Market Analysis Program (MAP)

Industry Sector/ Cross-Industry Markets 1989-1994

Appendix C: Forecast Reconciliation

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DECEMBER 1989

INDUSTRY SECTOR/CROSS-INDUSTRY MARKETS 1989-1994

APPENDIX C: FORECAST RECONCILIATION

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Market Analysis Program

Industry Sector/Cross-Industry Markets, 1989-1994
Appendix C: Forecast Reconciliation

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Exhibits

C

Exhibits (Continued)

C

EXHIBIT C-1

Processing—Data Base Reconciliation of Market Forecast by Industry Sector
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Processing Services Industry	18,850	18,125	(4)	32,855	31,845	(2)	12	12
Transaction Processing Services and Systems Operations								
Discrete Manufacturing	1,080	805	(34)	1,890	1,180	(14)	12	8
Process Manufacturing	680	810	+16	1,270	1,515	+16	13	11
Transportation	1,560	1,560	-	3,025	2,950	(3)	14	14
Utilities	85	90	+6	150	150	-	12	11
Telecommunications	560	560	-	1,135	1,150	+1	15	15
Wholesale Distribution	330	330	-	520	545	+5	9	11
Retail Distribution	125	135	-	230	240	+4	12	12
Banking & Finance	3,790	3,790	-	7,325	7,420	+1	14	14
Insurance	825	825	-	1,565	1,825	+14	14	18
Medical	1,030	975	(6)	1,875	1,685	(11)	13	11
Education	235	230	(2)	290	305	+5	4	7
Services	670	680	+2	955	1,020	+6	7	7
Federal Government	650	460	(41)	905	715	(27)	7	10
State & Local Government	735	740	+1	1,545	1,755	+12	16	20
Other Industry Sector	595	595	-	1,010	975	(4)	11	11
Total Industry Sectors	12,965	12,585	(3)	23,745	23,430	(1)	13	13
Cross-Industry Sector								
Accounting	990	990	-	1,150	1,160	+1	3	3
Education & Training	90	90	-	110	100	(10)	4	2
Engineering & Scientific	115	115	-	140	140	-	4	4
Human Resources	1,195	1,195	-	2,120	2,135	+1	12	12
Office Systems	40	40	-	35	35	-	(4)	(4)
Planning & Analysis	215	220	-	175	175	-	(4)	(5)
Other Cross-Industry Sector	430	430	-	875	665	(32)	15	8
Total Cross-Industry Sectors	3,075	3,080	-	4,605	4,410	(4)	10	7
Other								
Utility Processing Services	1,160	900	(29)	1,325	1,080	(23)	3	6
Other Processing Services	1,565	1,560	-	3,085	2,925	(6)	15	13
Total Other	2,725	2,460	(11)	4,410	4,005	(10)	10	11

EXHIBIT C-2

Network Services
Data Base Reconciliation of
Market Forecast by Industry Sector
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total	6,150	6,705	+8	17,185	16,955	(1)	23	20
Discrete Manufacturing	46	45	-	160	150	(6)	29	28
Process Manufacturing	650	500	(30)	1,575	1,140	(38)	19	18
Transportation	110	110	-	475	370	(28)	34	27
Utilities	65	70	+7	190	180	(6)	24	21
Telecommunications	40	40	-	170	140	(21)	32	29
Wholesale Distribution	135	140	+4	740	495	(50)	40	29
Retail Distribution	90	95	+5	425	290	(47)	36	23
Banking & Finance	475	470	(1)	1,610	1,535	(5)	28	25
Insurance	125	160	+22	285	365	+22	18	18
Medical	395	395	-	1,355	980	(38)	28	18
Education	115	115	-	295	250	(18)	21	17
Services	375	380	+1	955	975	+2	21	21
Federal Government	855	850	(1)	1,375	1,515	+9	10	10
State & Local Government	45	50	+10	150	150	-	26	24
Other Industry Sector	60	60	-	255	175	(63)	33	27
Total Vertical Markets	3,585	3,480	(3)	10,018	8,708	(15)	23	20
Cross-Industry Data Bases								
Securities	760	650	(17)	2,165	1,500	(44)	23	18
Credit	860	800	(8)	2,070	2,075	-	19	20
Text/Bibliographic	165	160	(3)	495	465	(7)	24	23
News	590	450	(31)	1,970	1,390	(42)	27	25
Economic/Other	185	160	(16)	465	400	(16)	20	20
Total Cross-Industry Sectors	2,565	2,220	(16)	7,165	5,830	(23)	23	21

