		156				
TITLE:		Company History				
COMPANY:		Sun				
REGION:		Europe				
UNITS:		Millions of Dollars and Actual Units				
		1987	1988	1989	1990	CAGR 87-90
		====	====	====	====	=====
All Applications						
Total Revenue		16.0	50.8	101.9	177.2	232.7%
Workstation Shipments		694	2,049	4,450	7,448	227.6%
Mechanical						
Total Revenue		4.0	17.8	35.7	70.9	320.9%
Workstation Shipments		174	717	1,561	2,879	307.1%
AEC						
Total Revenue		.0	2.0	6.0	7.1	NA
Workstation Shipments		0	82	263	308	NA
GIS/Mapping						
Total Revenue		.0	1.5	3.0	7.1	NA
Workstation Shipments		0	61	129	293	NA
Electronic CAE						
Total Revenue		5.0	16.2	25.5	42.5	192.8%
Workstation Shipments		215	656	1,115	1,815	190.4%
IC Layout						
Total Revenue		5.0	7.6	18.4	28.4	139.1%
Workstation Shipments		215	307	803	1,230	139.3%
PCB/Hybrid/MCM						
Total Revenue		2.1	5.6	13.3	21.3	219.9%
Workstation Shipments		90	225	580	922	220.2%
Technical Workstation						
Total Revenue		16.0	43.2	81.6	142.1	198.0%
Workstation Shipments		694	1,842	3,734	6,364	202.9%
Host/Server						
Total Revenue		.0	7.6	20.4	35.0	NA
Workstation Shipments		0	207	716	1,084	NA
Personal Computer						
Total Revenue		.0	.0	.0	.0	NA
Workstation Shipments		0	0	0	0	NA

Source: Dataquest
June 1991

TABLE NUMBER: 157
 TITLE: Company History
 COMPANY: Superdraft
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.2	2.9	1.9	2.3	.9%
Workstation Shipments	0	0	108	123	NA
Mechanical					
Total Revenue	2.2	2.9	1.9	2.3	.9%
Workstation Shipments	0	0	108	123	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	2.2	2.9	1.9	2.3	.9%
Workstation Shipments	0	0	108	123	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 158
 TITLE: Company History
 COMPANY: Swanson Analysis
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.4	2.6	4.3	6.5	62.7%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	2.4	2.6	4.3	6.5	62.7%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.3	.5	1.4	3.0	199.0%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	1.9	1.8	2.4	2.8	21.8%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.2	.3	.5	.6	69.2%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 159
 TITLE: Company History
 COMPANY: Synercom
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.0	4.0	5.3	5.1	124.3%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	1.0	4.0	5.3	5.1	124.3%
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	2.4	3.0	3.2	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	1.0	1.6	2.3	1.9	36.4%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 160
 TITLE: Company History
 COMPANY: Synopsys
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	.9	3.9	NA
Workstation Shipments	NA	NA	0	0	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.9	3.9	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.5	1.9	NA
Workstation Shipments	NA	NA	0	0	NA
Host/Server					
Total Revenue	NA	NA	.5	2.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 161
 TITLE: Company History
 COMPANY: Sysscan
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	xxxx	xxxx	xxxx	xxxx	xxxxx
All Applications					
Total Revenue	18.0	17.9	15.6	11.6	-19.6%
Workstation Shipments	125	102	119	103	-9.2%
Mechanical					
Total Revenue	3.4	.1	.0	.0	-100.0%
Workstation Shipments	24	0	0	0	-100.0%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	14.6	17.8	15.6	11.6	-10.7%
Workstation Shipments	101	102	119	103	.9%
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	3.8	4.0	NA
Workstation Shipments	0	0	21	27	NA
Host/Server					
Total Revenue	18.0	17.9	11.9	7.7	-34.7%
Workstation Shipments	125	102	98	76	-21.9%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 162
 TITLE: Company History
 COMPANY: t2 Solutions
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	6.0	8.1	10.9	7.1	9.1%
Workstation Shipments	50	118	102	136	64.9%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	6.0	8.1	10.9	7.1	9.1%
Workstation Shipments	50	118	102	136	64.9%
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	5.1	10.9	7.1	NA
Workstation Shipments	0	61	102	136	NA
Host/Server					
Total Revenue	5.8	2.9	.0	.0	-100.0%
Workstation Shipments	45	57	0	0	-100.0%
Personal Computer					
Total Revenue	.2	.0	.0	.0	-100.0%
Workstation Shipments	5	0	0	0	-100.0%

Source: Dataquest
 June 1991

TABLE NUMBER: 163
 TITLE: Company History
 COMPANY: Tebis
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	5.1	6.0	7.3	8.4	28.8%
Workstation Shipments	23	29	36	42	35.1%
Mechanical					
Total Revenue	5.1	6.0	7.3	8.4	28.8%
Workstation Shipments	23	29	36	42	35.1%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	5.1	6.0	7.3	8.4	28.8%
Workstation Shipments	23	29	36	42	35.1%

