Appendix table 4-39.
International strategic technology alliances, by technology and selected region/country: 1980–2000
(Counts)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total[a]																					
Total	212	201	272	260	346	437	491	488	545	584	437	372	507	557	611	812	713	647	661	586	574
Information technology	49	60	96	107	157	164	189	177	200	197	219	203	237	221	253	338	298	233	276	225	184
Biotechnology	31	38	54	42	65	113	103	112	100	71	50	40	101	134	165	164	177	185	147	191	199
New materials	9	23	27	35	28	58	87	65	61	47	35	21	38	59	33	46	36	30	41	23	25
Aerospace and defense	22	8	11	11	30	14	27	25	26	45	54	41	56	37	37	52	45	38	38	11	13
Automotive	19	7	9	8	8	20	26	22	45	56	12	3	4	15	26	32	37	46	35	38	53
Chemicals (nonbiotechnology)	40	26	30	29	25	32	19	38	58	84	47	40	39	68	52	60	28	60	73	35	39
Other	42	39	45	28	33	36	40	49	55	84	20	24	32	23	45	120	92	55	51	63	61
United States																					
Total	141	126	200	177	234	237	294	320	368	360	314	288	394	444	496	643	584	528	538	493	465
Information technology	31	39	76	76	105	88	118	135	145	139	174	163	194	196	229	296	262	195	240	192	144
Biotechnology	24	28	45	27	51	68	77	78	67	50	32	36	83	116	133	131	147	167	124	170	168
New materials	5	14	17	22	15	22	39	34	38	28	27	15	29	40	28	34	28	22	26	18	21
Aerospace and defense	15	5	8	6	18	7	10	14	17	25	36	25	36	21	17	29	29	20	29	10	9
Automotive	9	2	4	6	4	11	14	16	33	34	8	2	1	10	17	17	26	30	20	26	41
Chemicals (nonbiotechnology)	27	16	18	17	18	19	10	17	34	47	26	30	26	46	36	44	17	51	55	25	31
Other	30	22	32	23	23	22	26	26	34	37	11	17	25	15	36	92	75	43	44	52	51
Europe																					
Total	104	95	127	111	165	239	239	234	266	320	204	165	235	236	260	334	285	272	318	210	265
Information technology	20	28	48	34	73	96	103	82	91	96	81	72	93	68	60	86	76	85	97	61	82
Biotechnology	11	14	15	20	24	59	35	51	50	37	28	21	59	59	93	90	101	71	79	70	87
New materials	8	13	15	19	13	24	32	22	23	26	19	8	15	34	10	20	11	15	26	7	8
Aerospace and defense	13	4	7	8	19	10	18	15	15	30	31	26	33	24	29	33	23	27	25	5	5
Automotive	12	5	6	4	6	10	13	9	18	23	4	0	0	4	14	18	17	22	20	26	26
Chemicals (nonbiotechnology)	17	13	16	13	11	16	13	23	32	45	31	25	19	33	31	38	22	26	49	21	26
Other	23	18	20	13	19	24	25	32	37	63	10	13	16	14	23	49	35	26	22	20	31
Japan																					
Total	55	68	89	97	100	137	160	130	113	128	85	79	79	79	84	112	105	63	82	76	66
Information technology	15	18	35	44	55	40	53	31	33	35	46	50	40	41	46	51	47	28	38	41	33
Biotechnology	7	11	17	11	11	31	30	26	11	12	9	2	8	15	14	15	21	15	10	14	9
New materials	0	6	8	14	14	35	45	34	22	12	9	6	10	6	5	11	4	3	12	6	6
Aerospace and defense	6	3	0	3	1	0	4	1	0	4	3	6	2	0	0	3	2	1	1	1	3
Automotive	5	3	3	3	2	10	13	11	18	28	2	2	3	7	6	8	7	2	7	5	8
Chemicals (nonbiotechnology)	12	9	12	14	8	14	5	18	18	25	12	8	9	9	8	6	6	8	4	3	2
Other	10	18	14	8	9	7	10	9	11	12	4	5	7	1	5	18	18	6	10	6	5
Across regions[b]																					
Total	110	114	171	138	177	214	232	242	280	341	211	178	247	274	286	356	335	286	322	249	314
Information technology	18	29	71	53	85	70	92	81	91	103	100	88	104	101	99	129	124	102	121	93	111
Biotechnology	14	19	26	16	24	52	41	50	37	36	28	22	59	66	87	82	108	81	71	81	85
New materials	4	15	16	20	15	26	34	30	32	23	24	9	19	31	12	24	11	13	26	10	17
Aerospace and defense	12	4	5	6	9	6	7	6	8	20	17	21	28	27	20	25	17	18	23	5	6
Automotive	10	3	5	6	5	14	17	17	34	43	3	1	0	7	14	15	16	16	17	21	33
Chemicals (nonbiotechnology)	26	22	22	19	17	24	11	29	45	62	29	26	21	32	31	35	18	30	38	20	23
Other	26	22	26	18	22	22	30	29	33	54	10	11	16	10	23	46	41	26	26	19	39

See notes, if any, and SOURCE at end of table.

