

Who Invents IT?

An Analysis of Women's Participation
in Information Technology Patenting



PREPARED BY

Catherine Ashcraft, Ph.D.
National Center for Women & Information Technology (NCWIT)

Anthony Breitzman, Ph.D.
1790 Analytics, LLC

Who Invents IT?

An Analysis of Women's Participation
in Information Technology Patenting

TABLE OF CONTENTS

Section	Page
I. Introduction	3
II. Summary of Findings	4
III. Methodology	
A. Procedure for Patent-Gender Matching	6
B. Procedure for Assigning Inventorship on Multiple-Inventor Patents	8
IV. Findings	
A. Gendered IT Patenting Rates	9
B. Trends in Female Patenting Patterns Over Time	12
C. Gendered Patenting Rates for IT Subcategories	13
D. Gendered and Citation Patterns	18
C. Organizational Differences	19
V. Conclusion	21

I. INTRODUCTION

Why Study Female IT Patenting Rates?

This report examines the rates at which women have been patenting in information technology (IT) and how these rates have evolved over the past 20 years. It also identifies how these rates differ across IT industry sub-categories and across specific organizations.

While a number of studies have documented the underrepresentation of women in IT professions, no studies have investigated gendered patterns in IT patenting rates. This is especially problematic because patenting is an important measure of innovation and influence in information technology. As such, examining women's IT patenting rates is important for helping us understand women's involvement in the recognized and rewarded aspects of IT innovation, research and development. Documenting these trends also can provide a benchmark against which to measure future efforts to increase women's patenting activities. In addition, identifying differences in women's patenting across industry subcategories and across specific organizations is important for uncovering potential areas for future research – research into “what works” in those companies that may have higher rates of patenting for women.

Toward this end, the National Center for Women & Information Technology engaged 1790 Analytics in analyzing patent records from 1985-2005. Research questions included the following:

- ▶ What are the overall rates of IT patenting for males, females, and mixed-gender collaborations?
- ▶ How have these rates changed over the past two decades (from 1980-2005)?
- ▶ Are women-invented IT patents increasing at a rate that is slower, faster, or equivalent to overall increases in IT patenting?
- ▶ At what rates are male, female, and mixed-gender patents cited?
- ▶ How do patenting rates differ across IT industry subcategories? (e.g. communications and telecommunications, computer hardware, computer software, semiconductors)
- ▶ How do patenting rates differ across specific companies or organizations?

II. SUMMARY OF FINDINGS

- ▶ From 1980-2005, approximately 9 percent of U.S.-invented IT patents have at least one female inventor. During the same time period, approximately 6.5 percent of the Japanese-invented IT patents have at least one female inventor.
- ▶ Since many patents with one female inventor also have multiple male inventors, only a fraction of the patent can be counted as female. When this is taken into account, the overall percentage of female U.S.-invented patents drops to 4.7 percent, while the Japanese rate drops to 3.1 percent.
- ▶ Although the overall rate of female participation in IT patents is relatively low, some trends are promising. In 2005, women accounted for 6.1 percent of U.S. -invented patents, up from 1.7 percent in 1980 (when counted fractionally). In that same year, women accounted for 3.5% percent of Japanese-invented patents, up from 1.2 percent in 1980. This is a particularly noteworthy increase in women's patenting efforts since the percentage of women employed in IT has remained relatively flat over the past twenty years, even declined somewhat—from 32 percent in 1983 to 27 percent in 2005 (with a high of 36 percent in 1990-1991) . Although both the U.S. and Japanese rates plateaued around 1993-94, U.S. rates began to climb rather steeply in 1999, while the Japanese rate remained relatively flat.
- ▶ Patenting rates were similar across industry subcategories, with rates of approximately 9 percent when considering patents with at least one female inventor, and about 6 percent when counted fractionally. Japanese patenting rates were also similar across categories with women participating in 6 to 8 percent of the patents in most categories and between 3 and 3.6 percent when counted fractionally.
- ▶ An exception was in the Computer Software subcategory, where women participate in roughly 15 percent of recent patents and fractionally produce approximately 8 percent of this category. The Japanese-invented IT patents follow the same pattern, with women participating in 10.5 percent of the software patents and fractionally producing 5.6 percent of the category.
- ▶ Patenting in all IT sub-categories grew substantially over the 26-year period, but U.S. female patenting grew even more dramatically. For example, overall U.S. IT patenting grew from 32,000+ patents in the period from 1980–1985 to 176,000+ patents in the period 2000–2005. This is a five-fold increase (also called a growth multiple). For the same period, U.S. female IT patenting grew from 707 fractional patents to more than 10,000 (a 14-fold increase). These growth multiples also are noteworthy, because, as mentioned earlier, the percentage of women employed in IT remained relatively flat, declining slightly, during this same time period.

Who Invents IT?

An Analysis of Women's Participation
in Information Technology Patenting

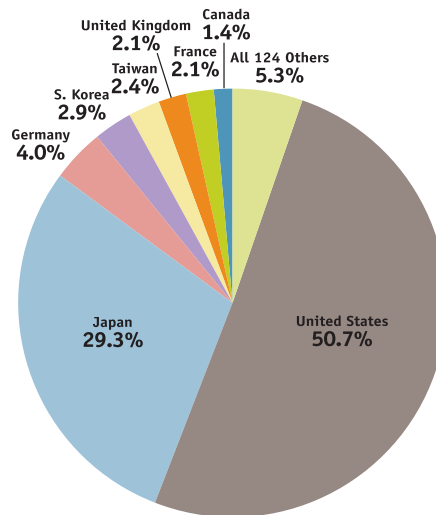
- ▶ U.S. female patenting grew most dramatically in the Computer Software category. From 1980-1985, there were only 49 U.S. female-invented fractional software patents; but from 2000-2005, that number increased to over 2,200 patents — a 45-fold increase. Although Japanese females have a lower share of IT patenting than their U.S. counterparts, Japanese females have had larger growth in actual numbers of patents.
- ▶ U.S. information technology patents tend to be cited more often than Japanese information technology patents. Within the U.S. set, mixed-gender teams produced the most frequently cited patents—with citation rates that were 26 to 42 percent higher than the norm. Female-only teams had the lowest citation impact, followed by patents from male only teams.
- ▶ Female patenting rates differ widely from one organization to another. In some organizations the number of patents with at least one female inventor was 5 percent, while in other organizations it was as high as 30 percent.
- ▶ A number of companies have produced large increases in female rates of patenting. For example, 20 years ago, several companies had no female inventors; but by 2005, approximately 25 percent of these companies' patents had at least one female inventor.

III. METHODOLOGY

The National Center for Women & Information Technology commissioned 1790 Analytics to research U.S. information technology patents granted by the U.S. patent office between 1980-2005. For purposes of this study, information technology (IT) patents were defined as any patent that fit into the following categories: Communications and Telecommunications, Computer Hardware, Computer Peripherals, Computer Software, Semiconductors/Solid State Devices. To identify IT patents, 1790 Analytics used a well defined set of patent filters (refined during previous consulting engagements) that consisted of patent classifications and keywords for identifying patents in these categories.

Included patents were limited to those granted by the U.S. patent office because the U. S. is one of the largest consumers of information technology products. As a result, any company wishing to sell these products in the United States would need to obtain a U.S. patent. Figure 1 shows the distribution of U.S. information technology patents by inventor country. Roughly 80% of all IT U.S. patents are produced by U.S. and Japanese inventors. As such, this analysis is also restricted to U.S. and Japanese invented U.S. IT patents.

Figure 1 Top Inventor Countries: Percentage of Patents by Inventor Country
 US Information Technology Patents Granted 1980-2005



Procedure for Patent-Gender Matching

Because the patent office does not record the gender of the inventors for each patent, 1790 Analytics used the names given on the patents as indicators of gender. Figure 2 lists the top 150 names that appear in U.S. invented information technology patents. A majority of these names are

gender-specific (e.g. John, Robert, Susan) so one could easily scan this list and assign gender to each name. However, a much more precise and automated process was needed for identifying thousands of names that rank lower than the 150 shown in Figure 2. To do so, 1790 Analytics used the Social Security Administration (SSA) database which maintains a list of the top 1000 most popular baby names each year from 1900-2005. This established a list of 4,000+ unique names that could be matched to the IT patent database.

Figure 2 Top 150 First names Appearing in US Invented Information Technology Patents 1980-2005

Rank#	Patents	Match Name	Sex	Multiplier	Rank#	Patents	Match Name	Sex	Multiplier	Rank#	Patents	Match Name	Sex	Multiplier
1	33808	John	M		51	2535	Jack	M		101	1206	Kurt	M	
2	33012	David	M		52	2513	Frederick	M		102	1197	Alfred	M	
3	32049	Robert	M		53	2460	Jonathan	M		103	1174	Vincent	M	
4	27276	James	M		54	2404	Howard	M		104	1156	Stuart	M	
5	27241	Michael	M		55	2352	Arthur	M		105	1148	Randy	M	
6	22256	William	M		56	2278	Wayne	M		106	1100	Chris	M	(.86 M; .14F)
7	19963	Richard	M		57	2244	Henry	M		107	1076	Brent	M	
8	16738	Thomas	M		58	2186	Louis	M		108	1050	Herbert	M	
9	15136	Mark	M		59	2178	Alexander	M		109	1041	Edwin	M	
10	13169	Paul	M		60	2095	Albert	M		110	1031	Ravi	M	
11	11014	Joseph	M		61	2076	Jerry	M		111	1023	Glen	M	
12	10740	Steven	M		62	2010	Dale	M		112	994	Bryan	M	
13	10268	Charles	M		63	1933	Eugene	M		113	994	Rodney	M	
14	9251	Stephen	M		64	1828	Jay	M		114	952	Jeff	M	
15	9000	Daniel	M		65	1800	Barry	M		115	937	Greg	M	
16	8903	Donald	M		66	1798	Glenn	M		116	935	Allan	M	
17	8878	Peter	M		67	1793	Todd	M		117	932	Susan	F	
18	8203	Jeffrey	M		68	1771	Leonard	M		118	926	Curtis	M	
19	7801	Kenneth	M		69	1764	Steve	M		119	904	Neil	M	
20	7298	George	M		70	1750	Harold	M		120	903	Don	M	
21	7104	Edward	M		71	1717	Theodore	M		121	889	Guy	M	
22	6746	Gary	M		72	1690	Ralph	M		122	883	Jim	M	
23	6671	Ronald	M		73	1642	Russell	M		123	868	Mike	M	
24	6379	Scott	M		74	1613	Stanley	M		124	856	Geoffrey	M	
25	6124	Brian	M		75	1604	Terry	M	(.82M; .18F)	125	849	Kent	M	
26	6085	Christopher	M		76	1596	Roy	M		126	833	Tom	M	
27	5691	Eric	M		77	1582	Nicholas	M		127	808	Adam	M	
28	5652	Kevin	M		78	1574	Harry	M		128	787	Ian	M	
29	5398	Gregory	M		79	1563	Karl	M		129	785	Vladimir	M	
30	5240	Douglas	M		80	1558	Victor	M		130	777	Marvin	M	
31	5172	Timothy	M		81	1528	Allen	M		131	769	Simon	M	
32	5012	Andrew	M		82	1512	Norman	M		132	764	Jun	M	
33	4776	Bruce	M		83	1468	Dean	M		133	732	Aaron	M	
34	4517	Alan	M		84	1462	Samuel	M		134	727	Ernest	M	
35	4389	Frank	M		85	1461	Gordon	M		135	725	Derek	M	
36	3863	Anthony	M		86	1434	Lee	M	(.78M; .18F)	136	722	Jose	M	
37	3546	Roger	M		87	1430	Joel	M		137	718	Karen	F	
38	3523	Larry	M		88	1425	Jon	M		138	716	Alex	M	
39	3388	Lawrence	M		89	1424	Fred	M		139	715	Joe	M	
40	3366	Dennis	M		90	1422	Dan	M		140	713	Clifford	M	
41	3264	Philip	M		91	1379	Warren	M		141	710	Mary	F	
42	3198	Patrick	M		92	1379	Francis	M		142	697	Ken	M	
43	3176	Raymond	M		93	1328	Randall	M		143	680	Gene	M	
44	2953	Carl	M		94	1306	Bradley	M		144	676	Sanjay	M	
45	2915	Matthew	M		95	1289	Bernard	M		145	670	Ray	M	
46	2811	Gerald	M		96	1283	Marc	M		146	657	Leo	M	
47	2792	Keith	M		97	1267	Benjamin	M		147	653	Leon	M	
48	2668	Craig	M		98	1241	Jerome	M		4148	630	Carlos	M	
49	2601	Walter	M		99	1238	Jason	M		149	620	Jan	F	(.26M; .74F)
50	2561	Martin	M		100	1222	Phillip	M		150	616	Erik	M	

Gender-ambiguous names (e.g. Terry, Lee, Chris, and Jan), required a number of other steps to determine gender. First, whenever possible, both the first name and the middle name were used. For example, if the name is Terry James Smith, the gender is assigned as male, while Terry Louise Smith would be assigned as female. This is not always possible, however, because often only a middle initial is listed on the patent. In this case, 1790 Analytics used the SSA database count of how many boys and girls are given a name. For example, this database, indicates that 82% of people named Terry are male and 18% are female. This number is indicated in the “Multiplier” column in Figure 2 and is used to decide what percentage of patents to count as “male”

and “female.” For example, 82% of the time Terry is a male name and 18% of the time it is female. Thus if Terry is listed as a first inventor 749 times, 82% of the 749 or 614 patents are assigned to the male count and 18% or 135 to the female count.

To augment the SSA list, a set of 200+ first names were identified via a web search for names that are prominent on several hundred patents but that are not typical American names. For example, the name Sanjay can be found on 676 U.S. invented IT patents but is not on the SSA list. To identify gender for these names 1790 Analytics identified websites of professors on the world wide web via a search such as (“Sanjay”) and (“professor” or “cv” or “department” or “resume”)—since university professors often include a photograph on their websites. When possible, a set of 10 or more websites were identified in order to create a multiplier (as in Figure 2) for names that could go with either gender. Gender-matching for Japanese invented patents followed a similar process, starting with a database of Japanese baby names and augmenting that with a similar web search.

In total, 92% of the U.S. invented patents had at least one gender matchable name and 93% of the Japanese invented patent had at least one gender matchable name. Most patents have more than one inventor, however. The typical U.S. invented IT patent has 2.22 U.S. inventors of which 1.88 or 85% were matched. The typical Japanese invented IT patent has 2.55 Japanese inventors of which 2.13 or 84% were matched. Roughly 15% of patents could not be matched because these names are either missing, obscure, or because only initials are given. The unmatched portion consists of approximately 13,000 names, most of which appear on fewer than 10 patents, leaving roughly 62,000 patents unmatched. To put this in perspective, this is a smaller number of patents than the number invented by the top two inventor names alone—John and David. As such, adding ten, a hundred, or even thousands of names to the database would not significantly change the overall results.

Procedure for Assigning Inventorship on Multiple-Inventor Patents

When multiple inventors produce a patent, accurately crediting the inventorship of that patent becomes difficult. Sometimes companies list the primary inventor first; however, many companies list all inventors alphabetically. As a result, identifying the key researcher and the relative contributions of each author is impossible. Despite this difficulty, many analysts in the industry do assign the patent to the first inventor. Because of this precedent, this report presents results where the gender of the first inventor determines whether the patent is counted as “male” or “female” invented.

To complement this analysis, however, this report also presents results that fractionally attribute inventorship. For example, suppose a patent lists Susan, Lisa, and John as inventors. In this case 2/3 of the patent is assigned to the female count and 1/3 to the male count. If instead it is invented by Terry, John, and Lisa, the multiplier from Figure 2 for Terry is used. This, then, assigns $(0.82 \cdot (1/3) + 1/3) = 0.61$ to the male count and $(0.18 \cdot (1/3) + 1/3) = 0.39$ to the female count. The next section first presents the results by first inventor and then by fractional attribution of inventorship.

IV. FINDINGS

Gendered IT Patenting Rates (by First Inventor and by Fractional Attribution of Inventorship)

When assigning inventorship by first inventor (excluding the unmatched patents), 96% of the matched first inventors on U.S. invented patents are male and 4% of the matched first inventors are female (see Figure 3). The Japanese invented patents follow a similar pattern, albeit with slightly lower percentages for female invented patents. When excluding unmatched patents, 97.1% are male invented patents with 2.9% female invented patents (see Figure 4).

Figure 3 Number and Percent of First Inventors by Gender
 U.S. Invented Information Technology Patents 1980-2005
 (Excluding Unmatched; Dual Gender Names Fractionally Attributed)

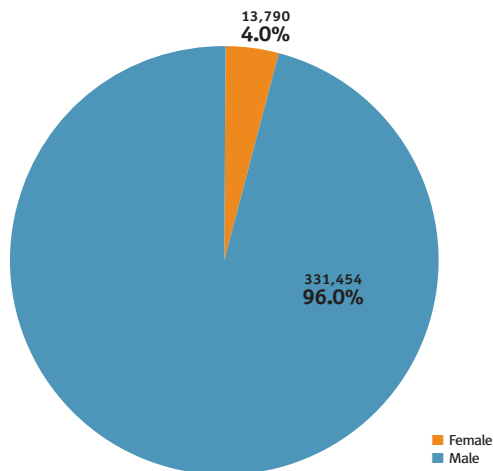
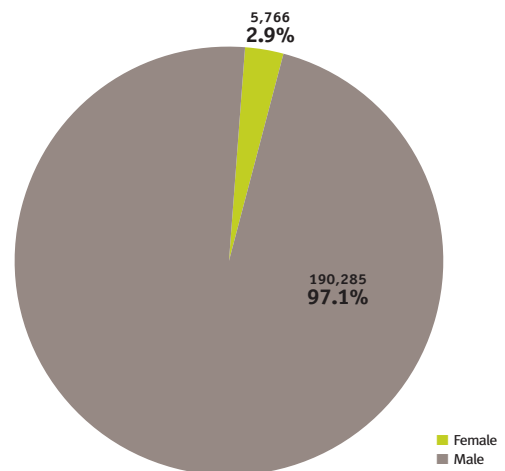


Figure 4 Number and Percent of First Inventors by Gender
 Japanese Invented Information Technology Patents 1980-2005
 (Excluding Unmatched; Dual Gender Names Fractionally Attributed)



When fractionally attributing inventorship amongst multiple inventors, the numbers shift just slightly. Before turning to these results, we briefly consider how many U.S. invented IT patents are produced by teams of multiple inventors and the gender makeup of these collaborative teams (see Figure 5). Roughly 45% of patents are produced by a single male inventor, while 1.4% are produced by a single female inventor. This, then, leaves 54%

Who Invents IT?

An Analysis of Women's Participation
in Information Technology Patenting

of patents being produced by multiple inventors. The most frequent team makeup consists of two male male inventors — accounting for roughly 26% of patents. About 9% of patents have at least one female inventor, but most of these are also on teams with at least one male.

Figure 5 Collaboration Statistics for U.S. Invented Information Technology Patents 1980-2005
(Counts of Gender Matched US Coinvented Patents)

# of Male Coinventors	# of Female Coinventors	# of Patents	Percentage of Total
1	0	171618	45.21%
2	0	98121	25.85%
3+	0	76439	20.14%
1	1	8777	2.31%
3+	1	8501	2.24%
2	1	7113	1.87%
0	1	5370	1.41%
3+	2	1259	0.33%
1	2	731	0.19%
2	2	636	0.17%
0	2	379	0.10%
3+	3+	372	0.10%
2	3+	142	0.04%
1	3+	87	0.02%
0	3+	74	0.02%
Total		379619	100.00%

Figure 6 Collaboration Statistics for Japanese Invented U.S. Information Technology Patents 1980-2005
(Counts of Gender Matched JP Coinvented Patents)

# of Male Coinventors	# of Female Coinventors	# of Patents	Percentage of Total
1	0	91226	41.65%
3+	0	62860	28.70%
2	0	51194	23.38%
3+	1	4890	2.23%
1	1	2900	1.32%
2	1	2811	1.28%
0	1	2239	1.02%
3+	2	410	0.19%
2	2	190	0.09%
1	2	153	0.07%
0	2	59	0.03%
3+	3+	46	0.02%
1	3+	12	0.01%
0	3+	8	0.00%
2	3+	6	0.00%
Total		219004	100.00%

Figure 6 shows the parallel collaboration team statistics for Japanese invented U.S. IT patents. Here again the results are similar to those for U.S. inventors, but with slightly lower female participation among Japanese invented patents. Notice that women participated in about 6% of the Japanese invented IT patents (versus about 9% for U.S. invented patents). Although females participated in 6% of the Japanese invented patents, only 1% of these patents contain no male participation.

When accounting for these mixed-gender collaboration teams (through fractional attribution as discussed in the methods section), the numbers shift just slightly from the first inventor analysis, with 4.7% of U.S. invented

Who Invents IT?

An Analysis of Women's Participation in Information Technology Patenting

patents being female invented and 95.3% male invented (see Figure 7). This compares with 4% female and 96% male for the first inventor count. Likewise, the Japanese female numbers increase slightly to 3.1% of Japanese invented IT patents being produced by female inventors and 96.9% by male inventors (see Figure 8).