EXHIBIT C-3

Application Software
Data Base Reconciliation of
Market Forecast by Industry Sector
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Application Software Industry	12,090	13,340	+9	30,730	27,500	(12)	19	15
Discrete Manufacturing	1,380	1,380	-	3,235	2,795	(16)	19	15
Process Manufacturing	180	405	+55	435	854	+49	19	16
Transportation	260	260	-	715	580	(23)	22	16
Utilities	180	180	-	410	370	(11)	18	14
Telecommunications	155	155	-	605	370	(64)	32	19
Wholesale Distribution	350	390	-	1,090	790	(38)	23	15
Retail Distribution	235	225	-	925	565	(38)	31	15
Banking & Finance	1,750	1,750	-	3,930	3,560	(10)	18	15
Insurance	570	570	-	1,680	1,225	(37)	24	15
Medical	670	670	-	1,520	1,330	(14)	18	14
Education	505	505	-	855	885	+3	11	12
Services	340	340	-	860	775	(11)	20	17
Federal Government	230	385	+40	440	890	(51)	14	18
State & Local Government	90	90	-	250	200	25	24	15
Other Industry Sector	160	160	-	360	325	(11)	20	15
Total Industry Sectors	7,095	7,465	+5	17,310	15,425	(12)	20	15
Cross-Industry Sector								
Accounting	1,515	1,515	-	3,165	2,860	(11)	16	12
Education & Training	140	140	-	445	330	(35)	25	16
Engineering & Scientific	400	400	-	1,230	955	(29)	25	17
Human Resources	760	760	-	1,050	1,110	+5	7	8
Office Systems	1,240	1,240	-	3,295	3,022	(9)	22	18
Planning & Analysis	1,490	1,490	-	3,080	3,170	+3	16	15
Other Cross-Industry Sector	330	330	-	735	630	(17)	17	13
Total Cross-Industry Sectors	5,875	5,875	-	13,000	12,075	(8)	17	14

EXHIBIT C-4

Systems Software
Data Base Reconciliation of
Market Forecast by Software Type
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1987 Forecast (%)	CAGR 89-94 1988 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Systems Software Industry	12,100	12,100	-	30,730	28,945	(6)	21	18
Application Development Tools	4,650	4,650	-	12,690	11,920	(7)	22	19
Systems Control	4,985	4,985	-	12,130	10,615	(14)	19	17
Data Center Management	2,460	2,460	-	6,015	6,410	+6	20	19
Mainframe	5,110	5,965	+14	12,055	11,550	(4)	15	14
Application Development Tools	2,120	2,120	-	4,340	3,940	(10)	15	13
Systems Control	2,435	2,435	-	4,610	4,525	(2)	14	14
Data Center Management	1,410	1,410	-	3,105	3,085	(1)	17	15
Minicomputer								
Application Development Tools	1,460	1,460	-	3,580	3,935	+9	20	20
Systems Control	1,680	1,680	-	3,530	3,065	(15)	16	14
Data Center Management	910	910	-	2,110	2,045	(3)	18	17
Workstation/PC	2,080	2,080	-	9,560	8,350	(15)	35	28
Application Development Tools	870	870	-	3,990	3,025	(32)	35	26
Systems Control	870	870	-	3,990	3,025	(32)	35	26
Data Center Management	140	140	-	800	1,280	+38	43	39