Source: Dataquest
 June 1991

TABLE NUMBER: 164
 TITLE: Company History
 COMPANY: Technische Computer Systeme
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	3.3	4.3	4.8	5.4	28.1%
Workstation Shipments	61	80	128	137	50.0%
Mechanical					
Total Revenue	.0	.0	4.8	5.4	NA
Workstation Shipments	0	0	128	137	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	3.3	4.3	.0	.0	-100.0%
Workstation Shipments	61	80	0	0	-100.0%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	3.3	4.3	4.8	5.4	28.1%
Workstation Shipments	61	80	128	137	50.0%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 165
 TITLE: Company History
 COMPANY: Teradyne
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.6	4.5	4.0	7.3	68.2%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	2.6	4.5	4.0	7.3	68.2%
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.4	1.3	1.2	3.1	181.0%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	2.2	2.2	2.0	2.9	15.4%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.9	.8	1.3	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 166
 TITLE: Company History
 COMPANY: TOOL Software
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	NA	.1	.2	NA
Workstation Shipments	NA	NA	5	4	NA
Mechanical					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
AEC					
Total Revenue	NA	NA	.1	.2	NA
Workstation Shipments	NA	NA	5	4	NA
GIS/Mapping					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Electronic CAE					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
IC Layout					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Technical Workstation					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	1	1	NA
Host/Server					
Total Revenue	NA	NA	.0	.0	NA
Workstation Shipments	NA	NA	0	0	NA
Personal Computer					
Total Revenue	NA	NA	.1	.1	NA
Workstation Shipments	NA	NA	4	3	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 167
 TITLE: Company History
 COMPANY: Unisys
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	8.0	10.0	10.5	9.9	11.1%
Workstation Shipments	100	196	159	151	22.9%
Mechanical					
Total Revenue	8.0	10.0	10.5	9.9	11.1%
Workstation Shipments	100	196	159	151	22.9%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	6.4	7.5	7.5	7.6	9.0%
Workstation Shipments	74	134	101	119	26.8%
Host/Server					
Total Revenue	1.6	2.5	3.1	2.3	19.1%
Workstation Shipments	26	61	58	32	11.1%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER:	168				
TITLE:	Company History				
COMPANY:	Valid				
REGION:	Europe				
UNITS:	Millions of Dollars and Actual Units				
	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	22.1	41.4	43.5	39.6	34.0%
Workstation Shipments	216	356	475	204	-2.9%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	20.3	34.1	30.5	23.0	6.4%
Workstation Shipments	210	330	333	118	-24.9%
IC Layout					
Total Revenue	1.6	3.1	4.4	4.8	74.7%
Workstation Shipments	5	9	47	24	116.5%
PCB/Hybrid/MCM					
Total Revenue	.2	4.2	8.7	11.9	635.5%
Workstation Shipments	1	17	95	61	599.3%
Technical Workstation					
Total Revenue	20.4	39.7	43.5	39.6	39.3%
Workstation Shipments	216	332	475	204	-2.9%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	1.6	1.7	.0	.0	-100.0%
Workstation Shipments	0	24	0	0	NA

Source: Dataquest
June 1991

TABLE NUMBER: 169
 TITLE: Company History
 COMPANY: Vero International Software
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	9.0	10.4	12.3	18.2	42.1%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	9.0	10.4	12.3	18.2	42.1%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	9.0	10.4	12.3	18.2	42.1%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 170
 TITLE: Company History
 COMPANY: Viewlogic Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	.8	1.0	3.7	3.0	89.9%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.8	1.0	3.7	3.0	89.9%
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.2	.9	1.3	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.1	.0	.0	-100.0%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.8	.7	2.8	1.8	46.1%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 171
 TITLE: Company History
 COMPANY: Vision 3D
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.0	1.2	1.2	.7	-12.7%
Workstation Shipments	12	15	12	6	-30.0%
Mechanical					
Total Revenue	1.0	1.2	1.2	.7	-12.7%
Workstation Shipments	12	15	12	6	-30.0%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	1.0	1.2	1.2	.7	-12.7%
Workstation Shipments	12	15	12	6	-30.0%