Figure 7 Fractionally Attributed Inventors by Gender
U.S. Invented Information Technology Patents 1980-2005

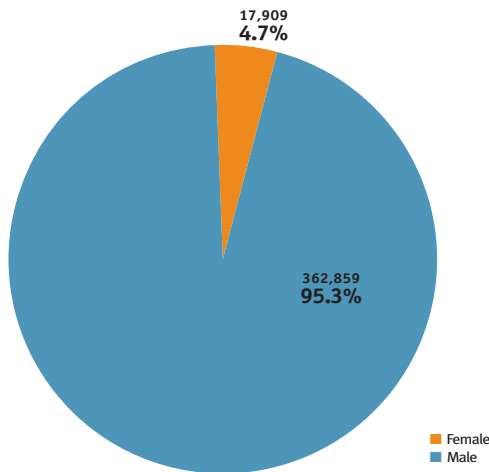


Figure 8 Fractionally Attributed Inventors by Gender
Japanese Invented Information Technology Patents 1980-2005

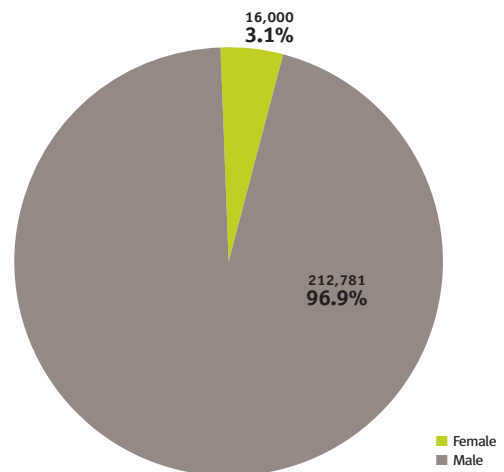
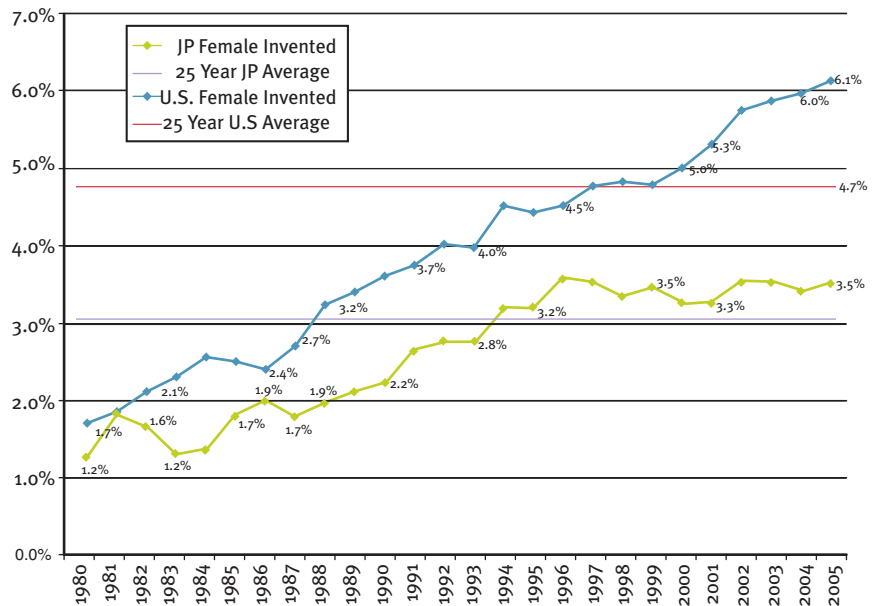


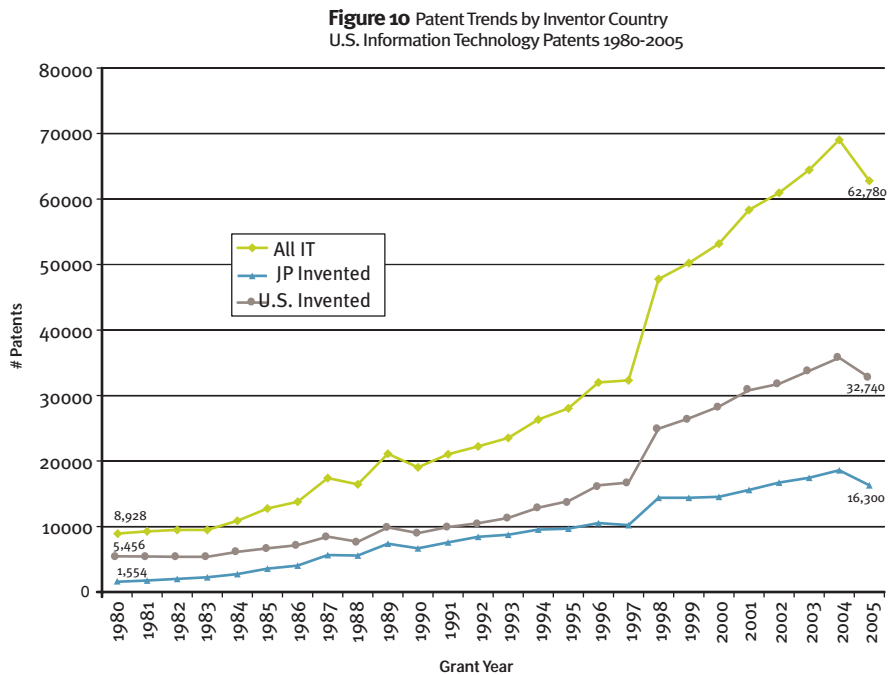
Figure 9 Percent of Female Invented Patents over Time
U.S. Invented Information Technology Patents- Fractional Counting



Trends in Female Patenting Patterns over Time

Although overall patenting rates for women have been and remain quite low, the picture improves when we look at trends over time. While women account for only 4.7% of total U.S. invented patents (when counting fractionally), that percentage has increased steadily from 1.7% in 1980 to 6.1% in 2005— more than a 3.5 fold increase (see Figure 9). This is particularly noteworthy because, during the past twenty years, the percentage of women employed in IT has remained relatively flat, even declined somewhat from 32% in 1983 to 27% in 2005 (with a high of 37% in 1990-1991).¹

This is perhaps even more promising when considering the growth in IT patenting overall. When looking at trends over the 26-year period, overall U.S. invented IT patenting has increased approximately six-fold, growing from roughly 5,500 patents in 1980 to 32,000 patents annually in recent years (Figure 10). The combination of the 3.5-fold increase in the percentage of female invented patents with the 6-fold increase in overall U.S. invented IT patenting translates to a roughly 20-fold increase in U.S. invented female IT patenting for the period. In raw numbers, this translates to an increase from 87 U.S. invented female IT patents in 1980 to more than 1800 in 2005.



¹ Bureau of Labor Statistics *Current Population Survey, 1983-2005 Annual Averages*

While Japanese women have lower rates of IT patenting, they also have increased their inventorship in IT nearly 3 fold, from 1.2% to 3.5% (see Figure 9). Overall Japanese invented U.S. patents have also grown faster over the same period from 1,554 in 1980 to 16,300 in 2005, for a nearly 11-fold increase (see Figure 10). When combining the 3-fold increase in female patenting with the 11-fold increase in overall Japanese invented patenting, this comprises an approximate 30-fold increase in raw number of Japanese invented female patents — from 17 IT patents in 1980 to 539 in 2005.

Interestingly, both U.S. and Japanese rates plateaued around 1993-94. In 1999, however, U.S. women inventors began making rather steep gains, while Japanese female inventorship remained relatively flat over the last 10 years.

Gendered Patenting Rates for IT Subcategories

In the next section, we explore how women's patenting rates vary across IT subcategories. In most subcategories, roughly 90% of the patents are produced by males, 1.5% by females and about 7% by teams of males and females (see Figure 11). The exception is computer software, where approximately 86% of the patents are produced by only males, 2.5% by only females and 11% by teams of males and females.

Figure 11 Male and Female Collaboration Statistics by Category

U.S. Invented U.S. Information Technology Patents

Sub-Category	#w/ Matchable	Female Only		Mixed Gender		Male Only	
		Count	%	Count	%	Count	%
Communications	104,309	1,468	1.4%	6,088	5.8%	96,753	92.8%
Computer Hardware	79,192	991	1.3%	5,385	6.8%	72,816	91.9%
Computer Peripherals	35,005	524	1.5%	2,435	7.0%	32,046	91.5%
Computer Software	51,804	1,308	2.5%	5,852	11.3%	44,644	86.2%
Semiconductors/Solid-State Devices	109,309	1,532	1.4%	7,858	7.2%	99,919	91.4%
Combined	379,619	5,823	1.5%	27,618	7.3%	346,178	91.2%

Japanese Invented U.S. Information Technology Patents

Sub-Category	#w/ Matchable	Female Only		Mixed Gender		Male Only	
		Count	%	Count	%	Count	%
Communications	46,705	513	1.1%	1,890	4.0%	44,302	94.9%
Computer Hardware	36,470	416	1.1%	1,522	4.2%	34,532	94.7%
Computer Peripherals	53,113	346	0.7%	3,155	5.9%	49,612	93.4%
Computer Software	18,558	390	2.1%	1,394	7.5%	16,774	90.4%
Semiconductors/Solid-State Devices	64,158	641	1.0%	3,457	5.4%	60,060	93.6%
Combined	219,004	2,306	1.1%	11,418	5.2%	205,280	93.7%

Who Invents IT?

An Analysis of Women's Participation
in Information Technology Patenting

Figure 12 displays the collaboration statistics in more detail, illustrating that very few teams of women patent without any male members. In contrast, 25-30% of the patents in each category are produced by teams of three or more men.

Figure 12 Detailed Male and Female Collaboration Statistics by Category

Subcategory	# of Male Coinventors	# of Female Coinventors	# of U.S. Invented Patents	% of Total	# of JP Invented Patents	% of Total
Communications	1	0	50,325	48.25	21,105	45.19
	2	0	26,805	25.70	11,045	23.65
	3+	0	19,623	18.81	12,152	26.02
	1	1	2,042	1.96	552	1.18
	3+	1	1,853	1.78	750	1.61
	2	1	1,517	1.45	483	1.03
	0	1	1,363	1.31	508	1.09
	3+	2	277	0.27	38	0.08
	1	2	159	0.15	32	0.07
	2	2	110	0.11	28	0.06
	0	2	97	0.09	5	0.01
	3+	3+	84	0.08	3	0.01
	2	3+	28	0.03	2	0.00
	1	3+	18	0.02	2	0.00
	0	3+	8	0.01	0	0.00
Computer Hardware	1	0	33,372	42.14	16,012	43.90
	2	0	20,536	25.93	8,482	23.26
	3+	0	18,908	23.88	10,038	27.52
	3+	1	1,902	2.40	577	1.58
	1	1	1,586	2.00	454	1.24
	2	1	1,351	1.71	421	1.15
	0	1	918	1.16	409	1.12
	3+	2	235	0.30	33	0.09
	2	2	115	0.15	18	0.05
	1	2	104	0.13	7	0.02
	3+	3+	70	0.09	1	0.00
	0	2	58	0.07	5	0.01
	0	3+	15	0.02	2	0.01
	2	3+	12	0.02	1	0.00
	1	3+	10	0.01	0	0.00
Computer Peripherals	1	0	15,516	44.33	19,843	37.36
	2	0	8,846	25.27	12,284	23.13
	3+	0	7,684	21.95	17,485	32.92
	3+	1	835	2.39	1,551	2.92
	1	1	771	2.20	636	1.20
	2	1	587	1.68	698	1.31
	0	1	489	1.40	335	0.63
	3+	2	89	0.25	152	0.29
	1	2	60	0.17	36	0.07
	2	2	51	0.15	56	0.11
	0	2	25	0.07	10	0.02
	3+	3+	24	0.07	23	0.04
	2	3+	15	0.04	1	0.00
	0	3+	10	0.03	1	0.00
	1	3+	3	0.01	2	0.00
Computer Software	1	0	21,389	41.29	8,188	44.12
	2	0	12,591	24.31	3,990	21.50
	3+	0	10,664	20.59	4,596	24.77
	1	1	1,734	3.35	383	2.06
	3+	1	1,675	3.23	504	2.72
	2	1	1,484	2.86	336	1.81
	0	1	1,157	2.23	365	1.97
	3+	2	312	0.60	67	0.36
	1	2	200	0.39	31	0.17
	2	2	177	0.34	49	0.26
	3+	3+	164	0.32	15	0.08
	0	2	116	0.22	21	0.11
	2	3+	68	0.13	1	0.01
	1	3+	38	0.07	8	0.04
	0	3+	35	0.07	4	0.02
Semiconductors/Solid-State Devices Combined	1	0	49,017	44.84	25,735	40.11
	2	0	28,782	26.33	15,178	23.66
	3+	0	22,120	20.24	19,147	29.84
	1	1	2,517	2.30	865	1.35
	3+	1	2,384	2.18	1,532	2.39
	2	1	2,121	1.94	842	1.31
	0	1	1,420	1.30	622	0.97
	3+	2	379	0.35	133	0.21
	1	2	202	0.18	36	0.06
	2	2	175	0.16	44	0.07
	0	2	103	0.09	18	0.03
	3+	3+	41	0.04	4	0.01
	2	3+	21	0.02	1	0.00
	1	3+	18	0.02	0	0.00
	0	3+	9	0.01	1	0.00

Who Invents IT?

An Analysis of Women's Participation
in Information Technology Patenting

For the Japanese invented patents, the patterns are similar except that the female participation is a few percentage points lower. In Japan, women also participate more in computer software patents than in the other categories, but still not to the same extent as American women.

To see how male-female collaboration has changed over time within each subcategory, consider Figure 13, which examines the collaboration statistics over two 6-year time periods (1980-85 and 2000-05). In the last 20 years, both female-only and female-male teams have increased their rate of invention. Again, the largest change has been in software, where female only teams have increased their patenting rate from 1.59% to 2.76%. Similarly, teams consisting of at least one female and at least one male have increased their rate of software patenting from 3.8% to 12.27%. As a result, the percentage of software patents that are from male only teams has dropped from about 95% of all U.S. invented software patents to 85% of all U.S. invented software patents. In other categories the percentage of all male U.S. invented patents has dropped about 8%. For Japanese invented patents the results are similar, but less dramatic.

Figure 13 Collaboration Statistics for Two Time Periods

U.S. Invented U.S. Information Technology Patents

Sub-Category	# Matchable Patents			% Female Only			% Mixed Gender Team			% Male Only		
	1980-85	2000-05	Growth	1980-85	2000-05	Difference	1980-85	2000-05	Difference	1980-85	2000-05	Difference
Communications	10305	44470	332%	0.73%	1.85%	1.12%	1.37%	7.34%	5.98%	97.90%	90.81%	-7.09%
Computer Hardware	5114	40298	688%	0.57%	1.46%	0.89%	2.39%	7.86%	5.47%	97.05%	90.68%	-6.37%
Computer Peripherals	4564	13237	190%	0.59%	1.75%	1.15%	1.67%	9.78%	8.11%	97.74%	88.48%	-9.26%
Computer Software	1449	28694	1880%	1.59%	2.76%	1.17%	3.80%	12.27%	8.47%	94.62%	84.98%	-9.64%
Semiconductors/Solid-State Devices	10862	48987	351%	1.07%	1.61%	0.54%	2.15%	9.47%	7.31%	96.78%	88.92%	-7.86%
Combined	32294	175686	444%	0.84%	1.83%	1.00%	1.94%	9.04%	7.10%	97.22%	89.13%	-8.09%

Japanese Invented U.S. Information Technology Patents

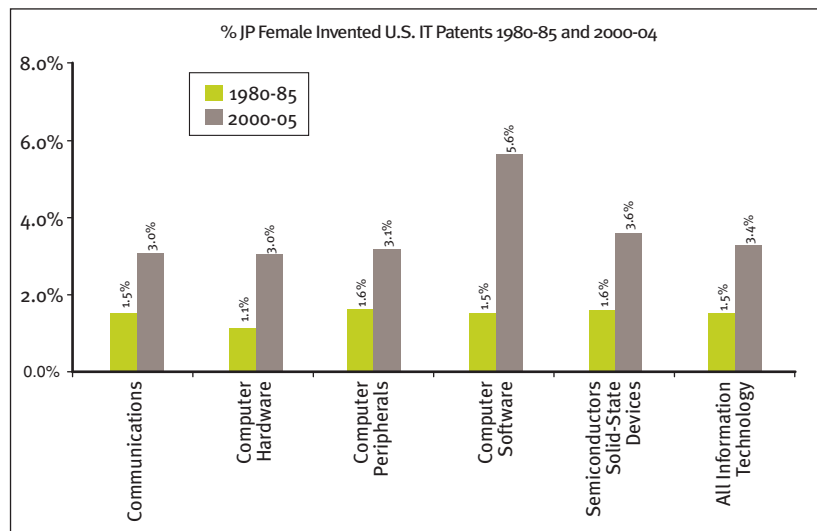
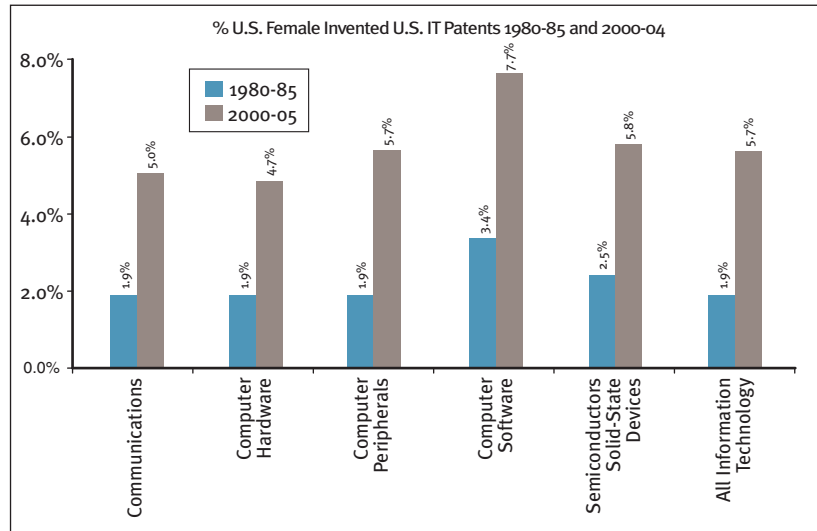
Sub-Category	# Matchable Patents			% Female Only			% Mixed Gender Team			% Male Only		
	1980-85	2000-05	Growth	1980-85	2000-05	Difference	1980-85	2000-05	Difference	1980-85	2000-05	Difference
Communications	3150	18321	482%	0.41%	1.15%	0.74%	2.10%	4.46%	2.37%	97.49%	94.38%	-3.11%
Computer Hardware	1770	16040	806%	0.23%	1.15%	0.92%	2.32%	4.78%	2.46%	97.46%	94.08%	-3.38%
Computer Peripherals	3713	20558	454%	0.46%	0.76%	0.31%	2.26%	7.02%	4.76%	97.28%	92.21%	-5.07%
Computer Software	524	8353	1494%	0.57%	2.36%	1.79%	2.29%	8.22%	5.93%	97.14%	89.42%	-7.72%
Semiconductors/Solid-State Devices	3631	29186	704%	0.58%	1.14%	0.56%	2.12%	6.32%	4.20%	97.30%	92.54%	-4.76%
Combined	12788	92458	623%	0.45%	1.17%	0.72%	2.19%	6.01%	3.82%	97.36%	92.82%	-4.54%

Figure 13, however, does not account for the varying numbers of males and females on different collaboration teams. As noted earlier, the majority of these teams had multiple male members and only one female member. To get a better understanding of the contribution of each gender, inventorship is again computed fractionally (as discussed in the methods section). From this perspective, we see that U.S. women are responsible for about 6% of the patents on average, up from 2% twenty years ago. (See Figure 14). The changes for software patents are again notable, with a change from 3.4% in the first period to 7.7% in the latter period. The Japanese results are again similar but with less dramatic increases.

Who Invents IT?

An Analysis of Women's Participation in Information Technology Patenting

Figure 14 % of Female Invented U.S. Information Technology Patents (Fractional Counts 1980-85 and 2000-05)



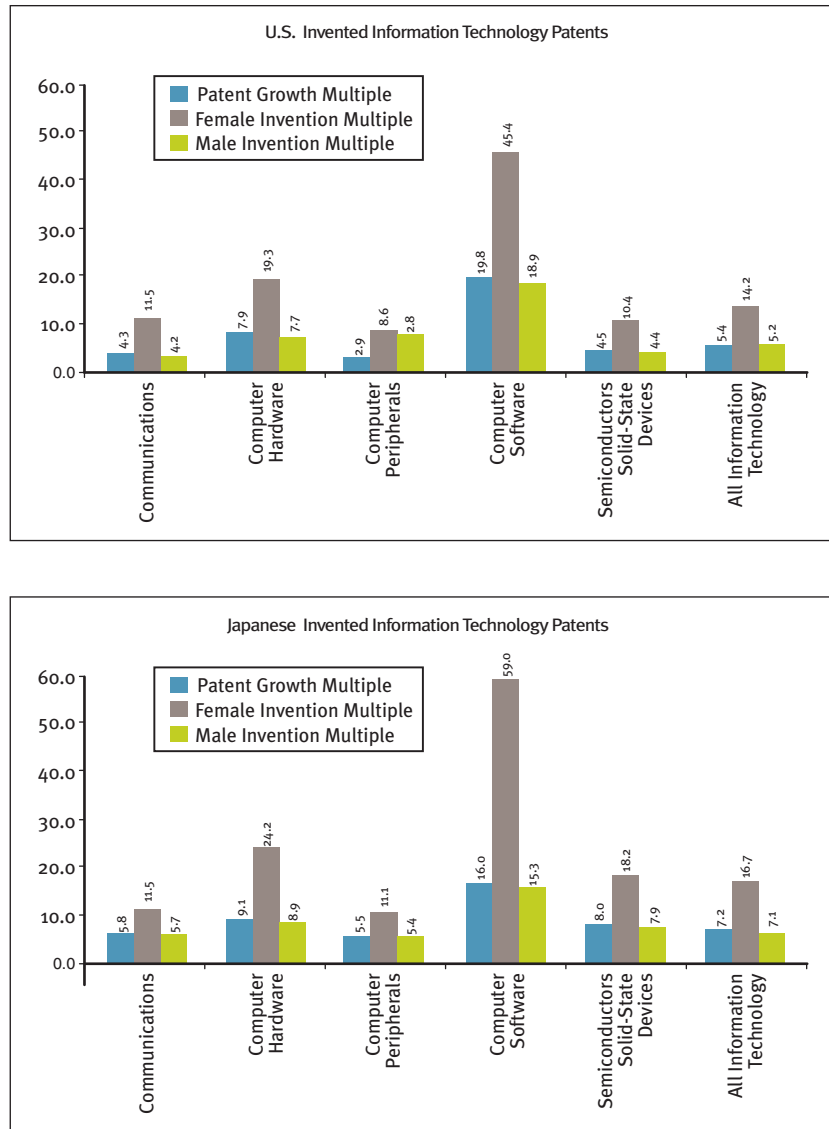
Of course while female patenting rates were increasing, overall patenting rates were also increasing in each IT subcategory. Considering female patenting increases within this context further illuminates the extent of the gains made by women. For example, 10,366 U.S. invented Communications patents were granted from 1980-85, compared to 44,598 granted from 2000-05. This is a 4.3 fold increase (also called a growth multiple) in the total number of communication patents. At the same time the number of U.S. female invented communications patents showed an 11.5 fold increase from 196 in 1980-85 to 2251 in 2000-05. This is particularly noteworthy when considering that, as mentioned earlier, the percentage of women employed in

Who Invents IT?

An Analysis of Women's Participation
in Information Technology Patenting

IT has remained relatively flat, declining slightly in the past twenty years. Figure 15 shows growth multiples (or “x” fold increases) for each category. In each case, the growth in female patenting has outpaced the growth in patenting overall, as well as the growth rate of male patenting. However, it should be noted that some of the more excessive growth multiples (such as 59 for Japanese female invented software patents) is largely a function of the very small numbers of female invented patents in 1980-85. Still, progress has been made in the last 20 years in both countries.