EXHIBIT C-5

Turnkey Systems
Data Base Reconciliation of
Market Forecast by Industry Sector
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Turnkey Industry	9,525	10,355	+8	15,155	16,580	+9	10	10
Discrete Manufacturing	2,000	2,000	-	2,990	3,280	+12	8	12
Process Manufacturing	400	405	+1	630	715	+13	9	12
Transportation	160	160	-	260	260	-	10	10
Utilities	35	35	-	55	55	-	10	10
Telecommunications	270	270	-	540	540	-	14	14
Retail Distribution	635	635	-	990	1,095	+10	9	9
Wholesale Distribution	365	365	-	625	670	+10	11	10
Banking & Finance	780	780	-	1,280	1,265	(1)	11	10
Insurance	230	230	-	350	440	+21	8	10
Medical	665	775	+14	1,140	1,250	+9	11	10
Education	180	180	-	290	265	(9)	9	8
Services	450	450	-	770	740	(4)	11	10
Federal Government	390	390	-	555	465	(19)	7	3
State & Local Government	120	120	-	210	210	-	12	12
Other Industry Sector	345	345	-	540	555	+3	9	10
Total Industry Sectors	7,025	7,140	+2	11,220	11,610	+3	10	10
Cross-Industry Sector								
Accounting	400	400	-	475	465	(2)	3	3
Education & Training	150	150	-	180	190	+5	4	4
Engineering & Scientific	330	330	-	540	665	+19	10	12
Human Resources	110	110	-	140	145	+3	5	5
Planning & Analysis	290	270	(7)	340	330	(3)	3	3
Office Systems	850	850	-	1,660	1,620	(2)	14	11
Other Cross-Industry Sector	370	370	-	600	550	(10)	10	8
Total Cross-Industry Sectors	2,500	2,480	(1)	3,935	3,715	(10)	9	8

EXHIBIT C-6

Professional Services
Data Base Reconciliation 1988-1993
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Professional Services Industry	15,020	15,020	-	32,195	29,775	(8)	16	14
Discrete Manufacturing	3,120	3,120	-	7,430	6,740	(10)	19	16
Process Manufacturing	1,490	1,490	-	4,030	3,405	(18)	22	17
Transportation	170	170	-	340	315	(8)	16	13
Utilities	410	410	-	690	735	+6	11	13
Telecommunications	680	680	-	1,455	1,465	-	17	16
Wholesale Distribution	280	280	-	610	530	(15)	19	13
Retail Distribution	180	180	-	430	380	(13)	19	15
Banking & Finance	1,905	1,910	-	4,550	4,405	(3)	17	18
Insurance	1,205	1,200	-	2,630	2,330	(13)	18	14
Medical	300	300	-	680	505	(35)	15	10
Education	60	60	-	120	120	-	17	15
Services	120	120	-	255	215	(19)	17	12
Federal Government	2,910	2,910	-	5,000	4,435	(13)	11	8
State & Local Government	1,900	1,900	-	3,350	3,690	+9	12	14
Other Industry Sector	290	290	-	620	505	(23)	16	12
Professional Services								
Consulting	3,120	3,020	(3)	7,800	7,020	(11)	20	18
Education and Training	1,960	1,820	(7)	4,500	3,625	(24)	18	14
Software Development	8,790	8,780	-	17,985	16,605	(8)	15	13
Systems Operations	1,150	1,400	18	1,910	2,527	+24	11	12

EXHIBIT C-7

Discrete Manufacturing Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1987 Forecast (%)	CAGR 89-94 1988 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Discrete Manufacturing Sector	8,205	8,205	-	18,015	16,740	(8)	17	16
Processing Services	1,080	750	(44)	1,890	1,180	(60)	12	8
Network Services	45	45	-	160	150	(7)	30	28
Application Software Products	1,380	1,380	-	3,235	2,795	(16)	19	15
Turnkey Systems	2,000	2,000	-	2,990	3,280	+9	8	10
Professional Services	3,120	3,120	-	7,430	6,740	(10)	19	16

EXHIBIT C-8

Process Manufacturing Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1987 Forecast (%)	CAGR 89-94 1988 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Process Manufacturing Sector	3,510	4,445	+21	8,250	9,210	+10	19	15
Processing Services	680	810	+16	1,270	1,515	+16	13	11
Network Services	660	500	(32)	1,575	1,141	(38)	19	18
Application Software Products	180	405	+56	435	830	+48	19	16
Turnkey Systems	400	1,140	+65	630	2,045	+69	9	12
Professional Services	1,490	1,490	-	4,030	3,405	(18)	22	17

Note: INPUT's 1987 professional services forecast includes systems integration software revenues.