Source: Dataquest
 June 1991

TABLE NUMBER: 172
 TITLE: Company History
 COMPANY: VLSI Technology
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	NA	7.1	6.4	7.6	NA
Workstation Shipments	NA	91	20	22	NA
Mechanical					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
AEC					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
GIS/Mapping					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Electronic CAE					
Total Revenue	NA	4.3	3.8	4.6	NA
Workstation Shipments	NA	55	12	13	NA
IC Layout					
Total Revenue	NA	2.8	2.6	3.0	NA
Workstation Shipments	NA	36	8	9	NA
PCB/Hybrid/MCM					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA
Technical Workstation					
Total Revenue	NA	6.0	5.4	7.5	NA
Workstation Shipments	NA	91	17	22	NA
Host/Server					
Total Revenue	NA	1.1	1.0	.1	NA
Workstation Shipments	NA	0	3	0	NA
Personal Computer					
Total Revenue	NA	.0	.0	.0	NA
Workstation Shipments	NA	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 173
 TITLE: Company History
 COMPANY: Whesoe Computing Systems
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.1	1.4	2.8	3.1	68.1%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	1.1	1.4	2.8	3.1	68.1%
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.1	.1	.3	.3	67.9%
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.2	.3	.6	.6	71.8%
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.8	1.0	2.0	2.2	67.1%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 174
 TITLE: Company History
 COMPANY: Wiechers Datentechnik
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	6.8	8.5	17.0	20.3	72.2%
Workstation Shipments	40	50	400	494	250.7%
Mechanical					
Total Revenue	5.1	6.4	17.0	20.3	98.8%
Workstation Shipments	30	38	400	494	304.9%
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	1.7	2.1	.0	.0	-100.0%
Workstation Shipments	10	13	0	0	-100.0%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	5.1	5.7	NA
Workstation Shipments	0	0	120	80	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	6.8	8.5	11.9	14.6	46.1%
Workstation Shipments	40	50	280	414	220.9%

Source: Dataquest
June 1991

TABLE NUMBER: 175
 TITLE: Company History
 COMPANY: XAO Industrie
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	1.1	1.5	2.3	3.0	62.9%
Workstation Shipments	61	80	91	108	33.3%
Mechanical					
Total Revenue	.0	.0	2.3	3.0	NA
Workstation Shipments	0	0	91	108	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	1.1	1.5	.0	.0	-100.0%
Workstation Shipments	61	80	0	0	-100.0%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	1.1	1.5	2.3	3.0	62.9%
Workstation Shipments	61	80	91	108	33.3%
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 176
 TITLE: Company History
 COMPANY: Xilinx
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	2.5	3.2	4.5	3.0	9.9%
Workstation Shipments	0	0	0	0	NA
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	2.5	3.2	4.5	3.0	9.9%
Workstation Shipments	0	0	0	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/WCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.0	.2	.2	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	2.5	3.2	4.3	2.7	5.3%
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 177
 TITLE: Company History
 COMPANY: Ziegler
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	====	====	====	====	=====
All Applications					
Total Revenue	8.1	14.1	15.0	18.4	50.5%
Workstation Shipments	0	0	14	0	NA
Mechanical					
Total Revenue	2.4	4.2	5.8	7.4	76.6%
Workstation Shipments	0	0	2	0	NA
AEC					
Total Revenue	.9	1.8	1.8	2.4	63.6%
Workstation Shipments	0	0	2	0	NA
GIS/Mapping					
Total Revenue	.6	1.0	1.3	2.0	77.7%
Workstation Shipments	0	0	2	0	NA
Electronic CAE					
Total Revenue	2.3	4.2	3.1	3.7	27.1%
Workstation Shipments	0	0	4	0	NA
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	2.0	2.8	3.0	2.9	22.8%
Workstation Shipments	0	0	4	0	NA
Technical Workstation					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Host/Server					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Personal Computer					
Total Revenue	8.1	14.1	15.0	18.4	50.5%
Workstation Shipments	0	0	14	0	NA

Source: Dataquest
 June 1991

TABLE NUMBER: 178
 TITLE: Company History
 COMPANY: Zycad
 REGION: Europe
 UNITS: Millions of Dollars and Actual Units

	1987	1988	1989	1990	CAGR 87-90
	****	****	****	****	*****
All Applications					
Total Revenue	5.4	5.3	7.9	4.6	-8.2%
Workstation Shipments	9	25	38	38	104.1%
Mechanical					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
AEC					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
GIS/Mapping					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Electronic CAE					
Total Revenue	5.4	5.3	7.9	4.6	-8.2%
Workstation Shipments	9	25	38	38	104.1%
IC Layout					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
PCB/Hybrid/MCM					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA
Technical Workstation					
Total Revenue	.0	.1	.1	3.7	NA
Workstation Shipments	0	0	0	31	NA
Host/Server					
Total Revenue	5.4	5.2	7.8	.9	-58.8%
Workstation Shipments	9	25	37	7	-12.8%
Personal Computer					
Total Revenue	.0	.0	.0	.0	NA
Workstation Shipments	0	0	0	0	NA

Source: Dataquest
 June 1991

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