Figure 15 Growth Multiples Derived from Figure 21 Data
(Increases from 1980-85 and 2000-05)



Gender and Citation Patterns

This section explores the varying citation rates for female invented, male-invented, and mixed-gender invented patents. Highly cited patents (i.e. patents cited by many later patents) tend to contain technological information of particular importance and are one indication of innovation excellence. As such, examining the citation rates of female-invented patents is one way of measuring their influence and importance.

The Appendix (www.ncwit.org) contains a list of highly-cited, female-invented patents. The first column is the “cite count” or raw number of citations received by each patent. Problems arise, however, with simply using raw citation counts. First, older patents are likely to be more highly cited since they have had more time to accrue citations. Second, average citation rates differ across technologies. A patent with 10 citations, therefore, may be very highly cited, or not very highly cited, depending on its age and technology.

In order to overcome these two problems, citation counts were normalized by technology and year. The column labeled ‘Expected Cite Count’ in the Appendix shows the average number of citations received by patents from the same year and technology class. Dividing the citation count by the expected count provides the third column, the “citation index.” This is a normalized measure of the impact of a particular patent. For example, the first patent, the Pauline Shuen, patent has a citation index of 3.51 which suggests the patent is cited 3.5 times as often as typical patents of the same age and technology class.

The list in the Appendix contains every patent invented by females, or teams of mostly females, that has a citation index of 1.5 or more (suggesting the patent has at least 50% more citations than expected) and has been cited by at least five later patents. Note, however, that there are some patents from names such as Robin which may or may not be female.

The concept of the citation index can be extended beyond a single patent to a set of patents. In fact, the citation index is better suited to a set of patents since a larger patent set will dilute the effects of any outliers. The citation index for a set of patents consists of the sum of the citations for that set divided by the sum of the expected citation counts, dependent on the age and technology class of each source patent. The citation index is derived in this way so that patent sets of differing sizes with different age profiles can be compared reasonably. Citation indexes are based on the average of all U.S. patents in each technology class invented anywhere in the world (including the U.S., Japan, and all other countries filing patents).

Figure 16 shows citation indices for each subcategory for both U.S. invented and Japanese invented patents. In general, we see that U.S. invented IT patents have a higher citation index than Japanese invented IT patents. All of the U.S. invented patent sets have citation indices exceeding 1.0, suggesting that the U.S. invented IT patents are cited more than average for all U.S. patents invented in other countries of the same age and technology class.

Figure 16 Citation Impact by Gender and information Technology Category

US Invented US Information Technology Patents		Female Only Invented		Male Only Invented		Mixed Gender Team	
Information Technology Category	# Patents 1980-2005	Citation Index	# Patents 1980-2005	Citation Index	# Patents 1980-2005	Citation Index	
Communications	1468	1.10	96753	1.11	6088	1.32	
Computer Hardware	991	1.08	72816	1.18	5385	1.26	
Computer Peripherals	524	1.14	32046	1.27	2435	1.42	
Computer Software	1308	1.08	44644	1.25	5852	1.29	
Semiconductors/Solid-State Devices	1532	1.24	99919	1.21	7858	1.30	

Japanese Invented US Information Technology Patents		Female Only Invented		Male Only Invented		Mixed Gender Team	
Information Technology Category	# Patents 1980-2005	Citation Index	# Patents 1980-2005	Citation Index	# Patents 1980-2005	Citation Index	
Communications	513	0.68	44302	0.76	1890	0.82	
Computer Hardware	416	0.57	34532	0.79	1522	0.73	
Computer Peripherals	346	0.82	49612	0.89	3155	1.07	
Computer Software	390	0.62	16774	0.72	1394	0.68	
Semiconductors/Solid-State Devices	641	0.72	60060	0.87	3457	0.92	

Highest Cited Patent Set
 Second Highest Cited Patent Set
 Third Highest Cited Patent Set

Within the U.S. set, the patents invented by mixed-gender teams—teams consisting of at least one female and at least one male are cited—more often than patents invented by female-only or male-only. One possibility for this finding may be that gender diversity leads to more innovative research and discovery. Another possibility is the size of the relative inventor teams. The female-only teams average only 1.1 inventors per patent, the male-only teams average 1.9 inventors per patent, while the mixed teams average 3.7 inventors per patent. It may be, then, that the more diverse teams and/or the larger teams create more complex inventions, and such complex inventions tend to be more highly cited. More research, however, would be needed to further address this question.

Organizational Differences

This section explores female IT patenting patterns across different organizations by examining the patenting rates of all companies with more than 10 IT patents between 2000-2005. This analysis reveals that female patenting rates differ widely from one organization to another. In small patenting companies (those with less than 100 patents during 2000-2005), female-only patenting rates differed dramatically, ranging from 0% - 33%, while patenting

rates for mixed-gender teams typically ranged from 0%-42%. Roughly 30 of these companies exceeded a patenting rate of 20% for mixed gender teams, but approximately 50 companies had no mixed-gender or female patents. An exception to these patterns again emerged in computer software, where a few small-patenting companies exceeded the typical high-end of the range, with rates from 50-70% of patents being produced by mixed-gender teams.

In general, large patenting companies (those with more than 350 patents during 2000-2005) experienced a narrower range of female patenting but still differed dramatically. In these companies, female-only patenting rates typically ranged from 0%- 5%. The rates of mixed gender teams ranged from approximately 5% - 24%, with only a very few companies falling below the 5% rate.

A number of companies have also produced large increases in female rates of patenting. For example, 20 years ago, several companies had no female inventors, but by 2005, approximately 25% of these company's patents had at least one female inventor. At the same time, however, the percentage of female inventorship in some companies actually decreased with declines of approximately 4-6%, and a high of 25% fewer female or mixed-gender patents.

An interesting pattern also emerged amongst unassigned patents in some subcategories. In Communications, the early independent inventors were mostly men. In recent years, however, almost 10% of the unassigned patents come from female inventors and female-male teams. This is a substantial increase from 1980-85, when nearly 98% of the unassigned communications patents were invented by men only. This raises questions as to whether the ability to work independently and out from under institutional constraints might be one way to foster female invention.

These findings raise a number of additional questions for future research. The patenting data alone tells us little about the reasons for the dramatic differences across organizations. As a result, future research would do well to explore how the demographic makeup and size of a company influences its female patenting rates. For example, do companies with higher female patenting rates also employ larger numbers of women from the start? What other characteristics, if any, do higher female-patenting companies share? Do specific organizational practices and conditions contribute to women's higher patenting rates and if so, in what ways? This additional research is necessary to understand the reasons for the existing variance across companies. The fact that these differences exist, however, does suggest that specific contexts do make a difference and that there is no industry-wide systemic reason for the low level of female patenting overall.

V. CONCLUSION

The National Center for Women & Information Technology, with funding from its Workforce Alliance, commissioned this study to provide insight into the current state of affairs regarding the rate and progress of female patenting. The bad news is that the overall rate of patenting by females in IT is relatively low in the U.S. and even lower in Japan. The good news is that the trends are positive with a growing share of female inventorship in a fast-growing field. The news is even better in some subcategories of IT such as software, and to a lesser extent in hardware.

Likewise, the finding that mixed-gender teams are more frequently cited than either male-only or female-only teams is an interesting finding. While it is too early to know whether this is a result of the tendency for these teams to be larger, the diverse makeup of these teams, or some other factor, this finding does at least point to potential benefits in innovation that may result from increasing women's participation in patenting. Future research would do well to explore the reasons for this finding.

Additional good news emerges in the finding that the level of female inventorship in IT is quite high at some companies. This suggests that systemic factors do matter, but that there is no innate or industry-wide systemic reason for the low level of female IT inventorship. As such, women could continue to gain greater shares of IT invention, especially if we identify and replicate the conditions and practices that foster women's increased patenting efforts. This report then serves as a call for future research to identify the conditions and practices that would make this possible.

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05572528	1996	Shuen; Pauline	Mobile networking method and apparatus	Novell Inc.	246	70.00	3.51
05388150	1995	Schneyer; Robin Gu; Jing L.	Automatic incoming telephone call identification and disposition system	UNASSIGNED	120	33.10	3.63
04675656	1987	Narcisse; Bernadine O.	OUT?OF?RANGE PERSONNEL MONITOR AND ALARM	UNASSIGNED	115	33.73	3.41
05204894	1993	Darden; Pamela	Personal electronic directory	Verizon Communications Inc	107	45.81	2.34
04593273	1986	Narcisse; Bernadine O.	OUT?OF?RANGE PERSONNEL MONITOR AND ALARM	UNASSIGNED	101	14.38	7.02
05241383	1993	Chen; Cheng-Tie Wong; Andria H.	Pseudo?constant bit rate video coding with quantization parameter adjustment	Telcordia Technologies Inc	94	33.38	2.82
04827347	1989	Bell; Cynthia S.	ELECTRONIC CAMERA WITH PROOFING FEATURE	Eastman Kodak Company	90	14.45	6.23
04582956	1986	Doughty; Carolyn A.	METHOD AND APPARATUS FOR DISPLAYING AT A SELECTED STATION SPECIAL SERVICE INFORMATION DURING A SILENT INTERVAL BETWEEN RINGING	Alcatel-Lucent	90	29.16	3.09
05289163	1994	Perez; Carla D. Perez; Bertha D.	Child position monitoring and locating device	UNASSIGNED	87	28.50	3.05
05287182	1994	Haskell; Barin G. Reibman; Amy R.	Timing recovery for variable bit?rate video on asynchronous transfer mode (ATM) networks	Alcatel-Lucent	85	11.67	7.28
05311194	1994	Brown; Alison K.	GPS precision approach and landing system for aircraft	NAVSYS CORP	84	42.44	1.98
04285801	1981	Chiang; Anne A.	ELECTROPHORETIC DISPLAY COMPOSITION	Xerox Corp	80	10.29	7.78
05303234	1994	Kou; Yukari	Random access data communication system with slot assignment capability for contending users	NEC Corp	80	29.09	2.75
05136636	1992	Wegrzynowicz; Carol A.	Telephone connection to a nearby dealer	Alcatel-Lucent	77	20.21	3.81
04776003	1988	Harris; Arlene J.	Cellular mobile radio credit card system	UNASSIGNED	76	25.30	3.00
05521916	1996	Choudhury; Abhijit K. Hahne; Ellen L.	Implementation of selective pushout for space priorities in a shared memory asynchronous transfer mode switch	Alcatel-Lucent	76	26.67	2.85
05159447	1992	Haskell; Barin G. Reibman; Amy R.	Buffer control for variable bit?rate channel	Alcatel-Lucent	72	35.53	2.03
05237604	1993	Ryan; Deirdre T.	Arrangement for serving a telephone office code from two switching systems	Alcatel-Lucent	71	26.01	2.73

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04785291	1988	Hawthorne; Candy C.	Distance monitor especially for child surveillance	UNASSIGNED	67	26.50	2.53
05561703	1996	Arledge; Cathy L. Jackson; Tracy R.	System and method for integration of a paging server into a private branch exchange environment	ROLM CO (FORMERLY ROLM SYSTEMS	65	15.05	4.32
05287199	1994	Zoccolillo; Susan M.	Facsimile message processing and routing system	Alcatel-Lucent	64	12.73	5.03
04918689	1990	Hui; Yu N.	ASYNCHRONOUS COMMUNICATION SYSTEM	Telcordia Technologies Inc	64	26.09	2.45
04953013	1990	Tsuji; Katsuhisa Ogawa; Tomoko	COLOR IMAGE PROCESSING DEVICE	Ricoh Co. Ltd.	62	18.85	3.29
05801747	1998	Bedard; Karen	Method and apparatus for creating a television viewer profile	Hynix Semiconductor Inc	62	22.13	2.80
06195478	2001	Fouquet; Julie E.	Planar lightwave circuit-based optical switches using micromirrors in trenches	Agilent Technologies Inc	61	17.04	3.58
05444476	1995	Conway; Lynn	System and method for teleinteraction	University of Michigan	60	27.90	2.15
05426635	1995	Mitra; Debasis Seery; Judith B.	Method for adaptive control of windows and rates in networks	Alcatel-Lucent	59	27.81	2.12
05550912	1996	Akinpelu; Akinwale A. Bhagat; Promod K. Garoutte; Dana L.	Connections between a toll network and multiple local networks	Alcatel-Lucent	59	36.11	1.63
05097499	1992	Cosentino; Phyllis	AUTONOMOUS REGISTRATION OVERLOAD CONTROL FOR CELLULAR MOBILE RADIO SYSTEMS	Alcatel-Lucent	58	25.99	2.23
05172375	1992	Kou; Yukari	Multiple access satellite communication system for mini?earth station networks	NEC Corp	58	32.36	1.79
05703943	1997	Otto; Mary Rita	Completion of calls to a preferred agent in an automatic call distributor	Alcatel-Lucent	57	17.35	3.29
05319355	1994	Russek; Linda G.	Alarm for patient monitor and life support equipment system	UNASSIGNED	57	19.11	2.98
05392345	1995	Otto; Mary R.	Work at home ACD agent network	Alcatel-Lucent	57	21.16	2.69
05282238	1994	Berland; Kerry	Facsimile radio communication system	SILICON ENGINES LTD	56	23.58	2.38
04551581	1985	Doughty; Carolyn A.	METHOD AND APPARATUS FOR SENDING A DATA MESSAGE TO A SELECTED STATION DURING A SILENT INTERVAL BETWEEN RINGING	Alcatel-Lucent	54	14.35	3.76
05067788	1991	Jannson; Tomasz P. Jannson; Joanna L. Moslehi; Behzad	HIGH MODULATION RATE OPTICAL PLASMON WAVEGUIDE MODULATOR	Physical Optics Corporation	54	16.07	3.36

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04931722	1990	Stoica; Susana	FLEXIBLE IMBEDDED TEST SYSTEM FOR VLSI CIRCUITS	CONTROL DATA CORP	53	18.70	2.83
05218632	1993	Cool; Anna M.	Flexible call detail recording system	Ericsson	53	26.01	2.04
04860005	1989	Deluca; Joan S. Dulaney; Randi L.	COMMUNICATION RECEIVER WITH AUTOMATIC TURN ON/OFF	Motorola Inc.	53	28.95	1.83
04931219	1990	Kwiatkowski; Patricia L. Kwak; Won S.	PHOTOCHROMIC COMPOUND AND ARTICLES CONTAINING THE SAME	PPG Industries Inc.	51	9.43	5.41
05774640	1998	Kurio; Kay M.	Method and apparatus for providing a fault tolerant network interface controller	Hewlett-Packard Co	51	26.02	1.96
05278539	1994	Lauterbach; Lyn Wise Jr.; Laird H.	Alerting and warning system	Verizon Communications Inc	51	28.50	1.79
05793438	1998	Bedard; Karen	Electronic program guide with enhanced presentation	Hynix Semiconductor Inc	50	22.13	2.26
05357509	1994	Ohizumi; Yumiko	Data writing during process of data restoration in array disk storage system	Fujitsu Limited	49	17.53	2.80
05229990	1993	Teraslinna; Kari T.	N+K sparing in a telecommunications switching environment	Alcatel-Lucent	49	30.25	1.62
05319457	1994	Nakahashi; Tomoko Kinoshita; Taizo	Variable length image coding system	Hitachi Ltd	48	11.67	4.11
05537440	1996	Eyuboglu; M. Vedat Yong; Mei	Efficient transcoding device and method	Motorola Inc.	48	14.08	3.41
06229640	2001	Zhang; Nan	Microelectromechanical optical switch and method of manufacture thereof	ADC Telecommunications Inc.	48	21.29	2.26
04868865	1989	Ogawa; Fukushige Motegi; Chiaki Hosokawa; Chikara	TERMINAL SWITCHING CONTROL APPARATUS	Toshiba Corp	47	15.50	3.03
04710870	1987	Blackwell; Catherine A. Lakshmanan; Raman Subramanian; Mahadevan	CENTRAL COMPUTER BACKUP SYSTEM UTILIZING LOCALIZED DATA BASES	Telcordia Technologies Inc	46	19.82	2.32
04777646	1988	Harris; Arlene J.	Communication system	UNASSIGNED	46	25.30	1.82
06167251	2000	Segal; Edna Segal; Alon	Keyless portable cellular phone system having remote voice recognition	TELESPREE COMMUNICATIONS	45	10.64	4.23
04913517	1990	Arroyo; Candido J. Fluevog; Jill B. Kathiresan; Krishnaswamy Patel; Parbhubhai D.	COMMUNICATION CABLE HAVING WATER BLOCKING STRENGTH MEMBERS	Alcatel-Lucent	45	11.46	3.93
04398651	1983	Kumpfer; Beverly D.	MICROWAVE FOOD DISPENSING MACHINE	UNASSIGNED	45	12.07	3.73

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04303322	1981	Someya; Hiromi	ELECTRONIC IMAGE PICK?UP DEVICE FOR A SINGLE?LENS REFLEX CAMERA HAVING AN INTERCHANGEABLE FINDER	Canon Inc	44	5.66	7.77
05848142	1998	Yaker; Rhoda	Advanced call waiting processing	Alcatel-Lucent	44	15.11	2.91
05099514	1992	Acree; Delores F.	MULTI?PURPOSE TELEPHONE ACCESSORY UNIT	UNASSIGNED	44	20.21	2.18
05502722	1996	Fulghum; Tracy L.	Method and apparatus for a radio system using variable transmission reservation	Motorola Inc.	44	26.67	1.65
05825823	1998	Goldstein; Yuri Okunev; Yuri	PCM channel diagnosis	GENERAL DATACOMM INC	43	10.36	4.15
05337041	1994	Friedman; Lorri	Personal safety guard system for stray person or pet	UNASSIGNED	43	19.11	2.25
05566234	1996	Reed; Elaine E. Edge; Cynthia A.	Method for controlling fraudulent telephone calls	Verizon Communications Inc	42	21.64	1.94
05677909	1997	Heide; Carolyn	Apparatus for exchanging data between a central station and a plurality of wireless remote stations on a time divided commnication channel	SPECTRIX CORP	42	21.75	1.93
05389442	1995	Arroyo; Candido J. Fluevog; Jill B. Kathiresan; Krishnaswamy Patel; Parbhubhai D.	Water blocking strength members	Alcatel-Lucent	41	9.03	4.54
05878126	1999	Velamuri; Syama S. Torbert; Julia B.	Method for routing a call to a destination based on range identifiers for geographic area assignments	BellSouth Corp.	41	12.00	3.42
05872773	1999	Katzela; Irene Veeraraghavan; Malathi	Virtual trees routing protocol for an ATM-based mobile network	Alcatel-Lucent	41	14.56	2.82
04535141	1985	Kroupa; Loretta A.	LIQUID CURABLE POLYORGANOSILOXANE COMPOSITIONS	Dow Corning Corp.	41	15.15	2.71
05719853	1998	Ikeda; Chinatsu	Congestion control method in an ATM network based on threshold values of node queue length	NEC Corp	40	15.40	2.60
05742712	1998	Pan; Jing-Jong Xu; Jing-Yu Yang; Charlene Jia-Ling	Efficient electromechanical optical switches	JDS Uniphase Corp	39	12.41	3.14
04311883	1982	Kidney; Susan L.	MODULAR TELEPHONE JACK LOCK	UNASSIGNED	39	12.91	3.02
05258836	1993	Murata; Eri	Encoding of motion picture signal	NEC Corp	39	13.23	2.95
04481642	1984	Hanson; Kerry A.	INTEGRATED CIRCUIT FSK MODEM	Texas Instruments Inc	39	14.24	2.74
05822371	1998	Goldstein; Yuri Okunev; Yuri	Mapper for high data rate signalling	GENERAL DATACOMM INC	38	10.36	3.67

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05953141	1999	Liu; Karen Wang; Weyl-kuo Yue; Chaoyu	Dynamic optical add-drop multiplexers and wavelength-routing networks with improved survivability and minimized spectral filtering	International Business Machines Corp	38	12.61	3.01
04682358	1987	Werner; Jean J.	ECHO CANCELLER	Alcatel-Lucent	38	18.42	2.06
05939981	1999	Renney; Marjorie	Item locator with attachable receiver/transmitter	UNASSIGNED	38	20.00	1.90
05349348	1994	Anderson; Karen L. Finlay; Ian R. Mitchell; Joan L. Thornton; Davey S.	Multi?mode data stream generator	International Business Machines Corp	38	24.18	1.57
05012234	1991	Dulaney; Randi L. Rakolta; Pamela A.	USER ACTIVATED MEMORY PROGRAMMING AUTHORIZATION IN A SELECTIVE CALL RECEIVER	Motorola Inc.	38	25.25	1.50
05565924	1996	Haskell; Barin G. Reibman; Amy R.	Encoder/decoder buffer control for variable bit?rate channel	Alcatel-Lucent	37	11.93	3.10
05838847	1998	Pan; Jing-Jong Xu; Jing-Yu Yang; Charlene Jia-Ling	Efficient electromechanical optical switches	JDS Uniphase Corp	37	12.41	2.98
05317594	1994	Goldstein; Yuri	Systems for and method of identifying V.fast modem within existing automatic interworking procedure standards	GENERAL DATACOMM INC	37	17.43	2.12
05732086	1998	Liang; Song-Chyau S. Tung; Roberta T.	System and method for determining the topology of a reconfigurable multi-nodal network	International Business Machines Corp	37	19.58	1.89
05862184	1999	Goldstein; Yuri Okunev; Yuri	Mapper for high data rate transmission through channels subject to robbed bit signalling	GENERAL DATACOMM INC	36	10.48	3.44
04367040	1983	Goto; Kenya	MULTI?CHANNEL OPTICAL SENSING SYSTEM	Toshiba Corp	36	11.44	3.15
05450134	1995	Legate; Kim R.	Video facility management system for encoding and decoding video signals to facilitate identification of the video signals	VISUAL AUTOMATION SYSTEMS INC	36	12.73	2.83
05615331	1997	Toorians; Arman Liu; Elizabeth Q.	System and method for debugging a computing system	Phoenix Technologies Ltd.	36	14.59	2.47
05793291	1998	Thornton; Carolyn M.	Child alert system for automobiles	UNASSIGNED	36	17.60	2.05
05103475	1992	Shuen; Jennifer Y.	PROCESSING OF TELECOMMUNICATIONS CALL BILLING DATA	Alcatel-Lucent	36	20.21	1.78
05086439	1992	Asai; Kohtaro Murakami; Tokumichi Hasegawa; Yuri	ENCODING/DECODING SYSTEM UTILIZING LOCAL PROPERTIES	Mitsubishi Electric Corp	36	21.74	1.66