Appendix table 4-39.
International strategic technology alliances, by technology and selected region/country: 1980–2000
(Counts)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
United States-Europe																					
Total	43	33	68	46	74	85	107	116	116	120	93	91	130	135	160	187	178	160	208	141	171
Information technology	7	11	31	13	30	28	43	48	41	41	42	37	54	47	45	51	47	52	68	41	52
Biotechnology	5	6	9	7	14	22	24	28	21	16	11	18	41	42	62	60	73	53	56	52	57
New materials	4	5	6	8	4	7	13	10	10	9	11	3	6	16	7	12	6	7	13	6	5
Aerospace and defense	6	2	4	4	8	3	4	5	6	10	15	11	14	8	9	10	8	9	16	4	2
Automotive	3	0	1	2	3	6	5	5	9	7	1	0	0	2	7	7	9	7	7	14	15
Chemicals (nonbiotechnology)	5	4	8	4	6	7	4	5	13	15	11	15	6	14	16	22	11	17	31	11	18
Other	13	5	9	8	9	12	14	15	16	22	2	7	9	6	14	25	24	15	17	13	22
United States-Japan																					
Total	33	35	60	61	58	57	60	56	62	74	48	50	47	46	45	60	57	44	42	39	33
Information technology	6	7	26	28	35	20	25	20	19	25	32	34	26	30	29	34	31	18	21	22	15
Biotechnology	6	8	12	7	7	16	14	11	6	6	4	1	5	10	7	6	13	14	6	9	7
New materials	0	3	4	10	5	9	10	11	9	8	4	3	8	1	3	4	0	2	3	2	4
Aerospace and defense	5	1	0	1	0	0	1	0	0	3	1	5	0	0	0	2	1	0	1	1	2
Automotive	3	1	2	2	1	2	5	7	12	17	1	1	0	2	1	2	3	0	3	1	4
Chemicals (nonbiotechnology)	10	6	6	8	5	7	2	7	9	12	4	4	2	2	1	4	1	6	2	2	0
Other	3	9	10	5	5	3	3	0	7	3	2	2	6	1	4	8	8	4	6	2	1
United States-others																					
Total	14	14	17	7	11	15	13	17	36	35	21	10	27	37	30	43	45	32	20	41	58
Information technology	0	1	5	3	2	5	2	5	11	10	10	4	9	10	12	22	22	15	12	20	22
Biotechnology	3	2	1	0	2	3	0	3	4	5	4	1	5	7	6	6	7	7	2	14	12
New materials	0	4	3	0	1	1	3	2	6	1	3	1	1	5	2	1	4	0	0	1	4
Aerospace and defense	0	0	1	0	1	0	0	0	0	3	1	2	8	7	3	5	6	2	4	0	1
Automotive	2	0	1	1	0	2	1	1	6	3	0	0	0	1	0	1	2	5	2	2	8
Chemicals (nonbiotechnology)	6	5	3	1	1	3	1	2	7	9	1	2	4	6	6	2	1	1	0	1	1
Other	3	2	3	2	4	1	6	4	2	4	2	0	0	1	1	6	3	2	0	3	10
Europe-Japan																					
Total	12	20	16	18	21	34	35	24	24	30	25	19	24	21	24	30	26	12	27	13	18
Information technology	4	7	6	6	11	12	17	3	9	7	8	11	10	7	8	10	9	5	10	6	8
Biotechnology	0	1	2	2	0	7	1	4	1	6	4	0	3	4	6	6	6	1	4	2	1
New materials	0	2	3	2	5	7	6	4	3	2	5	2	2	4	0	3	1	1	7	0	1
Aerospace and defense	1	1	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0
Automotive	1	2	1	1	0	3	4	2	3	5	0	0	0	2	3	2	1	1	2	4	3
Chemicals (nonbiotechnology)	1	2	2	3	1	3	3	8	4	6	7	4	7	4	6	2	5	2	2	1	2
Other	5	5	2	3	4	2	4	3	4	3	1	2	1	0	1	6	4	1	2	0	3
Europe-others																					
Total	5	10	7	6	10	20	12	21	36	61	23	5	17	31	21	28	20	34	19	11	25
Information technology	0	2	2	3	6	5	4	5	10	18	7	1	4	5	1	8	11	9	8	2	8
Biotechnology	0	2	1	0	0	3	1	1	4	3	5	1	5	3	6	2	7	6	3	3	8
New materials	0	1	0	0	0	2	1	3	4	3	1	0	2	5	0	3	0	3	2	0	2
Aerospace and defense	0	0	0	0	0	3	2	1	2	3	0	2	4	12	8	7	2	6	2	0	1
Automotive	0	0	0	0	1	0	1	0	3	5	1	0	0	0	1	2	0	2	1	0	2
Chemicals (nonbiotechnology)	3	4	2	3	3	3	1	5	9	13	6	1	2	4	2	5	0	4	3	5	2
Other	2	1	2	0	0	4	2	6	4	16	3	0	0	2	3	1	0	4	0	1	2

See notes, if any, and SOURCE at end of table.