EXHIBIT C-9

Transportation Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Transportation Sector	2,370	2,370	-	5,145	4,740	(9)	17	15
Processing Services	1,560	1,560	-	3,020	2,950	(2)	14	14
Network Services	110	110	-	475	369	(29)	34	27
Application Software Products	260	260	-	715	580	(23)	22	16
Turnkey Systems	160	160	-	260	255	(2)	10	10
Professional Services	170	170	-	340	315	(8)	16	13

EXHIBIT C-10

Utilities Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Utilities Sector	955	955	-	2,150	2,100	(2)	18	17
Processing Services	90	90	-	140	150	+7	11	11
Network Services	70	70	-	170	180	+6	21	21
Application Software Products	180	180	-	410	370	(11)	18	14
Turnkey Systems	35	35	-	50	55	+9	10	10
Professional Services	410	410	-	690	735	+6	11	13

EXHIBIT C-11

Telecommunications Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Telecommunications Sector	1,830	1,830	-	4,200	3,990	(5)	18	16
Processing Services	560	560	-	1,130	1,150	+2	15	15
Network Services	40	40	-	180	140	(29)	33	29
Application Software Products	155	155	-	605	370	(64)	32	19
Turnkey Systems	270	270	-	530	540	+2	14	14
Professional Services	680	680	-	1,455	1,465	+1	16	16

EXHIBIT C-12

Wholesale Distribution Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Wholesale Distribution Sector	1,615	1,615	-	3,885	3,225	(21)	19	15
Processing Services	330	330	-	520	545	+5	9	11
Network Services	140	140	-	730	495	(48)	40	29
Application Software Products	390	390	-	1,090	790	(38)	23	15
Turnkey Systems	365	365	-	625	610	(3)	11	10
Professional Services	280	280	-	610	530	(15)	17	13

EXHIBIT C-13

Retail Distribution Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Retail Distribution Sector	1,405	1,415	+1	3,765	3,070	(23)	22	17
Processing Services	135	135	-	245	240	(2)	13	12
Network Services	95	95	-	425	290	(47)	36	23
Application Software Products	235	225	(4)	925	490	(89)	31	15
Turnkey Systems	635	635	-	990	1,005	+2	9	9
Professional Services	180	180	-	430	380	(13)	19	15

EXHIBIT C-14

Banking and Finance Sector Data Base Reconciliation of Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Banking and Finance Sector	8,930	8,930	-	20,185	19,170	(5)	18	16
Processing Services	3,790	3,790	-	7,330	7,420	+1	14	14
Network Services	470	470	-	1,610	1,535	(5)	28	25
Application Software Products	1,750	1,750	-	3,930	3,560	(10)	18	15
Turnkey Systems	780	780	-	1,280	1,265	(1)	10	10
Professional Services	1,910	1,910	-	4,550	4,405	(3)	19	18

EXHIBIT C-15

Insurance Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Insurance Sector	3,110	3,110	-	7,050	6,610	(7)	18	16
Processing Services	825	825	-	1,560	1,825	+15	14	18
Network Services	160	160	-	380	365	(4)	20	18
Application Software Products	570	570	-	1,680	1,225	(37)	24	15
Turnkey Systems	230	230	-	350	400	+13	8	10
Professional Services	1,200	1,200	-	2,630	2,330	(13)	17	14

EXHIBIT C-16

Medical Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Medical Sector	3,218	3,275	+2	7,025	6,240	(13)	17	13
Processing Services	1,025	975	(5)	1,850	1,695	(9)	12	11
Network Services	395	395	-	1,335	980	(36)	28	19
Application Software Products	670	670	-	1,520	1,330	(15)	18	14
Turnkey Systems	665	775	+14	1,140	1,250	+9	11	10
Professional Services	300	300	-	680	505	(35)	18	10

EXHIBIT C-17

Education Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Education Sector	1,145	1,150	-	1,915	2,005	+5	11	12
Processing Services	230	230	-	280	290	+3	3	5
Network Services	115	115	-	230	250	+8	15	17
Application Software Products	505	505	-	855	885	+3	11	12
Turnkey Systems	180	180	-	290	265	(9)	9	8
Professional Services	60	60	-	120	120	-	15	15

EXHIBIT C-18

Services Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Services Sector	2,000	2,000	-	3,935	3,820	(3)	15	14
Processing Services	680	680	-	955	1,020	+6	7	7
Network Services	380	380	-	960	975	+2	21	21
Application Software Products	340	340	-	860	775	(11)	20	17
Turnkey Systems	450	450	-	770	740	(4)	11	10
Professional Services	120	120	-	260	215	(21)	17	12