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06160489	2000	Perry; Theresa Sue Dillard; Pamela Ann	Wireless communication device adapted to generate a plurality of	Motorola Inc.	35	4.27	8.20
05151697	1992	Bunton; Suzanne	Data structure management tagging system	University of Washington	35	13.00	2.69
05557334	1996	Legate; Kim R.	Apparatus for tracking the flow of video signals by incorporating patterns of machine readable signals which will appear at predetermined locations of a television picture	VISUAL AUTOMATION SYSTEMS INC	34	11.93	2.85
05386239	1995	Wang; Tian J. Christopher; Lauren A.	Multiple QAM digital television signal decoder	Thomson (formerly Multimedia)	34	12.73	2.67
04476349	1984	Cottrell; Jennie L. Hill; Deborah J.	CALL MESSAGE SERVICE	Alcatel-Lucent	34	14.06	2.42
05133034	1992	Arroyo; Candido J. Fluevog; Jill B. Kathiresan; Krishnaswamy	Communications cable having a strength member system disposed between two layers of waterblocking material	Alcatel-Lucent	34	14.59	2.33
04443791	1984	Risgin; Ojars Risgin; by Geraldine	SELF-COMPENSATING GAS DETECTION APPARATUS	UNASSIGNED	34	15.26	2.23
06014380	2000	Hendel; Ariel Muller; Shimon Yeung; Louise	Mechanism for packet field replacement in a multi-layer distributed network element	Sun Microsystems Inc	34	20.91	1.63
05528660	1996	Heins; Dana E. Schillaci; Onofrio	Display-based control mechanism resident in portable test and communications device for facilitating craftsperson's remote testing of selected portion of telephone network	Harris Corp.	34	21.64	1.57
06434403	2002	Ausems; Michiel R. Ausems; Jan B. Akveld; Felix N. Barrett; Lee Ann	Personal digital assistant with wireless telephone	BODYCOM INC	33	11.09	2.98
05555025	1996	McArthur; Kelly M.	Apparatus and method for performing asynchronous multi-standard VBI data extraction	Intel Corporation	33	11.93	2.77
04733064	1988	Ishikawa; Hiromi	LIGHT BEAM SCANNER WITH FOCUS-VARYING MECHANISM	Fuji Photo Film Co. Ltd	33	12.39	2.66
04709978	1987	Jackel; Janet L.	MACH-ZEHNDER INTEGRATED OPTICAL MODULATOR	Telcordia Technologies Inc	33	15.98	2.06
06008920	1999	Hendrix; Karen Denise	Multiple channel multiplexer/demultiplexer devices	JDS Uniphase Corp	33	16.54	2.00
05180645	1993	More; Georgina	Integral solid state embedded power supply	Motorola Inc.	32	11.76	2.72
04736189	1988	Katsumata; Hiromi Murooka; Rikichi Yumoto; Takeko	METHOD AND APPARATUS FOR CALIBRATING AN ANALOG-TO-DIGITAL CONVERSION APPARATUS	Tektronix Inc	32	11.92	2.69

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04763195	1988	Tults; Juri	Television tuning system with provisions for quickly locating active cable channels	General Electric Company	32	12.63	2.53
05862179	1999	Goldstein; Yuri Okunev; Yuri	Mapper for high data rate signalling	GENERAL DATACOMM INC	31	6.60	4.70
04306774	1981	Nicholson; Margie W.	SOLID STATE ELECTROCHROMIC DISPLAY	Rockwell Automation Inc	31	9.14	3.39
05465198	1995	Kellogg; Diane L.	Combination clock radio, night light and power receptacle	UNASSIGNED	31	9.66	3.21
04969710	1990	Tick; Paul A. Mitachi; Seiko	OPTICAL FIBER TRANSMISSION PATH WITH DISPERSION COMPENSATION	Corning Inc.	31	11.83	2.62
04247940	1981	Mueller; Kurt H. Werner; Jean J.	EQUALIZER FOR COMPLEX DATA SIGNALS	Alcatel-Lucent	31	16.44	1.89
05675627	1997	Yaker; Rhoda	Integrated pager and calling card	Alcatel-Lucent	31	17.68	1.75
05509050	1996	Berland; Kerry S.	Facsimile radio communication system having multiple data speeds	QUADPHASE CORP	31	19.85	1.56
04942465	1990	Ohta; Mutsumi	METHOD OF CODING A DIGITAL VIDEO SIGNAL FOR REVERSE REPRODUCTION OF PICTURES	NEC Corp	31	20.62	1.50
05867796	1999	Inutsuka; Kyoko	Portable telephone set capable of being put in a holding mode by operation of a vibration unit which is for announcing reception of an incoming call to a user	NEC Corp	30	8.55	3.51
05625334	1997	Compton; Karen A.	Indicating device for warning a user that a prescribed interval of the time after event has not elapsed	UNASSIGNED	30	12.05	2.49
04641374	1987	Oyama; Masumi	INFORMATION MEDIUM	Toshiba Corp	30	15.07	1.99
04241307	1980	Hong; Se June	MODULE INTERCONNECTION TESTING SCHEME	International Business Machines Corp	29	9.70	2.99
05802237	1998	Pulido; Jacqueline J.	Optical fiber organizer	Minnesota Mining and Manufacturing Com	29	11.90	2.44
05715237	1998	Akiyoshi; Hitomi	Inter digital switching equipment relay system and digital switching equipment	Fujitsu Limited	29	13.67	2.12
05349608	1994	Graham; Hatch Nguyen; Christine	Viterbi ACS unit with renormalization	STANFORD TELECOMMUNICATIONS IN	29	13.86	2.09
05534851	1996	Russek; Linda G.	Alarm for patient monitor and life support equipment	UNASSIGNED	29	15.17	1.91
05973748	1999	Horiguchi; Mari Komuro; Teruyoshi	Receiving device and receiving method thereof	Sony Corp	28	7.21	3.88
04995834	1991	Hasegawa; Izumi	NOISE FILTER CONNECTOR	Tyco International Ltd	28	17.88	1.57

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05991637	1999	Mack, II; Gawins A. Mack; R. Eugenia	Integrated passive and active communications system	UNASSIGNED	27	11.90	2.27
04204093	1980	Yeh; Yu Shuan	VARIABLE FRAME RATE TECHNIQUE FOR USE IN A TIME-DIVISION MULTIPLE ACCESS (TDMA) COMMUNICATION SYSTEM	Alcatel-Lucent	27	14.69	1.84
04568800	1986	Orikasa; Hiromi	MULTI-CHANNEL ACCESS (MCA) RADIO TELEPHONE SYSTEM	NEC Corp	27	15.24	1.77
05295142	1994	Hatakeyama; Izumi	Viterbi decoder	Sony Corp	27	17.53	1.54
04234910	1980	Price; Linda D.	HEAD-SUPPORTED ILLUMINATION DEVICE	UNASSIGNED	26	11.19	2.32
06002326	1999	Turner; Valerie Jean	Automotive vehicle anti-theft and anti-vandalism and anti-carjacking system	TURNER VALERIE	26	13.72	1.90
05481389	1996	Pidgeon; Rezin E. Rand; Heather H.	Postdistortion circuit for reducing distortion in an optical communications system	Scientific-Atlanta Inc.	26	14.15	1.84
04652083	1987	Laakmann; Katherine D.	HOLLOW WAVEGUIDE	Johnson & Johnson	26	15.98	1.63
05663724	1997	Westby; Judy Lynn	16B/20B encoder	Seagate Technology	25	5.05	4.95
06154493	2000	Acharya; Tinku Karam; Lina J. Marino; Francescomaria	Compression of color images based on a 2-dimensional discrete wavelet transform yielding a perceptually lossless image	Intel Corporation	25	6.47	3.86
06324316	2001	Fouquet; Julie E. Chen; Datong	Fabrication of a total internal reflection optical switch with vertical fluid fill-holes	Agilent Technologies Inc	25	11.74	2.13
06075791	2000	Chiussi; Fabio Massimo Francini; Andrea	System for guaranteeing data transfer rates and delays in packet networks	Alcatel-Lucent	25	14.67	1.70
05177806	1993	Abbott; Kathleen S. Hodgson; Michael J. Macdonald; Brian M. Smith; David R.	Optical fiber feedthrough	Du Pont (E.I.) de Nemours & Co.	25	15.14	1.65
04618995	1986	Kemp; Sandra R.	AUTOMATIC SYSTEM AND METHOD FOR MONITORING AND STORING RADIO USER LISTENING HABITS	UNASSIGNED	25	15.24	1.64
04896144	1990	Bogstad; Naomi C.	HAND WASHING ALERT	UNASSIGNED	25	15.27	1.64
04237447	1980	Clark; Becky J.	SPEED INDEPENDENT SELECTOR SWITCH FOR DIGITAL COMMUNICATION NETWORKS	Unisys Corp.	25	15.82	1.58
04989933	1991	Duguay; Michel A. Light; Melanie L.	GUIDED LIGHT DIFFUSER	UNASSIGNED	25	16.20	1.54

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06037913	2000	Johnson; Pamela Kay	Moveable satellite dish antenna mount	UNASSIGNED	24	6.63	3.62
04646096	1987	Brown; Alison	ENHANCED GLOBAL POSITIONING SYSTEM DELTA-RANGE PROCESSING	Northrop Grumman Corp	24	10.26	2.34
06055344	2000	Fouquet; Julie E. Beck; Patricia A. Chen; Datong	Fabrication of a total internal reflection optical switch with vertical fluid fill-holes	Hewlett-Packard Co	24	12.04	1.99
05475784	1995	Bookbinder; Dana C. Dannoux; Thierry L. Wu; Lung-Ming	Method of encapsulating optical components and products produced by that method	Corning Inc.	24	14.00	1.71
04719516	1988	Nagashima; Nao	IMAGE PROCESSING APPARATUS	Canon Inc	24	15.30	1.57
05960844	1999	Hamaya; Hiromi	Method and apparatus for monitoring conditions of a vehicle tire	Bridgestone Corp.	23	4.88	4.72
05894591	1999	Tamayo; Elizabeth L.	Personal emergency response communication apparatus for pagers	UNASSIGNED	23	6.92	3.32
05179449	1993	Doi; Miwako	Scene boundary detecting apparatus	Toshiba Corp	23	8.98	2.56
05578991	1996	Scholder; Erica J.	Security system and method for a portable personal computer	Dell Inc	23	12.60	1.83
04786818	1988	Mead; Carver A. Mahowald; Michelle A. Sivilotti; Massimo A.	Integrated sensor and processor for visual images	California Institute of Technology	23	12.63	1.82
06157655	2000	Shtivelman; Yuri	Method for estimating telephony system-queue waiting time in an agent level routing environment	Alcatel (France)	23	14.67	1.57
05946297	1999	Calvignac; Jean Orsatti; Daniel Verplanken; Fabrice	Scheduling method and apparatus for supporting ATM connections having a guaranteed minimum bandwidth	International Business Machines Corp	23	15.03	1.53
06385170	2002	Chiu; Angela L. Mang; Xiaowen	Method and system for dynamically triggering flow-based quality of service shortcuts through a router	AT&T Inc	22	5.44	4.04
05502484	1996	Okada; Miyuki	Video camera and video signal reproducing apparatus with shake detection and correction operation	Sony Corp	22	6.71	3.28
06044475	2000	Chung; Pi-Yu Huang; Yennun Kintala; Chandra Vo; Kiem-Phong Wang; Yi-Min	Checkpoint and restoration systems for execution control	Alcatel-Lucent	22	10.50	2.10
05890067	1999	Chang; Chu Rui Jiang; Hua	Multi-beam antenna arrays for base stations in which the channel follows the mobile unit	BNR INC	22	11.83	1.86
05473369	1995	Abe; Keiko	Object tracking apparatus	Sony Corp	22	12.73	1.73

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05640423	1997	Archer; Teri L.	Method for signal transmission using spectrally efficient orthogonal modulation	SIGNAL SCIENCE INC	22	13.02	1.69
04661853	1987	Roeder; Barbara J. Harwood; Leopold A. Weckenbrock; Hermann J.	INTERFIELD IMAGE MOTION DETECTOR FOR VIDEO SIGNALS	General Electric Company	22	13.04	1.69
04908704	1990	Fujioka; Arisa Watanabe; Sadakazu	METHOD AND APPARATUS FOR OBTAINING AN OBJECT IMAGE AND DISTANCE DATA OF A MOVING OBJECT	Toshiba Corp	22	13.15	1.67
04251879	1981	Clark; Becky J.	SPEED INDEPENDENT ARBITER SWITCH FOR DIGITAL COMMUNICATION NETWORKS	Unisys Corp.	22	13.16	1.67
05013117	1991	Fukuma; Masumi	METHOD FOR MANUFACTURING A FIBER TYPE COUPLER	Sumitomo Electric Industries Ltd.	22	13.79	1.60
06377217	2002	Zhu; Yongfei Sengupta; Louise C. Kozyrev; Andrey Zhang; Xubai	Serially-fed phased array antennas with dielectric phase shifters	Paratek Microwave Inc.	21	4.35	4.82
06192116	2001	Mayak; Barbara	System and method for generating CID/CIDCW information with a user inputted message	Alcatel-Lucent	21	8.06	2.60
06262980	2001	Leung; Kin K. Srivastava; Arty	Dynamic resource allocation method and apparatus for broadband services in a wireless communications system	AT&T Inc	21	8.32	2.53
06074103	2000	Hargreaves; Donald C. Oleskevich; Tanya K. Barber; Richard	Aligning an optical fiber with electroluminescent semiconductor diodes and other optical components	JDS Uniphase Corp	21	9.12	2.30
05400042	1995	Tulintseff; Ann N.	Dual frequency, dual polarized, multi-layered microstrip slot and dipole array antenna	California Institute of Technology	21	10.91	1.92
04286286	1981	Jurisson; Jaan Khalafalla; Aida S.	PHOTO CONTROLLED STEREOSCOPIC TELEVISION SYSTEM	Honeywell International Inc.	21	11.04	1.90
05937343	1999	Leung; Kin K.	Method and system for updating replicated databases in a telecommunication network system	AT&T Inc	21	11.90	1.76
06157623	2000	Kerstein; Denise	Apparatus and method for selectively outputting data using a MAC layer interface or a PCI bus interface	Advanced Micro Devices Inc	21	12.48	1.68
05282061	1994	Farrell; Barbara L.	Programmable apparatus for determining document background level	Xerox Corp	21	12.73	1.65
05047858	1991	Aimonoya; Izumi	MULTIPLE IMAGE PROCESSING AND DISPLAY SYSTEM	Toshiba Corp	21	13.68	1.54
05521453	1996	Yatsuda; Hiromi	Surface acoustic wave filter and mobile communication system using same	JAPAN RADIO CO LTD	20	8.00	2.50

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04264979	1981	Gutowski; Karol	DISPLAY DEVICE FOR CB RADIO	UNASSIGNED	20	8.56	2.34
05434847	1995	Kou; Yukari	Random access satellite communication system using random numbers generated in a range variable with channel traffic	NEC Corp	20	9.07	2.20
05758899	1998	Foo; Chek Peng Yeh; Huahn Fern	Method and apparatus for providing a safing function for side impact crash sensing systems	Northrop Grumman Corp	20	10.91	1.83
05268823	1993	Yergenson; Robin P.	Light transmission apparatus for electro?optically coupling to a display panel for an electronic instrument	Hewlett-Packard Co	20	11.29	1.77
05579346	1996	Kanzaki; Kiyoko	Automatic frequency control method and circuit for use in a delay detection type demodulator	Toshiba Corp	20	11.74	1.70
06490705	2002	Boyce; Jill MacDonald	Method and apparatus for receiving MPEG video over the internet	Alcatel-Lucent	19	4.38	4.34
06459913	2002	Cloutier; Jocelyn	Unified alerting device and method for alerting a subscriber in a communication network based upon the result of logical functions	AT&T Inc	19	5.85	3.25
06233709	2001	Zhang; Vicki Ping Hsu; Liangchi	Dynamic iterative decoding for balancing quality of service parameters	Nokia Corp	19	6.36	2.99
05801760	1998	Uomori; Kenya	Stereoscopic image pickup and display apparatus	Matsushita Electric Industrial Co. Ltd.	19	8.41	2.26
04628321	1986	Martin; Gayle P.	APERTURE TRANSFORMATION SIDELOBE CANCELLER	Harris Corp.	19	9.51	2.00
05388691	1995	White; Nona J.	Protective case for remote control transmitter	UNASSIGNED	19	9.93	1.91
05495260	1996	Couture; Tammy E.	Printed circuit dipole antenna	Motorola Inc.	19	10.81	1.76
04810922	1989	Hirsch; Kelly L.	DAMPING DECOUPLED OSCILLATOR USING A HIGH IMPEDANCE CRYSTAL	United Technologies Corp	19	10.94	1.74
06067178	2000	Zheng; Yu	Multiple wavelength division multiplexer with reduced loss	Oplink Communications Inc.	19	11.58	1.64
06525630	2003	Zhu; Yongfei Sengupta; Louise C. Rong; Yu	Microstrip tunable filters tuned by dielectric varactors	Paratek Microwave Inc.	18	1.52	11.82
06175618	2001	Shah; Tasvir Daniel; Lynn C. Shen; Hu Kannan; Comandur S.	ANI based routing	Alcatel-Lucent	18	6.68	2.69
04775845	1988	Mccoy; Jody A.	Microwave oscillator with external feedback	UNASSIGNED	18	7.48	2.41

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06208443	2001	Liu; Karen Wang; Weyl-Kuo Yue; Chaoyu	Dynamic optical add-drop multiplexers and wavelength-routing networks with improved survivability and minimized spectral filtering	International Business Machines Corp	18	8.37	2.15
06246813	2001	Zheng; Yu	Reliable low-cost dual fiber optical collimator	JDS Uniphase Corp	18	9.10	1.98
05099341	1992	Nosaki; Takefumi Watari; Masako	IMAGE READING APPARATUS WITH IMPROVED SHADING CORRECTION	Toshiba Corp	18	10.40	1.73
05517331	1996	Murai; Yukako Amagai; Tamio	Method and apparatus for reading image of image scanner?reader	Fujitsu Limited	18	11.40	1.58
05930238	1999	Nguyen; Annie Thanhvan	Asynchronous transfer mode (ATM) multicast tree delivery switching	GENERAL DATACOMM	18	11.53	1.56
06377203	2002	Doany; Ziyad Hanna	Collision arbitration method and apparatus for reading multiple radio frequency identification tags	Minnesota Mining and Manufacturing Com	17	3.31	5.13
06510325	2003	Mack, II; Gawins A. Mack; R. Eugenia	Convertible portable telephone	UNASSIGNED	17	3.54	4.80
06335933	2002	Mallory; Tracy D	Limited automatic repeat request protocol for frame-based communication channels	Broadcom Corp.	17	5.22	3.26
05815800	1998	Su; Lily Su; Sulton	Voice-pager system	Verizon Communications Inc	17	7.42	2.29
06105148	2000	Chung; Pi-Yu Huang; Yennun Kintala; Chandra Vo; Kiem-Phong Wang; Yi-Min	Persistent state checkpoint and restoration systems	Alcatel-Lucent	17	7.75	2.19
05974317	1999	Djuknic; Goran M. Hou; Diane Yuh-Lin Okunev; Yuriy B.	Cell-clustering arrangements and corresponding antenna patterns for wireless communication networks employing high-altitude aeronautical antenna platforms	Alcatel-Lucent	17	9.27	1.83
04499500	1985	Nagashima; Nao	TWO?SIDE IMAGE FORMING APPARATUS	Canon Inc	17	9.67	1.76
05875216	1999	Martin; Carol Catalano	Weight generation in stationary interference and noise environments	Alcatel-Lucent	17	11.19	1.52
06252536	2001	Johnson; Sandra M. Itani; Nadi R.	Dynamic range extender apparatus, system, and method for digital image receiver system	Cirrus Logic Inc.	16	3.37	4.74
05668841	1997	Haskell; Barin Geoffry Reibman; Amy Ruth	Timing recovery for variable bit-rate video on asynchronous transfer mode (ATM) networks	Alcatel-Lucent	16	6.86	2.33
05734683	1998	Hulkko; Jaakko A. Kontas; Veijo L. H. Siren; Lauri T.	Demodulation of an intermediate frequency signal by a sigma-delta converter	Nokia Corp	16	8.37	1.91
06118866	2000	Shtivelman; Yuri	Emergency call load management for call centers	Alcatel (France)	16	8.66	1.85

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06282339	2001	Zheng; Yu	Reliable low-cost wavelength division multiplexed coupler with flexible and precise optical path adjustment	JDS Uniphase Corp	16	9.10	1.76
04656487	1987	Sureau; Jean-Claude Leibinger; Janice M.	ELECTROMAGNETIC ENERGY PASSIVE FILTER STRUCTURE	RADANT TECHNOLOGIES INC	16	9.24	1.73
05626417	1997	McCavit; Kim I.	Motion detector assembly for use with a decorative coach lamp	HEATH CO	16	9.40	1.70
06122424	2000	Binguier; Anne G.	Fiber optic cable with flame inhibiting capability	SIECOR CORP	15	3.00	5.00
06208796	2001	Williams Vigliaturo; Shari Lynn	Fiber optic module	ADC Telecommunications Inc.	15	4.63	3.24
06633544	2003	Rexford; Jennifer Lynn Shaikh; Anees	Efficient precomputation of quality-of-service routes	AT&T Inc	15	4.90	3.06
06175436	2001	Jackel; Janet L.	Automatic feedback gain control for multiple channels in a doped optical fiber amplifier	Zhone Technologies Inc.	15	5.47	2.74
04483075	1984	Kundin; Jane I.	APPARATUS AND METHOD FOR MEASURING DEFORMED AREAS OF SKIN SURFACE	UNASSIGNED	15	7.44	2.02
04881248	1989	Korechika; Masako	COUNTER CIRCUIT PROVIDED WITH MEANS FOR READING OUT COUNTED DATA BY READ?COMMAND SIGNAL APPLIED ASYNCHRONOUSLY WITH CLOCK SIGNALS TO BE COUNTED	NEC Corp	15	7.72	1.94
06185347	2001	Zheng; Yu	Wavelength division multiplexed coupler	UNASSIGNED	15	9.10	1.65
04898691	1990	Borzo; Marie Stuetz; Dagobert E.	ORGANIC NONLINEAR OPTICAL MEDIA	Celanese Corp.	15	9.43	1.59
05099519	1992	Guan; Yu	HEADPHONES	UNASSIGNED	15	9.86	1.52
04427121	1984	Clements; Shannon K.	HYDRAULIC VALVE CONTROL FOR AERIAL BOOK DEVICES	UNASSIGNED	14	3.52	3.98
05883859	1999	Bentley; Dawn	Alarm clock housing with lockable keypad enclosure	UNASSIGNED	14	5.12	2.73
05805033	1998	Liang; Xiao-Peng Nugent; Jennifer C.	Dielectric resonator loaded cavity filter coupling mechanisms	Andrew Corp.	14	5.66	2.47
05897042	1999	Sims; Dianne	Talking backpack	UNASSIGNED	14	5.96	2.35
04184751	1980	Nicholson; Margie M.	PHTHALOCYANINE ELECTROCHROMIC DISPLAY	Rockwell Automation Inc	14	8.46	1.65
04555788	1985	Merrill; Dana A.	MULTIPLE RATE BASEBAND RECEIVER	ITT Corp	14	9.27	1.51