Appendix table 4-39.
International strategic technology alliances, by technology and selected region/country: 1980–2000
(Counts)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Japan-others																					
Total	3	2	3	0	3	3	5	8	6	21	1	3	2	4	6	8	9	4	6	4	9
Information technology	1	1	1	0	1	0	1	0	1	2	1	1	1	2	4	4	4	3	2	2	6
Biotechnology	0	0	1	0	1	1	1	3	1	0	0	1	0	0	0	2	2	0	0	1	0
New materials	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1
Aerospace and defense	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Automotive	1	0	0	0	0	1	1	2	1	6	0	0	0	0	2	1	1	1	2	0	1
Chemicals (nonbiotechnology)	1	1	1	0	1	1	0	2	3	7	0	0	0	2	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	1	1	0	6	0	0	0	0	0	0	2	0	1	0	1
Within regions[c]																					
Total	102	87	101	122	169	223	259	246	265	243	226	194	260	283	325	456	378	361	339	337	260
Information technology	31	31	25	54	72	94	97	96	109	94	119	115	133	120	154	209	174	131	155	132	73
Biotechnology	17	19	28	26	41	61	62	62	63	35	22	18	42	68	78	82	69	104	76	110	114
New materials	5	8	11	15	13	32	53	35	29	24	11	12	19	28	21	22	25	17	15	13	8
Aerospace and defense	10	4	6	5	21	8	20	19	18	25	37	20	28	10	17	27	28	20	15	6	7
Automotive	9	4	4	2	3	6	9	5	11	13	9	2	4	8	12	17	21	30	18	17	20
Chemicals (nonbiotechnology)	14	4	8	10	8	8	8	9	13	22	18	14	18	36	21	25	10	30	35	15	16
Other	16	17	19	10	11	14	10	20	22	30	10	13	16	13	22	74	51	29	25	44	22
United States intraregion																					
Total	51	44	55	63	91	80	114	131	154	131	152	137	190	226	261	353	304	292	268	272	203
Information technology	18	20	14	32	38	35	48	62	74	63	90	88	105	109	143	189	162	110	139	109	55
Biotechnology	10	12	23	13	28	27	39	36	36	23	13	16	32	57	58	59	54	93	60	95	92
New materials	1	2	4	4	5	5	13	11	13	10	9	8	14	18	16	17	18	13	10	9	8
Aerospace and defense	4	2	3	1	9	4	5	9	11	9	19	7	14	6	5	12	14	9	8	5	4
Automotive	1	1	0	1	0	1	3	3	6	7	6	1	1	5	9	7	12	18	8	9	14
Chemicals (nonbiotechnology)	6	1	1	4	6	2	3	3	5	11	10	9	14	24	13	16	4	27	22	11	12
Other	11	6	10	8	5	6	3	7	9	8	5	8	10	7	17	53	40	22	21	34	18
Europe intraregion																					
Total	44	32	36	41	60	100	85	73	90	109	63	50	64	49	55	89	61	66	64	45	51
Information technology	9	8	9	12	26	51	39	26	31	30	24	23	25	9	6	17	9	19	11	12	14
Biotechnology	6	5	3	11	10	27	9	18	24	12	8	2	10	10	19	22	15	11	16	13	21
New materials	4	5	6	9	4	8	12	5	6	12	2	3	5	9	3	2	4	4	4	1	0
Aerospace and defense	6	1	3	3	11	4	12	9	7	16	16	13	14	4	12	15	13	11	7	1	2
Automotive	8	3	4	1	2	1	3	2	3	6	2	0	0	0	3	7	7	12	10	8	6
Chemicals (nonbiotechnology)	8	3	4	3	1	3	5	5	6	11	7	5	4	11	7	9	6	3	13	4	4
Other	3	7	7	2	6	6	5	8	13	22	4	4	6	6	5	17	7	6	3	6	4
Japan intraregion																					
Total	7	11	10	18	18	43	60	42	21	3	11	7	6	8	9	14	13	3	7	20	6
Information technology	4	3	2	10	8	8	10	8	4	1	5	4	3	2	5	3	3	2	5	11	4
Biotechnology	1	2	2	2	3	7	14	8	3	0	1	0	0	1	1	1	0	0	0	2	1
New materials	0	1	1	2	4	19	28	19	10	2	0	1	0	1	2	3	3	0	1	3	0
Aerospace and defense	0	1	0	1	1	0	3	1	0	0	2	0	0	0	0	0	1	0	0	0	1
Automotive	0	0	0	0	1	4	3	0	2	0	1	1	3	3	0	3	2	0	0	0	0
Chemicals (nonbiotechnology)	0	0	3	3	1	3	0	1	2	0	1	0	0	1	1	0	0	0	0	0	0
Other	2	4	2	0	0	2	2	5	0	0	1	1	0	0	0	4	4	1	1	4	0