EXHIBIT C-19

Federal Government Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Federal Government Sector	7,450	7,415	(1)	14,040	13,165	(7)	14	12
Processing Services	650	460	(41)	905	715	(27)	7	10
Network Services	850	850	-	1,380	1,515	+9	10	10
Application Software Products	230	385	+40	440	890	+51	9	18
Turnkey Systems	390	390	-	355	465	(19)	7	3
Professional Services	2,910	2,910	-	5,000	4,435	-	11	8

EXHIBIT C-20

State and Local Government Sector
Data Base Reconciliation of
Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total State and Local Government Sector	3,280	3,280	-	6,580	7,110	+8	15	17
Processing Services	740	740	-	1,550	1,755	+13	16	20
Network Services	50	50	-	150	150	-	26	24
Application Software Products	90	90	-	250	230	(9)	24	14
Turnkey Systems	120	120	-	220	235	+6	13	12
Professional Services	1,900	1,900	-	3,350	3,690	+9	12	14

EXHIBIT C-21

Other Industry-Specific Sector Data Base Reconciliation of Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Other Industry-Specific Sector	1,520	1,515	-	2,980	2,735	(9)	14	13
Processing Services	595	595	-	1,010	975	(4)	11	11
Network Services								
Application Software Products	160	160	-	360	325	(11)	18	14
Turnkey Systems	345	345	-	540	555	+3	9	10
Professional Services	290	290	-	620	505	(23)	16	12

EXHIBIT C-22

Accounting Cross-Industry Sector Data Base Reconciliation of Market Forecast by Delivery Mode ($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Accounting Sector	2,905	2,905	-	4,790	4,480	(7)	11	8
Processing Services	990	990	-	1,150	1,160	+1	3	3
Application Software Products	1,515	1,515	-	3,165	2,855	(11)	16	12
Turnkey Systems	400	400	-	475	465	(2)	3	3

EXHIBIT C-23

Education and Training Cross-Industry Sector Data Base Reconciliation of Market Forecast by Delivery Mode ($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Education and Training Sector	380	380	-	735	620	(19)	14	10
Processing Services	90	90	-	110	100	(10)	3	2
Application Software Products	140	140	-	445	330	(35)	26	16
Turnkey Systems	150	150	-	180	190	+5	4	4

EXHIBIT C-24

Engineering and Scientific Cross-Industry Sector Data Base Reconciliation of Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Engineering and Scientific Sector	845	845	-	1,910	1,680	(14)	18	14
Processing Services	115	115	-	140	140	-	4	4
Application Software Products	400	400	-	1,230	955	(29)	25	17
Turnkey Systems	330	330	-	540	590	+9	10	12

EXHIBIT C-25

Human Resources Cross-Industry Sector Data Base Reconciliation of Market Forecast by Delivery Mode
($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93	CAGR 89-94
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)	1988 Forecast (%)	1989 Forecast (%)
Total Human Resources Sector	2,065	2,065	-	3,310	3,390	+2	10	10
Processing Services	1,195	1,195	-	2,120	2,135	+1	12	12
Application Software Products	760	760	-	1,050	1,110	+5	7	8
Turnkey Systems	110	110	-	140	145	+3	5	5

EXHIBIT C-26

Planning and Analysis Cross-Industry Sector Data Base Reconciliation of Market Forecast by Delivery Mode ($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Planning and Analysis Sector	2,000	1,980	(1)	3,600	3,665	-	12	12
Processing Services	220	220	-	180	175	(3)	(4)	(5)
Application Software Products	1,490	1,490	-	3,080	3,170	+3	16	15
Turnkey Systems	270	270	-	340	320	(6)	3	3

EXHIBIT C-27

Other Cross-Industry Sector Data Base Reconciliation of Market Forecast by Delivery Mode ($ Millions)

Industry Sector	1988 Market			1993 Market			CAGR 88-93 1988 Forecast (%)	CAGR 89-94 1989 Forecast (%)
	1988 Forecast	1989 Report	Variance (%)	1988 Forecast	1989 Forecast	Variance (%)		
Total Other Cross-Industry Sector	1,130	1,130	-	2,205	1,845	(20)	14	10
Processing Services	430	430	-	870	665	(31)	15	8
Application Software Products	330	330	-	735	630	(17)	17	13
Turnkey Systems	370	370	-	550	600	(8)	10	8

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