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06433917	2002	Mei; Wenhui Chan; Kin Foong	Light modulation device and system	Ball Semiconductor Inc.	13	3.67	3.54
05560051	1996	Butts; Becky	Toilet training device	UNASSIGNED	13	5.09	2.56
06359970	2002	Burgess; Shelia Jean	Communications control method and apparatus	MAVERICK CONSULTING SERVICES IN	13	5.42	2.40
06087899	2000	Kubota; Miki	Optical transmitter module, and semiconductor integrated circuit capable of increasing gain and band of amplifier constructed from FET	Fujitsu Limited	13	6.09	2.13
05502543	1996	Aboujaoude; Jodi F.	System for collecting statistical data on remotely monitored machines	Xerox Corp	13	7.51	1.73
05802080	1998	Westby; Judy Lynn	CRC checking using a CRC generator in a multi-port design	Seagate Technology	13	7.55	1.72
05923456	1999	Tench; D. Morgan Warren, Jr.; Leslie F.	Reversible electrochemical mirror	Rockwell Automation Inc	13	7.79	1.67
05467955	1995	Beyersmith; Stacy C.	Antenna mounting platform for a monopole tower	BellSouth Corp.	13	8.27	1.57
05719622	1998	Conway; Lynn	Visual control selection of remote mechanisms	University of Michigan	13	8.41	1.55
06714517	2004	Fawaz; Ayman Walrand; Jean	Method and apparatus for interconnection of packet switches with guaranteed bandwidth	EXTREME NETWORKS	12	1.70	7.06
06522795	2003	Jordan; Rebecca Madsen; Christi Kay	Tunable etched grating for WDM optical communication systems	UNASSIGNED	12	1.94	6.19
06665010	2003	Morris; Tonia G. Bell; Cynthia S.	Controlling integration times of pixel sensors	Intel Corporation	12	2.15	5.59
06590468	2003	du Toit; Cornelis Frederik Ryan; Deirdre A.	Tunable microwave devices with auto-adjusting matching circuit	Paratek Microwave Inc.	12	2.76	4.34
06580727	2003	Yim; Susan Lu; Xiaolin	Element management system for a digital subscriber line access multiplexer	Texas Instruments Inc	12	4.55	2.64
05821836	1998	Katehi; Linda P. B. Papapolymerou; Ioannis Cheng; Jui-Ching	Miniaturized filter assembly	University of Michigan	12	5.66	2.12
06128346	2000	Suarez; Jose' I. Prieto; Yolanda	Method and apparatus for quantizing a signal in a digital system	Motorola Inc.	12	6.91	1.74
06249629	2001	Bringuier; Anne G.	Robust fiber optic cables	SIECOR OPERATIONS LLC	12	7.09	1.69
05668640	1997	Nozawa; Masako Yamaguchi; Yumiko	Facsimile equipment	Toshiba Corp	12	7.45	1.61

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06567471	2003	Yoshinari; Hiromi	System method and apparatus for seamlessly splicing data	Sony Corp	11	2.09	5.26
06654374	2003	Fawaz; Ayman Walrand; Jean	Method and apparatus to reduce Jitter in packet switched networks	EXTREME NETWORKS	11	2.52	4.36
06473607	2002	Shohara; Aki Lei; Emilia Vailun	Communication device with a self-calibrating sleep timer	Broadcom Corp.	11	3.00	3.67
05923814	1999	Boyce; Jill MacDonald	Methods and apparatus for performing video data reduction operations and for concealing the visual effects of data reduction operations	Hitachi Ltd	11	5.40	2.04
04823190	1989	Yamamoto; Kazumi	APPARATUS FOR ENHANCING CONTOURS OF TELEVISION SIGNAL	IKEGAMI TSUSHINKI CO LTD	11	5.50	2.00
05625177	1997	Yukinori; Miyake Mitsunori; Kaneko Yasuhiro; Masuzaki Tetsuya; Ozaki	High frequency switch and method of testing H-F apparatus	Hirose Electric Co Ltd.	11	5.85	1.88
06549770	2003	Marran; Nadine	Over the air programming and/or service activation	CELLCO PARTNERSHIP	11	6.00	1.83
05917987	1999	Neyman; Yuri	System for controlling the transfer of an image on a first medium to a second medium	UNASSIGNED	11	6.28	1.75
06115072	2000	Vuong; Bao Anderson; Candace	16:9 aspect ratio conversion by letterbox method for an MPEG image	Motorola Inc.	11	6.40	1.72
06185249	2001	Drucker; Vitaly Okuney; Yuri Wang; Oin Goldstein; Yuri	Translation table design for a PCM modem	PC-Tel Inc	11	6.44	1.71
06285325	2001	Nalbandian; Vahakn Lee; Choon Sae	Compact wideband microstrip antenna with leaky-wave excitation	United States Army	11	6.51	1.69
06570519	2003	Yang; Yu Qing	Switched-capacitor summer circuits and methods and systems using the same	Cirrus Logic Inc.	10	2.71	3.68
06215275	2001	Bean; Heather N.	Method for the automatic determination of battery chemistry in portable electronic devices	Hewlett-Packard Co	10	2.95	3.39
06262692	2001	Babb; Susan M.	Laminate RFID label and method of manufacture	Brady Corp.	10	4.08	2.45
06489905	2002	Lee; Yvette P. Hassoun; Marwan M.	Segmented DAC calibration circuitry and methodology	Xilinx Inc.	10	4.32	2.32
06014231	2000	Sawase; Kensuke Ogata; Hiromi	Image sensor	Rohm Co. Ltd.	10	4.39	2.28
06208834	2001	Tawil; Saleem Tawil; Carmen	Apparatus and method for facilitating terrestrial transmissions at frequencies also used for satellite transmissions to a common geographic area	NORTHPOINT TECHNOLOGY LTD	10	4.93	2.03

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06207949	2001	Jackel; Janet L.	Method and apparatus for stabilizing attenuators in optical networks	Telcordia Technologies Inc	10	6.00	1.67
06178200	2001	Okunev; Yuri Drucker; Vitaly Wang; Qin Goldstein; Yuri	Constellation design for a PCM modem	PC-Tel Inc	10	6.44	1.55
06343098	2002	Boyce; Jill MacDonald	Efficient rate control for multi-resolution video encoding	Alcatel-Lucent	9	3.04	2.96
06429831	2002	Babb; Susan M.	Laminate RFID label and method of manufacture	Brady Corp.	9	3.08	2.92
06519457	2003	Jiang; Jianping Ahmad; Azeem Turner-Harris; Jerri L. Eduvuganty; Bajji Illiage; William Edward	Methods and systems for standardizing interbase station communications	Nortel Networks Corp	9	4.15	2.17
06157316	2000	Okayama; Kouichiro Yuyama; Miki	Selective call receiver with rechargeable battery	Hitachi Kokusai Electric Inc	9	4.27	2.11
06249319	2001	Post; Lauren L.	Method and apparatus for finding a correct synchronization point within a data stream	International Business Machines Corp	9	4.55	1.98
06181862	2001	Noble; Jennifer D. Gordon; Carrie Lynn	Interbay fiber optic storage unit	SIECOR OPERATIONS LLC	9	4.63	1.95
06317462	2001	Boyce; Jill MacDonald	Method and apparatus for transmitting MPEG video over the internet	Alcatel-Lucent	9	4.74	1.90
06198417	2001	Paul; Susanne A.	Pipelined oversampling A/D converter	Massachusetts Institute of Technology	9	5.22	1.72
06481010	2002	Nishikawa; Yuko S. Chow; Jenny S. Mingo; Kim Mugura; Kazuto	TV planner for DSS	Sony Corp	9	5.81	1.55
06320522	2001	Satoh; Noriko	Encoding and decoding apparatus with matching length detection means for symbol strings	Fujitsu Limited	9	5.85	1.54
06201927	2001	Comer; Mary Lafuze	Trick play reproduction of MPEG encoded signals	UNASSIGNED	8	2.15	3.72
06483536	2002	Aoyama; Chiaki	Distance measuring apparatus and method employing two image taking devices having different measurement accuracy	Honda Motor Co. Ltd.(Giken Kogyo KK)	8	3.36	2.38
06567121	2003	Kuno; Tomoko	Camera control system, camera server, camera client, control method, and storage medium	Canon Inc	8	3.38	2.37
06512625	2003	Mei; Wenhui Chan; Kin Foong Sim; Dong Youn	Light modulation device and system	Ball Semiconductor Inc.	8	4.14	1.93
06219387	2001	Glover; Kerry C.	Metric circuit and method for use in a viterbi detector	Texas Instruments Inc	8	4.31	1.86
06608816	2003	Nichols; Kathleen M.	Method and apparatus for providing differentiated services using a multi-level queuing mechanism	Nortel Networks Corp	8	4.52	1.77

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06445292	2002	Jen; Hsing C. Baricovich; Deborah R.	Processor based wireless detector	Honeywell International Inc.	8	5.29	1.51
06788765	2004	Beamon; Elizabeth Ann	Clear defective pairs module for proactive maintenance application	BellSouth Corp.	7	0.86	8.11
06678357	2004	Stumer; Peggy M. Stampfl; Robert Fartmann; Alfons Hipfinger; Walter	Internet protocol (IP) emergency connections (ITEC) telephony	Siemens Aktiengesellschaft	7	1.25	5.60
06731639	2004	Ors; Tolga Cable; Julian Rosenberg; Catherine	Multi protocol label switching for multiple access segments	Nortel Networks Corp	7	1.38	5.07
06542047	2003	Chen; Lu Setty; Radha Ji; Daxiong	Ninety degree splitter with at least three windings on a single core	MINI-CIRCUITS	7	1.52	4.60
06711125	2004	Walrand; Jean Gupta; Rajarshi Fawaz; Ayman	Provisioning networks for reliable quality of service	EXTREME NETWORKS	7	1.58	4.44
06552673	2003	Webb; Jennifer H.	Efficient table access for reversible variable length code decoding using a hash function	Texas Instruments Inc	7	2.05	3.42
06535137	2003	Ryan; Janet Lee	Child seat alarm	UNASSIGNED	7	2.06	3.39
06744740	2004	Chen; Priscilla	Network protocol for wireless devices utilizing location information	Motorola Inc.	7	2.20	3.18
06067006	2000	O'Brien; Patricia A.	Personal audible alarm	UNASSIGNED	7	2.58	2.71
06633696	2003	Vahala; Kerry J Yariv; Amnon	Resonant optical wave power control devices and methods	California Institute of Technology	7	2.67	2.63
06593851	2003	Bornstein; Aimee	Two-way parent-child paging system	UNASSIGNED	7	2.77	2.52
06219158	2001	Dawe; Julie T.	Method and apparatus for a dynamically variable scanner, copier or facsimile secondary reflective surface	Hewlett-Packard Co	7	3.52	1.99
05786749	1998	Johnson; Cynthia Sweeny; Suzette	Toothbrush holder with integrated automatic sound device	UNASSIGNED	7	3.56	1.97
06538416	2003	Hahne; Ellen L. Pan; Ping P. Schulzrinne; Henning G.	Border gateway reservation protocol for tree-based aggregation of inter-domain reservations	Alcatel-Lucent	7	3.67	1.91
06639916	2003	Wakizaka; Mayumi	AAL receiving circuit and method of processing ATM cells	NEC Corp	7	3.67	1.91

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06535492	2003	Shtivelman; Yuri	Method and apparatus for assigning agent-led chat sessions hosted by a communication center to available agents based on message load and agent skill-set	Alcatel (France)	7	3.67	1.91
06396403	2002	Haner; Lenora A.	Child monitoring system	UNASSIGNED	7	3.85	1.82
06560196	2003	Wei; Sherry Xiaobo	Method and apparatus for controlling the transmission of cells across a network	Cisco Systems Inc.	7	4.27	1.64
06181266	2001	Toki; Nozomi	D/A conversion method and a D/A converter using pulse width modulation	NEC Corp	7	4.34	1.61
06354212	2002	Krinsky; Lynn Paula	Method of preparing customized wallpaper panels	UNASSIGNED	7	4.40	1.59
06036203	2000	Tyus; Sierra Tyus; Yolounda	Tool dolly	UNASSIGNED	7	4.45	1.57
06366772	2002	Arnson; Jill C.	Caller identification delivery in a wireless local loop or other systems	Intel Corporation	7	4.52	1.55
06320618	2001	Aoyama; Chiaki	Semiconductor image sensor with a plurality of different resolution areas	Honda Motor Co. Ltd.(Giken Kogyo KK)	7	4.55	1.54
06239843	2001	Gaudreau; Jean Etienne	Method and system for decoding data in a signal	WAVO CORP	7	4.55	1.54
06774849	2004	Umehara; Naoko Nakano; Hisamatsu	Invented-F plate antenna and wireless communication device	Sharp Corp	6	1.23	4.86
06614987	2003	Ismail; Labeeb K. Gogoi; Amar N. Stupak; Yuri	Television program recording with user preference determination	METABYTE INC	6	2.00	3.00
06535746	2003	Yu; I-Hsiang Chan; May Y.	Method and apparatus supporting short message services in a wireless number portability environment	Verizon Communications Inc	6	2.17	2.77
06442195	2002	Liu; Ming-Kang Ku; Man Ho Wang; Yukuang	Multiple low speed sigma-delta analog front ends for full implementation of high-speed data link protocol	INTEGRATED TELECOM EXPRESS INC	6	2.94	2.04
06466628	2002	Kim; Helen Haeran	Technique for effectively rendering power amplification and control in wireless communications	Alcatel-Lucent	6	3.48	1.72
06542551	2003	Okunev; Yuri Drucker; Vitaly Wang; Qin Goldstein; Yuri	Translation table and constellation design for a PCM modem subjected to alternating robbed bit signaling	PC-Tel Inc	6	3.50	1.71
06462659	2002	Schuetter; Kim M.	Portable remote mail detection system	UNASSIGNED	6	3.53	1.70
06437914	2002	Hall, Jr.; Estill Thone Pfile; Wendy Rene	Projection televisions with holographic screens having center to edge variations	Thomson (formerly Multimedia)	6	3.67	1.63
06369698	2002	Valente; Nancy Ann	Device with interval playbacks for pets and infants	UNASSIGNED	6	3.85	1.56

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Communications

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06728326	2004	Fulghum; Tracy	Reduced complexity for initial mobile terminal synchronization	Ericsson	5	0.95	5.27
06771755	2004	Simpson; Anita Hogans	Personalized caller identification in a telephone network	BellSouth Corp.	5	1.41	3.54
06654432	2003	O'Shea; Deirdre Lakkis; Ismail Safavi; Saeid Tayebi; Masood K.	Joint maximum likelihood frame and timing estimation for a digital receiver	WIRELESS FACILITIES INC	5	1.51	3.30
06693530	2004	Dowens; Jac P. Spudic; Cynthia L.	Home security administration platform	AT&T Inc	5	1.52	3.29
06674760	2004	Walrand; Jean Gupta; Rajarshi	Method and system for implementing end-to-end QoS in packet-switched networks	EXTREME NETWORKS INC	5	1.58	3.17
06563856	2003	O'Shea; Deirdre Lakkis; Ismail Safavi; Saeid Tayebi; Masood K. Hatim; Baya O'Scolai; Cathal	Frame synchronization and detection technique for a digital receiver	WIRELESS FACILITIES INC	5	1.60	3.12
06711147	2004	Barnes; Mary H. Hosain; Akram Qaddoura; Emad A. Akhtar; Haseeb	Merged packet service and mobile internet protocol	Nortel Networks Corp	5	2.00	2.50
06553110	2003	Peng; Sharon	Selective telephone caller identification service	Koninklijke Philips Electronics N.V.	5	2.00	2.50
06594313	2003	Hazra; Rajeeb Kasai; Arlene	Increased video playback framerate in low bit-rate video applications	Intel Corporation	5	2.09	2.39
06507296	2003	Lee; Yvette P. Hassoun; Marwan N.	Current source calibration circuit	Xilinx Inc.	5	2.18	2.29
06519446	2003	Tawil; Carmen Tawil; Saleem	Apparatus and method for reusing satellite broadcast spectrum for terrestrially broadcast signals	NORTHPOINT TECHNOLOGY LTD	5	2.64	1.89
06525653	2003	Rigmaiden; Annie	Vehicle security and monitoring system	UNASSIGNED	5	2.82	1.77
06430235	2002	O'Shea; Deirdre Lakkis; Ismail Tayebi; Masood	Non-data-aided feedforward timing synchronization method	WIRELESS FACILITIES INC	5	3.20	1.56
06359878	2002	Lakkis; Ismail O'Shea; Deirdre Tayebi; Masood K. Hatim; Baya	Non-data-aided maximum likelihood based feedforward timing synchronization method	WIRELESS FACILITIES INC	5	3.30	1.52

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05768510	1998	Gish; Sheri L.	Object-oriented system, method and article of manufacture for a client-server application enabler system	Sun Microsystems Inc	111	43.38	2.56
04787051	1988	Olson; Lynn T.	Inertial mouse system	Tektronix Inc	109	20.14	5.41
05025387	1991	Frane; Terrie L.	POWER SAVING ARRANGEMENT FOR A CLOCKED DIGITAL CIRCUIT	Motorola Inc.	106	38.56	2.75
05650994	1997	Daley; Kathleen	Operation support system for service creation and network provisioning for video dial tone networks	Verizon Communications Inc	97	23.04	4.21
04460982	1984	Gee; Lubin Cheng; Pearl Bobra; Yogendra Mehta; Rustam	INTELLIGENT ELECTRICALLY PROGRAMMABLE AND ELECTRICALLY ERASABLE ROM	Intel Corporation	95	17.13	5.55
05325525	1994	Shan; Ming-Chien Murphy; Marguerite C.	Method of automatically controlling the allocation of resources of a parallel processor computer system by calculating a minimum execution time of a task and scheduling subtasks against resources to execute the task in the minimum time	Hewlett-Packard Co	94	40.00	2.35
05768541	1998	Pan-Ratzlaff; Ruby	System for hot-plugging peripheral device to computer bus and disconnecting peripheral device upon detecting predetermined sequence of keystrokes inputted by user through keyboard	Dell Inc	93	12.80	7.27
05734865	1998	Yu; Kin C.	Virtual local area network well-known port routing mechanism for mult--emulators in an open system environment	Bull SA	88	23.16	3.80
05541912	1996	Choudhury; Abhijit K. Hahne; Ellen L.	Dynamic queue length thresholds in a shared memory ATM switch	Alcatel-Lucent	87	38.76	2.24
04763333	1988	Byrd; Kerry	Work?saving system for preventing loss in a computer due to power interruption	UNIVERSAL VECTORS CORP	82	19.91	4.12
05049863	1991	Oka; Mayumi	CURSOR KEY UNIT FOR A COMPUTER HAVING A MOUSE FUNCTION REMOVABLY MOUNTED ON A KEYBOARD SECTION OF A BASE	Toshiba Corp	81	19.30	4.20
05243528	1993	Lefebvre; Rebecca K.	Land vehicle navigation apparatus with visual display	Motorola Inc.	80	16.21	4.93
05151875	1992	Sato; Tai	MOS array multiplier cell	LSI Logic Corp.	75	9.62	7.79
05056000	1991	Chang; Robin	SYNCHRONIZED PARALLEL PROCESSING WITH SHARED MEMORY	INTERNATIONAL PARALLEL MACHINES	73	22.93	3.18

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04641238	1987	Kneib; Kristine N.	MULTIPROCESSOR SYSTEM EMPLOYING DYNAMICALLY PROGRAMMABLE PROCESSING ELEMENTS CONTROLLED BY A MASTER PROCESSOR	ITT Corp	69	23.28	2.96
04742215	1988	Daughters; Turpen A. Mcginnis; Patricia A.	IC CARD SYSTEM	PERSONAL COMPUTER CARD CORP	68	25.45	2.67
05938736	1999	Muller; Shimon Hendel; Ariel Yeung; Louise	Search engine architecture for a high performance multi-layer switch element	Sun Microsystems Inc	67	24.28	2.76
05539645	1996	Mandhyan; Indur B. Trovato; Karen I.	Traffic monitoring system with reduced communications requirements	Koninklijke Philips Electronics N.V.	65	14.03	4.63
05848246	1998	Gish; Sheri L.	Object-oriented system, method and article of manufacture for a client-server session manager in an interprise computing framework system	Sun Microsystems Inc	59	37.08	1.59
05432918	1995	Stamm; Rebecca L.	Method and apparatus for ordering read and write operations using conflict bits in a write queue	Hewlett-Packard Co	58	20.72	2.80
05003462	1991	Blaner; Bartholomew Ngai; Agnes Y.	APPARATUS AND METHOD FOR IMPLEMENTING PRECISE INTERRUPTS ON A PIPELINED PROCESSOR WITH MULTIPLE FUNCTIONAL UNITS WITH SEPARATE ADDRESS TRANSLATION INTERRUPT MEANS	International Business Machines Corp	57	28.28	2.02
05444851	1995	Woest; Karen L.	Method of accessing configured nodes in a facilities management system with a non?configured device	JOHNSON SERVICE CO	57	29.88	1.91
05664117	1997	Shah; Nilesh Ajanovic; Jasmin Dahmani; Dahmane	Apparatus and method for prefetching data to load buffers in a bridge between two buses in a computer	Intel Corporation	55	16.41	3.35
05541852	1996	Eyuboglu; M. Vedat Yong; Mei Zhu; Oin-Fan	Device, method and system for variable bit?rate packet video communications	Motorola Inc.	55	33.13	1.66
04275384	1981	Hicks; Thurmond A. Hicks; Brenda G.	PORTABLE MEDICINE CABINET WITH TIMER	UNASSIGNED	54	11.62	4.65
05233696	1993	Suzuki; Nariko	Microprocessor having precoder unit and main decoder unit operating in pipeline processing manner	NEC Corp	54	24.86	2.17
06216158	2001	Luo; Wenjun Lusher; Elaine P.	System and method using a palm sized computer to control network devices	3Com Corporation	52	15.41	3.38
05774552	1998	Grimmer; Francine Gail	Method and apparatus for retrieving X.509 certificates from an X.500 directory	NCR Corp.	52	16.28	3.20
05184303	1993	Link; Laura J.	Vehicle route planning system	Motorola Inc.	51	16.21	3.15