See notes, if any, and SOURCE at end of table.

Appendix table 4-39.
International strategic technology alliances, by technology and selected region/country: 1980–2000
(Counts)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Data addenda[d]																					
United States interregion																					
Total	90	82	145	114	143	157	180	189	214	229	162	151	204	218	235	290	280	236	270	221	262
Information technology	13	19	62	44	67	53	70	73	71	76	84	75	89	87	86	107	100	85	101	83	89
Biotechnology	14	16	22	14	23	41	38	42	31	27	19	20	51	59	75	72	93	74	64	75	76
New materials	4	12	13	18	10	17	26	23	25	18	18	7	15	22	12	17	10	9	16	9	13
Aerospace and defense	11	3	5	5	9	3	5	5	6	16	17	18	22	15	12	17	15	11	21	5	5
Automotive	8	1	4	5	4	10	11	13	27	27	2	1	0	5	8	10	14	12	12	17	27
Chemicals (nonbiotechnology)	21	15	17	13	12	17	7	14	29	36	16	21	12	22	23	28	13	24	33	14	19
Other	19	16	22	15	18	16	23	19	25	29	6	9	15	8	19	39	35	21	23	18	33
Europe interregion																					
Total	60	63	91	70	105	139	154	161	176	211	141	115	171	187	205	245	224	206	254	165	214
Information technology	11	20	39	22	47	45	64	56	60	66	57	49	68	59	54	69	67	66	86	49	68
Biotechnology	5	9	12	9	14	32	26	33	26	25	20	19	49	49	74	68	86	60	63	57	66
New materials	4	8	9	10	9	16	20	17	17	14	17	5	10	25	7	18	7	11	22	6	8
Aerospace and defense	7	3	4	5	8	6	6	6	8	14	15	13	19	20	17	18	10	16	18	4	3
Automotive	4	2	2	3	4	9	10	7	15	17	2	0	0	4	11	11	10	10	10	18	20
Chemicals (nonbiotechnology)	9	10	12	10	10	13	8	18	26	34	24	20	15	22	24	29	16	23	36	17	22
Other	20	11	13	11	13	18	20	24	24	41	6	9	10	8	18	32	28	20	19	14	27
Japan interregion																					
Total	48	57	79	79	82	94	100	88	92	125	74	72	73	71	75	98	92	60	75	56	60
Information technology	11	15	33	34	47	32	43	23	29	34	41	46	37	39	41	48	44	26	33	30	29
Biotechnology	6	9	15	9	8	24	16	18	8	12	8	2	8	14	13	14	21	15	10	12	8
New materials	0	5	7	12	10	16	17	15	12	10	9	5	10	5	3	8	1	3	11	3	6
Aerospace and defense	6	2	0	2	0	0	1	0	0	4	1	6	2	0	0	3	1	1	1	1	2
Automotive	5	3	3	3	1	6	10	11	16	28	1	1	0	4	6	5	5	2	7	5	8
Chemicals (nonbiotechnology)	12	9	9	11	7	11	5	17	16	25	11	8	9	8	7	6	6	8	4	3	2
Other	8	14	12	8	9	5	8	4	11	12	3	4	7	1	5	14	14	5	9	2	5

[a]The counts for total international strategic technology alliances are the sum of 'across regions' and 'within regions' for the United States, Europe, and Japan.

[b]Totals for alliances 'across regions' include all interregional alliances, which are alliances formed by companies from different countries/regions (U.S., Europe, Japan).

[c]Totals for alliances 'within regions' include all intraregional alliances, which are alliances formed by companies from the same country (U.S., Japan) or region (Europe).

[d]Counts of these interregional strategic technology alliances are included in the totals for across regions listed above. For example, the United States interregion totals are the sum of United States-Europe, United States-Japan, and United States-others.

NOTE: Data are annual counts of new international strategic technology alliances.

SOURCE: J. Hagedoorn, Cooperative Agreements and Technology Indicators (CATI) database, Maastricht Economic Research Institute on Innovation and Technology (MERIT), unpublished tabulations (Maastricht, The Netherlands, 2001).