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05440705	1995	Wang; Bu-Chin Daly; Marita E.	Address modulo adjust unit for a memory management unit for monolithic digital signal processor	Advanced Micro Devices Inc	50	20.72	2.41
06272537	2001	Kekic; Miodrag M. Lu; Grace N. Carlton; Eloise H.	Method for building element manager for a computer network element using a visual element manager builder process	Fujitsu Limited	49	11.11	4.41
04670853	1987	Stepien; Joyce A.	COUPON COMPUTER AND METHOD FOR HANDLING COUPONS	UNASSIGNED	48	12.63	3.80
05548532	1996	Menand; Jean-Rene Joseph; Kuriacose Jessup Jr.; Ansley W.	Apparatus and method for formulating an interactive TV signal	Thomson (formerly Multimedia)	48	26.67	1.80
06310609	2001	Morgenthaler; Angela	User interface with guide lights	Nokia Corp	47	5.65	8.33
05088024	1992	Vernon; Mary K. Manber; Udi	ROUND-ROBIN PROTOCOL METHOD FOR ARBITRATING ACCESS TO A SHARED BUS ARBITRATION PROVIDING PREFERENCE TO LOWER PRIORITY UNITS AFTER BUS ACCESS BY A HIGHER PRIORITY UNIT	University of Wisconsin	47	21.61	2.17
05448724	1995	Hayashi; Yoko	Data processing system having double supervising functions	Fujitsu Limited	46	20.81	2.21
05274816	1993	Oka; Mayumi	Personal computer capable of changing boot priority	Toshiba Corp	45	28.75	1.57
04935867	1990	Wang; Bu-Chin Daly; Marita E.	SIGNAL PROCESSOR MEMORY MANAGEMENT UNIT WITH INDIRECT ADDRESSING USING SELECTABLE OFFSETS AND MODULO VALUES FOR INDEXED ADDRESS CALCULATIONS	Advanced Micro Devices Inc	44	26.13	1.68
05602761	1997	Spoerre; Julie K. Lin; Chang-Ching Wang; Hsu-Pin	Machine performance monitoring and fault classification using an exponentially weighted moving average scheme	Caterpillar Inc.	41	11.06	3.71
05913061	1999	Gupta; Prashant Mellen-Garnett; Katrina A.	Modular application collaboration	CROSSROADS SOFTWARE INC	40	9.92	4.03
04255791	1981	Martin; Gayle P.	SIGNAL PROCESSING SYSTEM	Harris Corp.	40	11.41	3.51
05001561	1991	Haskell; Barin G. Reibman; Amy R.	EMBEDDED CODING SYSTEM FOR VIDEO SIGNALS	Alcatel-Lucent	40	21.29	1.88
06363319	2002	Hsu; Ivy P.	Constraint-based route selection using biased cost	Nortel Networks Corp	39	7.25	5.38
05426739	1995	Lin; Fong Lu Ghosh; Subir K. Chen; Win Shaw; Jhyuping Chen; Chen-Yung V.	Local bus ? I/O Bus Computer Architecture	OPTI INC	39	12.92	3.02

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05404552	1995	Ikenaga; Chikako	Pipeline risc processing unit with improved efficiency when handling data dependency	Mitsubishi Electric Corp	38	15.64	2.43
05170155	1992	Plus; Dora Harwood; Leopold A.	System for applying brightness signals to a display device and comparator therefore	Thomson (formerly Multimedia)	38	19.45	1.95
06094688	2000	Mellen-Garnett; Katrina A. Gupta; Prashant	Modular application collaboration including filtering at the source and proxy execution of compensating transactions to conserve server resources	International Business Machines Corp	37	10.47	3.54
05170158	1992	Shinya; Masako	Display apparatus	Toshiba Corp	37	19.45	1.90
05113134	1992	Plus; Dora Mourey; Bruno B.	Integrated test circuit for display devices such as LCD's	Thomson (formerly Multimedia)	36	10.23	3.52
05343386	1994	Barber; Pamela L.	Apparatus for making electronically produced postcards and method of operating same	IMAGEWARE SOFTWARE INC	36	14.83	2.43
05892962	1999	Cloutier; Jocelyn	FPGA-based processor	Alcatel-Lucent	35	8.67	4.04
05184971	1993	Williams; Susan A.	Toy telephone recorder with picture actuated recording and playback	UNASSIGNED	34	9.29	3.66
05867140	1999	Rader; Sheila M.	Display system and circuit therefor	Motorola Inc.	34	10.28	3.31
05619471	1997	Nunziata; Ann B.	Memory controller for both interleaved and non-interleaved memory	Apple Computer Inc	34	13.39	2.54
05737531	1998	Ehley; Lynnae Anne	System for synchronizing by transmitting control packet to omit blocks from transmission, and transmitting second control packet when the timing difference exceeds second predetermined threshold	International Business Machines Corp	33	12.40	2.66
05619558	1997	Jheeta; Elizabeth A.	ATM segment of one marketing method	NCR Corp.	33	17.35	1.90
05073855	1991	Staplin; Deborah K. Shen; Jian-Kuo Miu; Ming-Tzer	RESOURCE CONFLICT DETECTION METHOD AND APPARATUS INCLUDED IN A PIPELINED PROCESSING UNIT	Bull SA	33	21.88	1.51
05570139	1996	Wang; Yu	Surface plasmon high efficiency HDTV projector	UNASSIGNED	32	11.93	2.68
05398211	1995	Willenz; Avigdor Maas; Kelly A.	Structure and method for providing prioritized arbitration in a dual port memory	Integrated Device Technology Inc.	32	12.84	2.49
04684989	1987	Roeder; Barbara J. Harwood; Leopold A. Weckenbrock; Hermann J.	SIGNAL BACKGROUND NOISE DETECTOR	General Electric Company	32	13.04	2.45
05003510	1991	Kamisaki; Sachiko	SEMICONDUCTOR MEMORY DEVICE WITH FLASH WRITE MODE OF OPERATION	NEC Corp	32	13.05	2.45

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04335302	1982	Robillard; Jean J.	BAR CODE SCANNER USING NON-COHERENT LIGHT SOURCE	R L S INDUSTRIES INC	32	14.12	2.27
06000027	1999	Pawate; Basavaraj I. Prince; Betty	Method and apparatus for improved graphics/image processing using a processor and a memory	Texas Instruments Inc	31	8.67	3.58
06317687	2001	Morimoto; Kyoumi Ozaki; Naokazu Kato; Kiyohide Sugiura; Naoko	Vehicle navigation apparatus providing both automatic guidance and guidance information in response to manual input request	Aisin Seiki Co. Ltd.	31	11.30	2.74
06016520	2000	Facq; Jean-Remy Harris; Lindsay A.	Method of viewing at a client viewing station a multiple media title stored at a server and containing a plurality of topics utilizing anticipatory caching	Microsoft Corporation	31	11.42	2.72
05495243	1996	McKenna; Lou	Emergency vehicle alarm system for vehicles	UNASSIGNED	31	13.95	2.22
04320463	1982	Himmelstein; Sydney	PRODUCTION CONTROL SYSTEM	S HIMMELSTEIN & CO	31	14.61	2.12
05450324	1995	Cikanek; Susan R.	Electric vehicle regenerative antiskid braking and traction control system	Ford Motor Co.	31	15.92	1.95
06115754	2000	Landgren; Patricia A.	System and method for appending location information to a communication sent from a mobile terminal operating in a wireless communication system to an internet server	Nortel Networks Corp	31	16.10	1.93
05485174	1996	Henshaw; Susan F. Redpath; Sarah D.	Display image scroll control and method	International Business Machines Corp	31	16.21	1.91
05083256	1992	Trovato; Karen I. Dorst; Leendert	PATH PLANNING WITH TRANSITION CHANGES	Koninklijke Philips Electronics N.V.	30	18.84	1.59
06131166	2000	Wong-Insley; Becky	System and method for cross-platform application level power management	Sun Microsystems Inc	29	7.91	3.67
05030953	1991	Chiang; Alice M.	CHARGE DOMAIN BLOCK MATCHING PROCESSOR	Massachusetts Institute of Technology	29	12.70	2.28
05212643	1993	Yoshida; Chisato	Vehicle-mounted navigation apparatus	Mitsubishi Electric Corp	29	16.21	1.79
05808374	1998	Miller; Robin Mihekun Hartman; Hollister	Driver interface system for vehicle control parameters and easy to utilize switches	Lear Corp.	28	9.37	2.99
05079734	1992	Riley; Callie A.	DIGITAL DECIMATION FILTER	Harris Corp.	27	9.62	2.81
05305276	1994	Uenoyama; Hiromi	Non-volatile IC memory	Rohm Co. Ltd.	27	13.39	2.02

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06128666	2000	Muller; Shimon Yeung; Louise Hendel; Ariel	Distributed VLAN mechanism for packet field replacement in a multi-layered switched network element using a control field/signal for indicating modification of a packet with a database search engine	Sun Microsystems Inc	27	14.81	1.82
05983316	1999	Norwood; Sherri Lynn	Computing system having a system node that utilizes both a logical volume manager and a resource monitor for managing a storage pool	Hewlett-Packard Co	26	8.25	3.15
05747784	1998	Walter; Joanne S. Flynn; Tracy L.	Method and apparatus for enhancing security in a self-service checkout station	NCR Corp.	26	10.79	2.41
05720019	1998	Koss; Louise A. Nash; Mary Louise	Computer graphics system having high performance primitive clipping preprocessing	Hewlett-Packard Co	26	11.76	2.21
06052711	2000	Gish; Sheri L.	Object-oriented system, method and article of manufacture for a client-server session web access in an interprise computing framework system.	Sun Microsystems Inc	26	15.19	1.71
04893244	1990	Tang; Dah-Lain Chang; Man-Feng Sultan; Myrna C.	PREDICTIVE SPARK TIMING METHOD	General Motors Corp	26	16.95	1.53
04670861	1987	Shu; Lee-Lean Kao; Chao-Ven Shyu; Tai C.	CMOS N ⁺ WELL BIAS GENERATOR AND GATING SYSTEM	Advanced Micro Devices Inc	26	17.20	1.51
05689452	1997	Cameron; Kelly	Method and apparatus for performing arithmetic in large galois field GF(2 ^{sup.n})	University of New Mexico	25	6.51	3.84
05663918	1997	Javanifard; Jahanshir J. Meister; Kimberley D.	Method and apparatus for detecting and selecting voltage supplies for flash memory	Intel Corporation	25	10.41	2.40
04583197	1986	Chappell; Barbara A. Hsieh; Hung-Hui	MULTI-STAGE PASS TRANSISTOR SHIFTER/ROTATOR	International Business Machines Corp	25	12.24	2.04
06104721	2000	Hsu; Teng Tai	DSP based dynamic resource allocation multiprocessor communications board	SYMMETRY COMMUNICATIONS SYSTEMS INC	25	12.48	2.00
04758881	1988	Laspada; Kathleen A.	Still video frame store memory	Eastman Kodak Company	25	12.63	1.98
05848253	1998	Walsh; James J. Joe; Joseph Milhaupt; Robert W. Bridgwater; James Haijima; Kazumi	Computer system and an electronic circuit utilizing a single DMA controller and additional communication circuit to manage DMA transfers between memory and I/O devices	Texas Instruments Inc	25	12.80	1.95
04937732	1990	Brundisini; Andrea	IRRIGATION CONTROLLER	Toro Co.	25	16.17	1.55
05684621	1997	Downing; Elizabeth Anne	Method and system for three-dimensional display of information based on two-photon upconversion	UNASSIGNED	24	10.30	2.33

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05349302	1994	Cooper; Lavon K.	Sense amplifier input stage for single array memory	Honeywell International Inc.	24	12.09	1.98
06119147	2000	Toomey; Lori Adams; Lia	Method and system for computer-mediated, multi-modal, asynchronous meetings in a virtual space	Fuji Photo Film Co. Ltd	23	13.41	1.72
05301668	1994	Hales; Lynn B.	Field of view underwater diving computer monitoring and display system	UNASSIGNED	23	13.58	1.69
04893279	1990	Rahman; Mahboob F. Parikh; Dakshesh D. Daly; Marita E. Wang; Bu-Chin	STORAGE ARRANGEMENT HAVING A PAIR OF RAM MEMORIES SELECTIVELY CONFIGURABLE FOR DUAL?ACCESS AND TWO SINGLE?ACCESS RAMS	Advanced Micro Devices Inc	23	14.63	1.57
06236933	2001	Lang; Brook	Instantaneous traffic monitoring system	INFOMOVE COM INC	22	5.21	4.22
06182157	2001	Schlener; Cynthia Vasudev; Shaila	Flexible SNMP trap mechanism	Hewlett-Packard Co	22	7.06	3.12
06161761	2000	Ghaem; Sanjar O'Malley; Grace Gore; Kiron	Card assembly having a loop antenna formed of a bare conductor and method for manufacturing the card assembly	Motorola Inc.	22	8.27	2.66
05764928	1998	Lanctot; Jane B.	Microprocessor communication protocol in a multiprocessor transmitter	Emerson Electric Co.	22	10.89	2.02
04791613	1988	Hardee; Kim C.	Bit line and column circuitry used in a semiconductor memory	INMOS CORP	22	13.91	1.58
04890487	1990	Dussan V.; Elizabeth B. Sharma; Yogeshwar	METHOD FOR DETERMINING HORIZONTAL AND/OR VERTICAL PERMEABILITY OF A SUBSURFACE EARTH FORMATION	Schlumberger Ltd.	22	14.15	1.56
05528552	1996	Kamisaki; Sachiko	Dynamic random access memory device with sense amplifiers serving as cache memory independent of row address buffer unit for high?speed sequential access	NEC Corp	22	14.53	1.51
05089983	1992	Chiang; Alice M.	CHARGE DOMAIN VECTOR?MATRIX PRODUCT PROCESSING SYSTEM	Massachusetts Institute of Technology	21	9.62	2.18
05909220	1999	Sadow; Robin	Interactive computerized image coloring systems and methods for processing combinations of color with automated subroutines and color standardization for diverse color systems	UNASSIGNED	21	11.76	1.79
05793384	1998	Okitsu; Hiromi	Image decoder with bus arbitration circuit	Yamaha Corp	21	11.76	1.79
05257198	1993	van Schoyck; Carol G.	Method of transmitting edger information to a remote numerically controlled edger	UNASSIGNED	21	12.87	1.63

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05604640	1997	Zipf; Mary J. Jachimowicz; Karen E.	Business card scanner and method of use	Motorola Inc.	20	9.36	2.14
05701450	1997	Duncan; Kathleen Anne	System including ATA sequencer microprocessor which executes sequencer instructions to handle plurality of real-time events allowing to perform all operations without local microprocessor intervention	Seagate Technology	20	9.82	2.04
05826046	1998	Nguyen; Tram Thi Mai Bui; Thao Bich Tran; Christina Hien	Method and apparatus for polling and selecting any paired device in any drawer	International Business Machines Corp	20	11.35	1.76
04709226	1987	Christopher; Lauren A.	CIRCUITRY FOR COMPLEMENTING BINARY NUMBERS	General Electric Company	20	11.45	1.75
06442694	2002	Bergman; Ruth Medard; Muriel	Fault isolation for communication networks for isolating the source of faults comprising attacks, failures, and other network propagating errors	Massachusetts Institute of Technology	19	7.81	2.43
05457805	1995	Nakamura; Kimiko	Microcomputer enabling high speed execution of product?sum operation	NEC Corp	19	9.04	2.10
06154690	2000	Coleman; Raquel	Multi-feature automated wheelchair	UNASSIGNED	19	9.15	2.08
05790432	1998	Morys; Marian	Universal measuring instrument with signal processing algorithm encapsulated into interchangeable intelligent detectors	SOLAR LIGHT CO INC	19	9.88	1.92
04855945	1989	Sakai; Ritsuko	PORTABLE FOOD?CONSTITUENT?AMOUNT DISPLAY AND CALCULATING SYSTEM, AND DEVICE TO OPERATE THE SYSTEM	UNASSIGNED	19	11.05	1.72
05596756	1997	O'Brien; Rita M.	Sub-bus activity detection technique for power management within a computer system	Advanced Micro Devices Inc	19	11.91	1.60
06618644	2003	Bean; Heather N.	Battery recycling	Hewlett-Packard Co	18	2.25	7.99
06456533	2002	Hamilton; Darlene G. Derhacobian; Narbeh Wang; Janet S.Y. Tanpairoj; Kulachet K.T.	Higher program VT and faster programming rates based on improved erase methods	Advanced Micro Devices Inc	18	3.98	4.52
05535150	1996	Chiang; Alice M.	Single chip adaptive filter utilizing updatable weighting techniques	Massachusetts Institute of Technology	18	8.57	2.10
05561615	1996	Kuo; Dong-Ying Koss; Louise A.	Method and apparatus for floating point to fixed point conversion with compensation for lost precision	Hewlett-Packard Co	18	8.57	2.10
05105380	1992	Owechko; Yuri	ELECTRO?OPTIC CHANNELIZED MODULATOR AND RECEIVER	Raytheon Co.	18	9.62	1.87

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06148372	2000	Mehrotra; Sharad Wong; Michelle L.	Apparatus and method for detection and recovery from structural stalls in a multi-level non-blocking cache system	Sun Microsystems Inc	18	10.11	1.78
06003121	1999	Wirt; Lynda M.	Single and multiple channel memory detection and sizing	Intel Corporation	18	10.11	1.78
05358317	1994	Cikanek; Susan R.	Fuzzy logic electric vehicle regenerative antiskid braking and traction control system	Ford Motor Co.	17	7.53	2.26
05821911	1998	Jachimowicz; Karen E.	Miniature virtual image color display	Motorola Inc.	17	8.00	2.13
06088636	2000	Chigumira; Ishmael Chigumira; Robin	Vehicle trip data computer	UNASSIGNED	17	8.89	1.91
05155698	1992	Niimi; Hiroko	Barrel shifter circuit having rotation function	NEC Corp	17	9.62	1.77
05896492	1999	Chong, Jr.; Fay	Maintaining data coherency between a primary memory controller and a backup memory controller	Sun Microsystems Inc	17	9.62	1.77
06003090	1999	Puranik; Vineeta Datta; Utpal Barlow; Rachael	System for determining network connection availability between source and destination devices for specified time period	CABLETRON SYSTEMS INC	17	10.92	1.56
06728365	2004	Li; Xiao-Dong Wang; Chung-Ching Chang; Kim	Method and system for providing quality-of-service on packet-based wireless connections	Nortel Networks Corp	16	0.86	18.54
06584493	2003	Butler; Laura J.	Multiparty conferencing and collaboration system utilizing a per-host model command, control and communication structure	Microsoft Corporation	16	3.59	4.45
06266270	2001	Nobukata; Hiromi	Non-volatile semiconductor memory and programming method of the same	Sony Corp	16	6.02	2.66
05123715	1992	Okubo; Satomi	Estimating road friction coefficient	Akebono Brake Industry Co. Ltd.	16	6.09	2.63
05973957	1999	Tedrow; Kerry D.	Sense amplifier comprising a preamplifier and a differential input latch for flash memories	Intel Corporation	16	9.02	1.77
05126963	1992	Fukasawa; Hisako	Hardware arrangement for floating?point multiplication and operating method therefor	NEC Corp	16	9.62	1.66
06590811	2003	Hamilton; Darlene G. Derhacobian; Narbeh Wang; Janet S. Y. Tanpairoj; Kulachet	Higher program VT and faster programming rates based on improved erase methods	Advanced Micro Devices Inc	15	2.21	6.80
05664168	1997	Yishay; Oded Harwood; Ann E. Le; Chinh H.	Method and apparatus in a data processing system for selectively inserting bus cycle idle time	Motorola Inc.	15	4.00	3.75

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06188944	2001	Kolmanovsky; Llya V. Sun; Jing Wang; Leyi	Torque control strategy for engines with continuously variable transmission	Ford Motor Co.	15	6.46	2.32
05764403	1998	Downing; Elizabeth A.	Panel display using two-frequency upconversion fluorescence	UNASSIGNED	15	8.57	1.75
04870587	1989	Kumagai; Chiaki	METHOD OF DISCRIMINATING A STROKE OF A 4?CYCLE INTERNAL COMBUSTION ENGINE	Honda Motor Co. Ltd.(Giken Kogyo KK)	15	8.87	1.69
04318431	1982	Evans; Susan D.	ELECTRONIC CONTROL SYSTEM FOR A POUCH PACKAGING MACHINE	RJR FOODS INC	15	9.90	1.52
05409107	1995	Browne; Patricia	Computer mouse holder	UNASSIGNED	15	9.93	1.51
06370605	2002	Chong, Jr.; Fay	Switch based scalable performance storage architecture	Sun Microsystems Inc	14	3.27	4.28
06362798	2002	Kimura; Mutsumi Matsueda; Yojiro Ozawa; Tokuroh Quinn; Michael	Transistor circuit, display panel and electronic apparatus	Seiko Epson Corporation	14	3.69	3.79
06098087	2000	Lemay; Danielle G.	Method and apparatus for performing shift operations on packed data	Infineon Technologies AG	14	4.19	3.35
05092662	1992	Okubo; Satomi	ANTI?LOCK CONTROL METHOD AND APPARATUS FOR VEHICLE	Akebono Brake Industry Co. Ltd.	14	6.09	2.30
05703799	1997	Ohta; Mutsumi	Lossless transform coding system for digital signals	NEC Corp	14	6.31	2.22
06298426	2001	Ajanovic; Jasmin	Controller configurable for use with multiple memory organizations	Intel Corporation	14	6.49	2.16
05953074	1999	Reddy; Chandra S.	Video adapter circuit for detection of analog video scanning formats	Genesis Microchip Inc.	14	7.21	1.94
05028095	1991	Okubo; Satomi	ANTI?LOCK CONTROL METHOD AND SYSTEM FOR A VEHICLE	Akebono Brake Industry Co. Ltd.	14	7.39	1.89
06108583	2000	Schneck; Phyllis A. Schwan; Karsten Chokhani; Santosh	Adaptive data security system and method	Georgia Institute of Technology	14	8.01	1.75
04843599	1989	Bucker; Rhoda H.	METHOD FOR CONTINUOUS COLOR MAPPING OF SEISMIC DATA	BP P.l.c.	14	8.12	1.72
06101521	2000	Kosiec; Jeannie Han	Data processing method and apparatus operable on an irrational mathematical value	Motorola Inc.	13	4.19	3.11
06032171	2000	Kiriaki; Sami Nagaraj; Krishnasawamy Glover; Kerry C.	Fir filter architecture with precise timing acquisition	Texas Instruments Inc	13	4.19	3.11

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06111586	2000	Ikeda; Hisayoshi Shiraha; Junko Takeda; Keiko Hirose; Akifumi Takahashi; Matsudou Hieda; Miyuki	Electronic photo album editing apparatus	Fujitsu Limited	13	6.03	2.16
06202005	2001	Mahaffey; Ann	System for selectively printing messages and adding inserts to merchant statements	First Data Corp.	13	6.22	2.09
05892455	1999	Matsumoto; Mariko	Analog wrist watch and pager providing message display on cover glass	NEC Corp	13	6.92	1.88
04983898	1991	Kanda; Masae	METHOD AND SYSTEM FOR CHANGING CONTROL PARAMETERS IN ACCORDANCE WITH STATE OF PROCESS IN PROCESS CONTROL	Toshiba Corp	13	8.00	1.63
06069614	2000	Singhal; Tara C	Man machine interface via display peripheral	UNASSIGNED	12	5.52	2.17
06195079	2001	Reddy; Chandra S.	On-screen user interface for a video adapter circuit	Genesis Microchip Inc.	12	5.65	2.13
06272575	2001	Rajchel; Suzanne Kennedy	Modular digital assistant	Alcatel-Lucent	12	6.26	1.92
06078361	2000	Reddy; Chandra S.	Video adapter circuit for conversion of an analog video signal to a digital display image	Genesis Microchip Inc.	12	6.40	1.87
04718506	1988	Hills; Karen F.	PROM CARD ARRANGEMENT FOR POSTAL/SHIPPING SCALE	Pitney Bowes Inc.	12	6.53	1.84
06058042	2000	Nobukata; Hiromi	Semiconductor nonvolatile memory device and method of data programming the same	Sony Corp	12	7.59	1.58
06512701	2003	Hamilton; Darlene G. Tanpairo; Kulachet Wu; Yider	Erase method for dual bit virtual ground flash	Advanced Micro Devices Inc	11	2.21	4.98
06349357	2002	Chong, Jr.; Fay	Storage architecture providing scalable performance through independent control and data transfer paths	Sun Microsystems Inc	11	3.67	3.00
06040531	2000	Miller-Kovach; Karen Watson; Sarah May Way; Marian Jane Frye; Wanema Melnyk; Mary Grace Forman; Adrienne	Process for controlling body weight	WEIGHT WATCHERS (UK) LTD	11	5.08	2.17
06286071	2001	Iijima; Yuko	Communication control method, communication system and electronic device used therefor	Sony Corp	11	6.06	1.81
06272389	2001	Dietrich; Brenda Lynn	Method and system for capacity allocation in an assembly environment	International Business Machines Corp	11	6.22	1.77
05691927	1997	Gump; Carolyn	Nutritional aid and method of operating the same	UNASSIGNED	11	6.51	1.69

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06505772	2003	Mollett; Cassandra J. Schmutz-Nugent; Melanie McGuire; Judith	System for utilizing a single card to provide multiple services in an open network environment	First Data Corp.	10	2.14	4.68
06397267	2002	Chong, Jr.; Fay	Redirected I/O for scalable performance storage architecture	Sun Microsystems Inc	10	3.16	3.16
06467008	2002	Gentry, Jr.; Denton E. Cheng; Linda T.	Method and apparatus for indicating an interrupt in a network interface	Sun Microsystems Inc	10	4.33	2.31
06662221	2003	Gonda; Rohinton S. Shu; Nin Kin Vangala; Ramalingeswara R.	Integrated network and service management with automated flow through configuration and provisioning of virtual private networks	Alcatel-Lucent	10	5.85	1.71
06272555	2001	Gish; Sheri L.	Object-oriented system, method and article of manufacture for a client-server-centric enterprise computing framework system	Sun Microsystems Inc	10	6.62	1.51
06491217	2002	Catan; Carolyn Ramsey	Machine readable label reader system with versatile response selection	Koninklijke Philips Electronics N.V.	9	3.33	2.70
06459618	2002	Wang; Janet S. Y.	Method of programming a non-volatile memory cell using a drain bias	Advanced Micro Devices Inc	9	3.98	2.26
06296489	2001	Blass; Laurie J. Elder; Pamela H.	System for sound file recording, analysis, and archiving via the internet for language training and other applications	HEURISTIX	9	5.26	1.71
06393534	2002	Chen; Andrea Y. J. Yue; Lordson L.	Scheduler for avoiding bank conflicts in issuing concurrent requests to main memory	ATI Technologies Inc.	9	5.65	1.59
06067850	2000	Lang; Yu Tao; Xiaojian	Fast and accurate tire pressure charge controller	UNASSIGNED	9	5.74	1.57
05739760	1998	Hatakeyama; Satomi	Method and system for remote supervisory control	Fujitsu Limited	9	5.77	1.56
06587782	2003	Nocek; Tracey Paulauskas; Cynthia	Method and system for providing reminders about points of interests while traveling	Navigation Technologies Corporation	8	1.55	5.16
06711624	2004	Narurkar; Rajen Bodapati; Chandra	Process of dynamically loading driver interface modules for exchanging data between disparate data hosts	PRODEX TECHNOLOGIES	8	1.70	4.71
06697864	2004	Demirtjis; Ann Jeffrey; Mark T.	Login architecture for network access through a cable system	Microsoft Corporation	8	1.84	4.36
06684256	2004	Warrier; Chandra Xu; Yingchun	Routing method for mobile wireless nodes having overlapping internet protocol home addresses	UTStarcom Inc	8	2.02	3.96
06314381	2001	Johansson; Ola M.	Refiner measurement system and method	J & L FIBER SERVICES INC	8	3.50	2.29

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06230253	2001	Roussel; Patrice Thakkar; Ticky	Executing partial-width packed data instructions	Intel Corporation	8	4.36	1.83
06611868	2003	Arutyunov; Yuri	Method and system for automatic link hang up	3Com Corporation	8	4.64	1.72
04980532	1990	Morishita; Junko	MACHINING TIME ESTIMATING DEVICE FOR ELECTRIC DISCHARGE MACHINING OPERATION	Mitsubishi Electric Corp	8	4.74	1.69
06401991	2002	Eannone; Kathleen H.	Computer timed-locked medication container with individual compartments	UNASSIGNED	7	1.59	4.40
06670944	2003	Ishii; Kenya	Shift register circuit, driving circuit for an electrooptical device, electrooptical device, and electronic apparatus	Seiko Epson Corporation	7	1.89	3.71
06559882	2003	Kerchner; Lynn L.	Domestic appliance	NCR Corp.	7	2.15	3.26
06618290	2003	Wang; Janet S. Y. Derhacobian; Narbeh	Method of programming a non-volatile memory cell using a baking process	Advanced Micro Devices Inc	7	2.21	3.17
06516371	2003	Lai; Po-Shen Niu; Autumn J.	Network interface device for accessing data stored in buffer memory locations defined by programmable read pointer information	Advanced Micro Devices Inc	7	2.23	3.14
06442664	2002	Maynard; Ann Marie Twichell; Brian Chase	Computer memory address translation system	International Business Machines Corp	7	3.00	2.33
06050379	2000	Lyon; Kim M.	Algorithm for electro-mechanical clutch actuator	DaimlerChrysler AG	7	3.18	2.20
06507629	2003	Hatakeyama; Izumi	Address generator, interleave unit, deinterleave unit, and transmission unit	Sony Corp	7	3.25	2.15
06449726	2002	Smith; Kim C.	Method, system, software, and signal for estimating battery life in a remote control device	Gateway Inc.	7	3.27	2.14
06567983	2003	Shiimori; Yoshiko	Electronic album producing and viewing system and method	Fuji Photo Film Co. Ltd	7	3.37	2.07
06163759	2000	Kita; Kazumi	Method for calibrating variable delay circuit and a variable delay circuit using the same	Advantest Corp.	7	3.75	1.87
06446017	2002	Skidmore; Beth	Method and system for tracking manufacturing data for integrated circuit parts	Micron Technology Inc.	7	3.75	1.87
06349242	2002	Mahaffey; Ann	Method for selectively printing messages and adding inserts to merchant statements	First Data Corp.	7	4.04	1.73
06549189	2003	Zarek; Lynne	Method for operating a computer input device and keyboard	Micron Technology Inc.	7	4.15	1.69
06392592	2002	Johnson; Susan Desai; Tejas	Hand held car locator	Siemens Aktiengesellschaft	7	4.47	1.57

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06718231	2004	Konno; Reizo Ogure; Satoko	Authoring system and authoring method, and storage medium	Sony Corp	6	1.27	4.71
06665751	2003	Chen; Jeane Shu-Chun Feig; Ephraim	Streaming media player varying a play speed from an original to a maximum allowable slowdown proportionally in accordance with a buffer state	International Business Machines Corp	6	1.40	4.30
06505146	2003	Blackmer; Tracy M.	Method and system for spatial evaluation of field and crop performance	Monsanto Co.	6	1.50	4.00
06535218	2003	Schlapp; Elizabeth J.	Frame buffer memory for graphic processing	Mitsubishi Electric Corp	6	2.12	2.83
06522315	2003	Ozawa; Tokuroh Kimura; Mutsumi	Display apparatus	Seiko Epson Corporation	6	2.35	2.56
06061532	2000	Bell; Cynthia Sue	Animated image presentations with personalized digitized images	Eastman Kodak Company	6	2.36	2.54
06411198	2002	Hirai; Koutarou Yanagida; Masayuki Takasu; Ai	Portable terminal device	Matsushita Electric Industrial Co. Ltd.	6	2.41	2.49
06545895	2003	Li; Che-yu Moriarty; Sharon L.	High capacity SDRAM memory module with stacked printed circuit boards	HIGH CONNECTION DENSITY INC	6	2.44	2.46
06462549	2002	Curtis; Andrew Ryan; Sarah Martin; James Edward	Method and system for electroseismic monitoring of microseismicity	Schlumberger Ltd.	6	2.67	2.25
06441846	2002	Carl bom; Ingrid B. Jean; Yves D. Pingali; Sarma V G K	Method and apparatus for deriving novel sports statistics from real time tracking of sporting events	Alcatel-Lucent	6	3.36	1.79
06542392	2003	Yanagawa; Miki	Content addressable memory devices determining entry data priority by valid data length	Fujitsu Limited	6	3.46	1.73
05363308	1994	Guyder; Margaret K.	Method for automating the optimization of tool path generation for profile milling	General Electric Company	6	4.00	1.50
06839819	2005	Martin; Marcia Reid	Data management appliance	Sun Microsystems Inc	5	0.50	10.00
06568596	2003	Shaw; Elizabeth C.	XML-based barcode scanner	Symbol Technologies Inc.	5	1.61	3.10
06578763	2003	Brown; Laurie J.	Method and apparatus for vending a containerized liquid product utilizing an automatic self-service refill system	RESTORE PRODUCTS	5	1.81	2.76
06519705	2003	Leung; Kin K.	Method and system for power control in wireless networks using interference prediction with an error margin	AT&T Inc	5	1.96	2.55
06545928	2003	Bell; Debra M.	Antifuse programming current limiter	Micron Technology Inc.	5	2.13	2.35

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Hardware

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06591188	2003	Ohler; Jean K.	Method, system and article of manufacture for identifying regularly traveled routes	Navigation Technologies Corporation	5	2.25	2.22
06360182	2002	Hales; Lynn B.	Field of view underwater dive computer system	UNASSIGNED	5	2.78	1.80
06625157	2003	Niu; Autumn Jane Fischer; Jenny Liu	Apparatus and method in a network switch port for transferring data between buffer memory and transmit and receive state machines according to a prescribed interface protocol	Advanced Micro Devices Inc	5	2.99	1.67
06414594	2002	Guerlain; Stephanie Anne Elisabeth	Method and apparatus for user-initiated alarms in process control system	Honeywell International Inc.	5	3.17	1.58

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Peripherals

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05499128	1996	Hasegawa; Reij Mori; Miki	Liquid crystal display device with acrylic polymer spacers and method of manufacturing the same	Toshiba Corp	103	16.45	6.26
04498146	1985	Martinez; Maria N.	MANAGEMENT OF DEFECTS IN STORAGE MEDIA	Alcatel-Lucent	96	22.95	4.18
05184148	1993	Suga; Yuko Shimomura; Masako	Ink jet recording having an ink with carbon black	Canon Inc	86	12.59	6.83
05548429	1996	Tsujita; Chikako	Process for producing liquid crystal device whereby curing the sealant takes place after pre?baking the substrates	Canon Inc	61	13.26	4.60
05060058	1991	Goldenberg; Jill F. Timmers; Wilhelmus A.G.	MODULATION SYSTEM FOR PROJECTION DISPLAY	Koninklijke Philips Electronics N.V.	60	13.68	4.39
05518534	1996	Pearlstine; Kathryn A. Page; Loretta A.	Ink set and process for alleviating bleed in printed elements	Du Pont (E.I.) de Nemours & Co.	58	15.55	3.73
05521945	1996	Knudson; Kelly J.	Reduced complexity EPR4 post?processor for sampled data detection	Quantum Corp.	57	16.19	3.52
05103359	1992	Marazzo; Penny J.	CONNECTOR APPARATUS FOR ELECTRICALLY COUPLING A TRANSDUCER TO THE ELECTRONICS OF A MAGNETIC RECORDING SYSTEM	Seagate Technology	53	24.20	2.19
04862411	1989	Dishon; Yitzhak Kim; Michelle Y.	MULTIPLE COPY DATA MECHANISM ON SYNCHRONOUS DISK DRIVES	International Business Machines Corp	52	20.09	2.59
04612569	1986	Ichinose; Izumi	VIDEO EDITING VIEWER	ASAKA CO LTD	49	11.11	4.41
04532802	1985	Yeack-Scranton; Celia E. Vogel; Siegfried F.	APPARATUS FOR ANALYZING THE INTERFACE BETWEEN A RECORDING DISK AND A READ?WRITE HEAD	International Business Machines Corp	48	8.29	5.79
05344483	1994	Hinton; Stephanie S.	High?density, low?viscosity ink for use in ink jet printers	PORELON INC	47	23.54	2.00
04555437	1985	Tanck; Elinor J.	TRANSPARENT INK JET RECORDING MEDIUM	XIDEX CORP	47	24.59	1.91
04460907	1984	Nelson; Kerry S.	ELECTROGRAPHIC IMAGING APPARATUS	Minnesota Mining and Manufacturing Com	44	23.69	1.86
04868694	1989	Hagen; Tracy M.	FLEXURE FOR ROTARY ACTUATED ARM	MAGNETIC PERIPHERALS INC	42	10.78	3.90
05079659	1992	Hagen; Tracy M.	GIMBAL FOR SUPPORTING A HYDRODYNAMIC AIR BEARING SLIDER	Seagate Technology	42	13.08	3.21
04837071	1989	Tagoku; Izumi Mashiko; Harumitsu	INFORMATION DISPLAY MEDIUM	Ricoh Co. Ltd.	42	17.41	2.41

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Peripherals

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05100470	1992	Hindagolla; Suraj L. Pagh; Lisa M.	WATERFAST INK FORMULATIONS FOR THERMAL INK?JET USING ORGANIC AMINES	Hewlett-Packard Co	41	23.54	1.74
05009626	1991	Katz; Marcella M.	HUMAN LIFE LIKE DOLLS, MANNEQUINS AND HUMANOIDS AND PET ANIMAL DOLLS AND METHODS OF INDIVIDUALIZING AND PERSONALIZING SAME	UNASSIGNED	39	9.43	4.14
05463413	1995	Ho; May F. Tappon; Ellen	Internal support for top?shooter thermal ink?jet printhead	Hewlett-Packard Co	39	11.69	3.34
05677717	1997	Ohashi; Yumiko	Ink ejecting device having a multi-layer protective film for electrodes	Brother Industries Ltd	39	11.85	3.29
05318370	1994	Nehowig; Kelly R.	Cartridge with data memory system and method regarding same	Brady Corp.	37	7.73	4.79
04838965	1989	Bussard; Janice W.	HOLOGRAPHIC ART APPLIED TO T?SHIRTS OR OTHER TEXTILE PRODUCTS	UNASSIGNED	37	10.78	3.43
05189580	1993	Pisharody; Raghavan Gooch; Beverley R.	Ultra small track width thin film magnetic transducer	AMPEX CORP	37	14.31	2.59
05706064	1998	Fukunaga; Yoko Tsuji; Yoshiko Ikeda; Mitsushi Nikaido; Masaru Kurauchi; Shoichi	LCD having an organic-inorganic hybrid glass functional layer	Toshiba Corp	37	20.47	1.81
04841387	1989	Rindfuss; Diane J.	ARRANGEMENT FOR RECORDING AND INDEXING INFORMATION	UNASSIGNED	36	10.64	3.38
05145270	1992	Darden; Jody J.	Reverse slope keyboard	UNASSIGNED	35	6.27	5.58
04935751	1990	Hamlin; Mindy	LEVEL SENSOR FOR INK BAG	Hewlett-Packard Co	34	13.85	2.45
05407718	1995	Popat; Ghanshyam H. Manfreda; Susan C.	Transparent paper label sheets	Avery Dennison Corp.	32	12.63	2.53
04481550	1984	Miller; Armin Merritt; Lauren V.	METHOD AND APPARATUS FOR FOLLOWING A RECORDED DATA TRACK WITH A READ HEAD	DATA COPY CORP	32	13.79	2.32
04232950	1980	Benham; Judith L.	LIQUID CRYSTAL COMPOSITIONS INCLUDING PLEOCHROIC DYE	Minnesota Mining and Manufacturing Com	32	18.38	1.74
05815176	1998	Rotering; Catherine A.	Multi-finned wiping system for inkjet printheads	Hewlett-Packard Co	31	11.76	2.63
05558454	1996	Owen; Sonia	One?piece laser/ink jet printable divider which is folded over at the binding edge	Avery Dennison Corp.	31	12.60	2.46

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Peripherals

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04988563	1991	Wehr; Mary A.	THERMAL TRANSFER RIBBON WITH PROTECTIVE LAYER	UNASSIGNED	31	13.12	2.36
05445349	1995	Hart; Sandra A.	Wrist support system	UNASSIGNED	31	15.87	1.95
05299291	1994	Ruetz; Brigitte	Color printing method and apparatus using an out-of-gamut color table	Canon Inc	30	15.97	1.88
05596027	1997	Mead; Sharon B. Brennan; Susan J. Morelos; Arsenia Aguilar; Josephine	Condensation and water resistant jet ink	Danaher Corp.	30	17.74	1.69
04914452	1990	Fukawa; Kazumi	INK SHEET/RECORDING PAPER CASSETTE	Ricoh Co. Ltd.	28	13.85	2.02
04367533	1983	Wiener; Patricia P.	IMAGE BIT STRUCTURING APPARATUS AND METHOD	Xerox Corp	28	16.63	1.68
06091686	2000	Caffarelli; Fabrizio D'Amato; Andrea	Compact disc recording system and method	Adaptec Inc.	27	4.88	5.53
05681660	1997	Bull; Sally J. McCray; Lois A.	Protective clear layer for images	Minnesota Mining and Manufacturing Com	26	8.93	2.91
05459501	1995	Lee; Steven S. Miller; Gayle W.	Solid-state ink jet print head	NCR Corp.	26	11.69	2.22
05016342	1991	Pisharody; Raghavan K. Gooch; Beverley R.	METHOD OF MANUFACTURING ULTRA SMALL TRACK WIDTH THIN FILM TRANSDUCERS	AMPEX CORP	26	12.57	2.07
05124716	1992	Roy; Joy Schoening; Susan C.	Method and apparatus for printing with ink drops of varying sizes using a drop-on-demand ink jet print head	Tektronix Inc	26	14.21	1.83
06164853	2000	Foote; Lisa L.	Ergonomic housing for a handheld device	UNASSIGNED	25	4.07	6.14
05771810	1998	Wolcott; Dana W.	Continuous tone microfluidic display and printing	Eastman Kodak Company	25	4.61	5.43
05188464	1993	Aaron; Nancy A.	Handheld bar code printer for envelopes and labels	UNASSIGNED	25	6.49	3.85
05044625	1991	Reid; Paula E.	ACTIVE TAMPER FOR BIDIRECTIONAL SORTER	Xerox Corp	25	6.89	3.63
04358699	1982	Wilsdorf; Doris	VERSATILE ELECTRICAL FIBER BRUSH AND METHOD OF MAKING	University of Virginia (and Patent(s) Found	25	9.94	2.51
04268126	1981	Mumford; Robin B.	THERMAL-PANE WINDOW WITH LIQUID CRYSTAL SHADE	Honeywell International Inc.	25	16.55	1.51
06041023	2000	Lakhansingh; Cynthia	Portable digital radio and compact disk player	UNASSIGNED	24	5.28	4.54
05327305	1994	Thomas; Kimberly I.	Tape format detection system	CONNER PERIPHERALS INC	24	8.27	2.90

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Peripherals

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04385825	1983	Kaneko; Tamaki	COPYING APPARATUS	Ricoh Co. Ltd.	24	10.80	2.22
05282187	1994	Lee; Y. Ellen	Picture orientation markable photo compact disk and method and apparatus for using same	Eastman Kodak Company	23	11.18	2.06
05469198	1995	Kadonaga; Anne P.	Multiple pass printing for achieving increased print resolution	Hewlett-Packard Co	23	11.69	1.97
05500921	1996	Ruetz; Brigitte	Method and apparatus for printing high fidelity color reproductions of colors displayed on a monitor	Canon Inc	23	11.90	1.93
04924242	1990	Fukawa; Kazumi	THERMAL RECORDING APPARATUS USING A DETACHABLE INK SHEET CASSETTE	Ricoh Co. Ltd.	23	13.85	1.66
05446611	1995	Webber; Valerie P.	Head suspension assembly which includes a load beam element having relief channels	Hutchinson Technology Inc.	23	14.53	1.58
05428490	1995	Hagen; Tracy M.	One-piece flexure having an etched load point button	Seagate Technology	23	14.53	1.58
05104731	1992	Gager; Morgan E.	DRY TONER IMAGING FILMS POSSESSING AN ANTI-STATIC MATRIX LAYER	Oce N.V.	22	7.23	3.04
05325349	1994	Taniguchi; Kayoko	Hard disc drive and a servo signal writing apparatus	Sony Corp	22	11.34	1.94
05249166	1993	Hamilton; Rowan T. Hamilton; Rebecca E.	Optical disc audio reproduction device having track playback monitoring system	UNASSIGNED	22	11.34	1.94
05048904	1991	Montagu; Jean I.	TWO-MIRROR SCANNER WITH PINCUSHION ERROR CORRECTION	GENERAL SCANNING INC	22	11.74	1.87
05146248	1992	Duwaer; Arne L. Goldenberg; Jill F.	Light valve projection system with improved illumination	Koninklijke Philips Electronics N.V.	22	14.41	1.53
05658411	1997	Faykish; Lynn E.	Durable security laminate with hologram	Minnesota Mining and Manufacturing Com	21	6.88	3.05
05656360	1997	Faykish; Lynn E. Lu; Shih-Lai	Article with holographic and retroreflective features	Minnesota Mining and Manufacturing Com	21	7.49	2.80
05972479	1999	Lehman; Victoria L.	Camouflage configuration	UNASSIGNED	20	6.03	3.32
05995343	1999	Imamura; Junko	Magnetic head with specified tapered pole tip width ratio	Fujitsu Limited	20	8.35	2.40
04816665	1989	Ksu; Sunny K.	SENSOR ARRAY FOR FOCUS DETECTION	Seagate Technology	20	9.46	2.11
06183092	2001	Troyer; Diane	Laser projection apparatus with liquid-crystal light valves and scanning reading beam	UNASSIGNED	20	10.41	1.92
04449812	1984	Furuichi; Katsushi Takahata; Naomi	PAPER LEAF HANDLING APPARATUS	Canon Inc	20	10.72	1.86

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Peripherals

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05966189	1999	Matsuo; Mutsumi	Active matrix substrate and color liquid crystal display	Seiko Epson Corporation	20	12.00	1.67
05576745	1996	Matsubara; Miyuki	Recording apparatus having thermal head and recording method	Canon Inc	20	13.00	1.54
06108153	2000	Glover; Kerry C.	Servo demodulator and method for synchronous servo demodulation	Texas Instruments Inc	19	5.33	3.56
05152522	1992	Yamashita; Miyuki	Sheetlike article conveying roller assembly	HIRAKAWA KOGYOSHA CO LTD	19	7.27	2.61
04640529	1987	Katz; Marcella M.	FLEXIBLE NON-DISTORTABLE HANDCRAFT SHEET MATERIAL AND METHOD OF APPLYING PRINTED DESIGNS THERETO	UNASSIGNED	19	9.24	2.06
06327047	2001	Motamed; Margaret	Automatic scanner calibration	Electronics for Imaging Inc.	18	3.83	4.70
05978559	1999	Quinion; Susan M.	User interface for distributed printing system	Xerox Corp	18	5.47	3.29
05866236	1999	Faykish; Lynn E.; Lu; Shih-Lai	Article with holographic and retroreflective features	Minnesota Mining and Manufacturing Com	18	6.03	2.98
05817389	1998	Ono; Masumi	Optical disk	Sony Corp	18	6.22	2.89
05604276	1997	Suga; Yuko	Recording liquid and method for ink jet recording using same	Canon Inc	18	6.59	2.73
05413294	1995	Greenquist; Marcia L.	Platform positioned above a keyboard for use with a computer mouse	Alcatel-Lucent	18	8.27	2.18
05424141	1995	Croner; Marjorie	Design transfer process and kit	UNASSIGNED	18	9.00	2.00
04337533	1982	Ando; Ryuta; Kinugawa; Kazumi	FRONT LOADING TYPE RECORD PLAYER	Sony Corp	18	11.40	1.58
05749951	1998	Yoshiike; Etsuko; Takemoto; Kiyohiko; Kubota; Kazuhide	Ink composition for color ink jet recording and recording method with the same	Seiko Epson Corporation	18	11.92	1.51
04927279	1990	Morgan; Ruth B.	KEYBOARDS FOR HOMES	UNASSIGNED	17	7.37	2.31
05102733	1992	Zawadzki; Mary E.	REPULPABLE PRESSURE-SENSITIVE ADHESIVE CONSTRUCTIONS	Avery Dennison Corp.	17	8.33	2.04
05452128	1995	Kimura; Kazumi	Polarization illumination apparatus and projector using the apparatus	Canon Inc	17	10.98	1.55
05655762	1997	Yergenson; Robin P.	Mechanism for avoiding multiple sheet misfeeds in sheet media feed systems	Hewlett-Packard Co	16	4.87	3.28
06110585	2000	Shaw-Klein; Lori J.	Ink jet recording element	Eastman Kodak Company	16	4.99	3.21

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Peripherals

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06093083	2000	Lackey; Lauren D.	Row carrier for precision lapping of disk drive heads and for handling of heads during the slider fab operation	Veeco Instruments Inc.	16	5.67	2.82
04699369	1987	Zirilli; Michele D.	FRONT AIR KNIFE IMPROVEMENT FOR A TOP VACUUM CORRUGATION FEEDER	Xerox Corp	16	8.12	1.97
06226241	2001	D'Amato; Andrea Caffarelli; Fabrizio	Compact disc recording system and method	Sonic Solutions	15	3.67	4.09
05342037	1994	Martin; Kathleen M.	Feed roll wear compensation scheme	Xerox Corp	15	5.77	2.60
05718520	1998	MacKay; Mary K.	Apparatus and method for modifying a print job ticket	Xerox Corp	15	5.87	2.56
05715119	1998	Williams; Kelly Pham; Tho	Rotating crash stop assembly for hard disk drives	Samsung Electronics Co Ltd	15	7.44	2.02
04547088	1985	Shattuck; Meredith D.	CORRECTABLE THERMAL TRANSFER PRINTING RIBBON	International Business Machines Corp	15	7.64	1.96
05055444	1991	Kaszczuk; Linda A.	INTERMEDIATE RECEIVER SUBBING LAYER FOR THERMAL DYE TRANSFER	Eastman Kodak Company	15	8.05	1.86
05817385	1998	Stanislav; Lorri A.	Scented transferable tattoo	UNASSIGNED	15	8.11	1.85
05003415	1991	Freeze; Robin J.	ADAPTIVE HEAD POSITIONING SERVO?MECHANISM	QUME CORP	15	8.19	1.83
05201458	1993	Hagen; Tracy M.	Method of welding a head suspension assembly	Seagate Technology	15	9.58	1.57
05753350	1998	Bright; Lyn E.	Article labeled by a labeling machine applying a tactilely distinguishable marking	B & H MANUFACTURING CO	14	5.95	2.35
05980028	1999	Seccombe; S. Dana	Fluid accumulator for ink-jet print heads	Hewlett-Packard Co	14	8.03	1.74
06459666	2002	Yokoi; Kenya	Information recording apparatus and method	Ricoh Co. Ltd.	13	2.79	4.66
06050671	2000	Rotering; Catherine	Stalagmite dissolving spittoon system for inkjet printheads	Hewlett-Packard Co	13	5.44	2.39
05923485	1999	Ito; Kenya	Storage device for reliably maintaining data in a reproducible state for a long period of time	Hitachi Ltd	13	7.54	1.72
05290115	1994	Little; Karen K.	Cushioning means for keyboard keys	UNASSIGNED	13	7.73	1.68
06156404	2000	Ross; Caroline A. Chen; Tu	Method of making high performance, low noise isotropic magnetic media including a chromium underlayer	Komag Inc.	13	8.09	1.61

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Peripherals

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05589247	1996	Wallack; David A. Lewis; Donald M. Munter; John D. Silbernagel; Peter J. Heiti; Robert V. Yoshida; Yuko	Magnetic recording medium having an embossed backcoat layer	Minnesota Mining and Manufacturing Com	12	5.84	2.05
05120040	1992	Worley; A. Justine	Sheet media tray and mechanism for feeding media of two different sizes	DATAPRODUCTS INC	12	7.67	1.57
06351320	2002	Shin; Helen Haekyung	Memory-saving printer driver	Xerox Corp	11	2.75	4.00
06336722	2002	Wotton; Geoff Chen; Angela	Conductive heating of print media	Hewlett-Packard Co	11	3.61	3.05
05328168	1994	Fox; Elizabeth D.	Hierarchy of jam clearance options including single zone clearance	Xerox Corp	11	5.77	1.91
05825386	1998	Ohashi; Yumiko	Piezoelectric ink-jet device and process for manufacturing the same	Brother Industries Ltd	11	6.91	1.59
05520383	1996	Amagai; Tamio Okita; Satomi	Apparatus for controlling transportation of printed materials	Fujitsu Limited	10	4.84	2.07
06282045	2001	Glover; Kerry C.	Server hard disk drive integrated circuit and method of operation	Texas Instruments Inc	10	5.11	1.96
05786861	1998	Parker; Joan H.	Clipboards attached to computer keyboard	PARKER JOAN H	10	5.90	1.69
05674314	1997	Auslander; Judith D. Higashiyama; Shunichi	Waterfast ink composition for printers	Pitney Bowes Inc.	10	6.18	1.62
06643103	2003	Trindade; Isabel G.	Very high linear resolution CPP differential dual spin valve magnetoresistive head	Seagate Technology	9	2.54	3.55
06330018	2001	Ramanujan; Sujatha Donner; Janet	Method and apparatus for printing high resolution images using reflective LCD modulators	Eastman Kodak Company	9	3.83	2.35
06257714	2001	Seccombe; S. Dana	Method and apparatus for removing air from an inkjet print cartridge	Hewlett-Packard Co	9	3.91	2.30
06099944	2000	Laprade; Jean Paul Geurtsen; Friedrich H. H. Patel; Mukund	Heat-transfer label including a frosted ink design	Avery Dennison Corp.	9	4.99	1.81
06084848	2000	Goto; Kenya	Two-dimensional near field optical memory head	Toshiba Corp	9	5.28	1.70
06256107	2001	Toda; Rieko	Image forming system including interconnected and priority allocated image forming devices	Sharp Corp	8	3.83	2.09
06070000	2000	Mori; Hiromi	Printing device	Brother Industries Ltd	8	4.50	1.78
06419355	2002	Bermel; Alexandra D. Shaw-Klein; Lori J.	Ink jet printing method	Eastman Kodak Company	7	1.68	4.16

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Peripherals

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06392723	2002	Sugiyama; Mamiko Matsuoka; Takaharu	Flat display device with substantially rectangular bezel	Toshiba Corp	7	2.38	2.94
06106927	2000	Zhong; Linda L. Liu; Connie C.	Ultra-smooth as-deposited electroless nickel coatings	Seagate Technology	7	2.84	2.47
06120882	2000	Faykish; Lynn E. Lu; Shih-Lai	Article with holographic and retroreflective features	Minnesota Mining and Manufacturing Com	7	3.69	1.90
06266073	2001	Yergenson; Robin P.	Four beam electrophotographic printing apparatus	Hewlett-Packard Co	7	3.83	1.83
06132118	2000	Grezeszak; Lori	Curved mound ergonomic keyboard	UNASSIGNED	7	4.07	1.72
06111835	2000	Honma; Hiromi	PRML decoder for processing different channel codes with reduced hardware	NEC Corp	7	4.20	1.66
06089765	2000	Mori; Hiromi	Print system and printer	Brother Industries Ltd	7	4.31	1.63
05842694	1998	Brooks; Janice S. Petocchi; Ermanno C.	Stack height control with height sensing feedhead	Xerox Corp	7	4.35	1.61
05951179	1999	Zarek; Lynne	Method of operating a computer keyboard assembly	Web.com Inc	7	4.37	1.60
06426929	2002	Watabe; Teruyasu Yokoi; Kenya	Information recording method	Ricoh Co. Ltd.	6	2.36	2.54
06490052	2002	Yanagidaira; Kazumi	Printer controller	Fuji Photo Film Co. Ltd	6	2.75	2.18
05791645	1998	Takada; Hiromi	Simple inverting path for an auto document feeder for an image forming apparatus	Ricoh Co. Ltd.	6	3.21	1.87
06497781	2002	Dalvey; Jodi A. Nasser; Nabill F.	Image transfer sheet	AMERICAN COATING TECHNOLOGY IN	5	1.86	2.68
06422770	2002	de la Reguera; Deborah J.	Universal inked ribbon assembly for printing apparatus	NASHUA CORP	5	2.10	2.38
06356359	2002	Motamed; Margaret	Toner usage estimation system	Electronics for Imaging Inc.	5	2.75	1.82
06563666	2003	LaPanse; Margot Ann	Disc drive model reference seek algorithm	Seagate Technology	5	2.92	1.71
06364471	2002	Seccombe; S. Dana	Fluid accumulator for ink-jet print heads	Hewlett-Packard Co	5	2.92	1.71
06667788	2003	Maruyama; Muneo Fujimaki; Eriko	Method for producing image on liquid crystal panel, liquid crystal panel and liquid crystal display equipped with the same	NEC Corp	5	3.14	1.59

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05706502	1998	Foley; Jill Paula Sielski; Karen Lynn	Internet-enabled portfolio manager system and method	Sun Microsystems Inc	208	43.31	4.80
04853843	1989	Ecklund; Denise J.	SYSTEM FOR MERGING VIRTUAL PARTITIONS OF A DISTRIBUTED DATABASE	Tektronix Inc	172	48.19	3.57
04775935	1988	Yourick; Denise A.	Video merchandising system with variable and adoptive product sequence presentation order	Toshiba Corp	147	24.63	5.97
04903201	1990	Wagner; Susan W.	AUTOMATED FUTURES TRADING EXCHANGE	WORLD ENERGY EXCHANGE CORP	147	42.26	3.48
05457746	1995	Dolphin; Janet L.	System and method for access control for portable data storage media	SPYRUS INC	144	39.60	3.64
05999179	1999	Kekic; Miodrag M. Lu; Grace N. Carlton; Eloise H.	Platform independent computer network management client	Fujitsu Limited	138	14.05	9.82
04769772	1988	Dwyer; Patricia A.	Automated query optimization method using both global and parallel local optimizations for materialization access planning for distributed databases	Bull SA	135	44.48	3.04
05636371	1997	Yu; Kin C.	Virtual network mechanism to access well known port application programs running on a single host system	Bull SA	129	23.79	5.42
05321833	1994	Chang; Shih-Chio Chow; Anita Du; Min-Wen	Adaptive ranking system for information retrieval	GTE LABORATORIES INC	118	43.40	2.72
04815029	1989	Barker; Barbara A. Hernandez; Irene H. Machart; Beverly H.	IN?LINE DYNAMIC EDITOR FOR MIXED OBJECT DOCUMENTS	International Business Machines Corp	111	29.66	3.74
04509043	1985	Mossaides; Paula X.	METHOD AND APPARATUS FOR DISPLAYING IMAGES	Tektronix Inc	102	16.91	6.03
05303388	1994	Kreitman; Kristee Mountford; Joy	Method to display and rotate a three?dimensional icon with multiple faces	Apple Computer Inc	97	33.25	2.92
05826242	1998	Montulli; Lou	Method of on-line shopping utilizing persistent client state in a hypertext transfer protocol based client-server system	Time Warner Inc.	96	43.32	2.22
05603034	1997	Swanson; Sara J.	Graphical resource editor for software customization	International Business Machines Corp	95	21.54	4.41
05384893	1995	Hutchins; Sandra E.	Method and apparatus for speech synthesis based on prosodic analysis	EMERSON & STERN ASSOCIATES INC	92	20.92	4.40
05611052	1997	Dykstra; Diana R. Wade; Patricia M.	Lender direct credit evaluation and loan processing system	THE GOLDEN 1 CREDIT UNION	87	35.22	2.47

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05060170	1991	Bourgeois; Nancy E. Hause; Sandra L. Lindquist; Arwin B.	SPACE ALLOCATION AND POSITIONING METHOD FOR SCREEN DISPLAY REGIONS IN A VARIABLE WINDOWING SYSTEM	International Business Machines Corp	85	38.35	2.22
04965763	1990	Zamora; Elena M.	COMPUTER METHOD FOR AUTOMATIC EXTRACTION OF COMMONLY SPECIFIED INFORMATION FROM BUSINESS CORRESPONDENCE	International Business Machines Corp	83	20.45	4.06
06038560	2000	Wical; Kelly	Concept knowledge base search and retrieval system	Oracle Corporation	81	22.23	3.64
05852812	1998	Reeder; Mary	Billing system for a network	Microsoft Corporation	81	31.69	2.56
05497319	1996	Chong; Leighton K. Kamprath; Christine K.	Machine translation and telecommunications system	TRANS-LINK INTERNATIONAL CORP	81	32.90	2.46
05860012	1999	Luu; Linda	Installation of application software through a network from a source computer system on to a target computer system	Intel Corporation	77	15.08	5.11
05115501	1992	Kerr; Linda L.	Procedure for automatically customizing the user interface of application programs	International Business Machines Corp	77	34.51	2.23
04829427	1989	Green; Nancy L.	DATABASE QUERY CODE GENERATION AND OPTIMIZATION BASED ON THE COST OF ALTERNATE ACCESS METHODS	EMC Corp.	76	48.19	1.58
05566330	1996	Sheffield; Kim A.	Method for forming a reusable and modifiable database interface object	Sybase Inc.	75	29.46	2.55
04739477	1988	Barker; Barbara A. Hernandez; Irene H.	IMPLICIT CREATION OF A SUPERBLOCK DATA STRUCTURE	International Business Machines Corp	75	44.48	1.69
05602920	1997	Bestler; Caitlin B. Rabii; Khosro M.	Combined DCAM and transport demultiplexer	LG Electronics Inc.	74	16.99	4.35
05222121	1993	Shimada; Keiko	Voice recognition dialing unit	NEC Corp	73	45.81	1.59
05930358	1999	Rao; Mahesh Chandra	Storage device having a nonvolatile memory for storing user changeable operating parameters	Mitsubishi Chemical Holdings Corp.	71	14.92	4.76
05535120	1996	Chong; Leighton K. Kamprath; Christine K.	Machine translation and telecommunications system using user ID data to select dictionaries	TRANS-LINK INTERNATIONAL CORP	71	14.92	4.76
05216593	1993	Dietrich; Brenda L. Escudero; Laureano F.	Method and apparatus for discrete activity resource allocation through cardinality constraint generation	International Business Machines Corp	70	18.68	3.75

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05504837	1996	Griffeth; Nancy D. Velthuisen; Hugo	Method for resolving conflicts among distributed entities through the generation of counter proposals by transversing a goal hierarchy with acceptable, unacceptable, and indeterminate nodes	Telcordia Technologies Inc	69	9.39	7.35
05644740	1997	Kiuchi; Itsuko	Method and apparatus for displaying items of information organized in a hierarchical structure	Hitachi Ltd	68	21.75	3.13
05521841	1996	Arman; Farshid Depommier; Remi Hsu; Arding Chiu; Ming-Yee	Browsing contents of a given video sequence	Siemens Aktiengesellschaft	68	23.85	2.85
05608872	1997	Schwartz; Krista S. Carleton; Allison A. FitzPatrick; Catherine M. Pommier; Theresa M.	System for allowing all remote computers to perform annotation on an image and replicating the annotated image on the respective displays of other comuters	NCR Corp.	68	29.77	2.28
05311423	1994	Clark; Deborah P.	Schedule management method	GTE SERVICE CORP	68	32.12	2.12
04980826	1990	Wagner; Susan W.	VOICE ACTUATED AUTOMATED FUTURES TRADING EXCHANGE	WORLD ENERGY EXCHANGE CORP	67	42.26	1.59
05515490	1996	Buchanan; M. Cecelia Zellweger; Polle T.	Method and system for temporally formatting data presentation in time?dependent documents	Xerox Corp	66	36.73	1.80
04542528	1985	Sanner; Medford D. McWaters; Lynn D.	OCR AND BAR CODE READER WITH OPTIMIZED SENSOR	RECOGNITION EQUIPMENT INC	65	25.21	2.58
04862347	1989	Rudy; Ann M.	SYSTEM FOR SIMULATING MEMORY ARRAYS IN A LOGIC SIMULATION MACHINE	International Business Machines Corp	65	28.89	2.25
05127055	1992	Larkey; Leah S.	Speech recognition apparatus & method having dynamic reference pattern adaptation	KURZWEIL APPLIED INTELLIGENCE IN	63	16.54	3.81
05546576	1996	Cochrane; Roberta J. Pirahesh; Mir H. Sidle; Richard S.	Query optimizer system that detects and prevents mutating table violations of database integrity in a query before execution plan generation	International Business Machines Corp	63	24.26	2.60
04611298	1986	Schuldt; Marlo E.	INFORMATION STORAGE AND RETRIEVAL SYSTEM AND METHOD	HARDING & HARRIS BEHAVIORAL RES	63	40.05	1.57
05333280	1994	Ishikawa; Isako Ushimaru; Yumiko	Parallel pipelined instruction processing system for very long instruction word	NEC Corp	62	19.51	3.18
05121477	1992	Koopmans; Sytze T. Watson; Susan L.	System for interactively creating action bar pull?down windows of a user interface for use at program run time	International Business Machines Corp	62	33.26	1.86
04546434	1985	Gioello; Debbie A.	METHOD FOR DESIGNING APPAREL	UNASSIGNED	60	16.44	3.65

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05056021	1991	Ausborn; Carolyn	METHOD AND APPARATUS FOR ABSTRACTING CONCEPTS FROM NATURAL LANGUAGE	UNASSIGNED	60	28.00	2.14
06236975	2001	Boe; Barbara J. Hamrick; Julia M. Aarant; Marjorie L.	System and method for profiling customers for targeted marketing	IGNITE SALES INC	59	10.00	5.90
05677953	1997	Dolphin; Janet L.	System and method for access control for portable data storage media	SPYRUS INC	59	35.22	1.68
05452406	1995	Butler; Laura J. Grauman; Joyce A.	Method and system for scalable borders that provide an appearance of depth	Microsoft Corporation	58	16.16	3.59
04862376	1989	Ferriter; Kate M. Palmer; Elaine R.	BILL OF MATERIAL INTERFACE TO CAD/CAM ENVIRONMENT	International Business Machines Corp	57	18.29	3.12
04369463	1983	Anastassiou; Dimitris Mitchell; Joan L.	GRAY SCALE IMAGE DATA COMPRESSION WITH CODE WORDS A FUNCTION OF IMAGE HISTORY	International Business Machines Corp	57	18.85	3.02
05230048	1993	Moy; Diana Y.	Data processing system with tree and list data structure	WANG LABORATORIES INC	57	33.17	1.72
05893118	1999	Sonderegger; Kelly E.	Method for managing globally distributed software components	Novell Inc.	56	13.63	4.11
05970477	1999	Roden; Barbara J.	Method and system for allocating costs in a distributed computing network	BellSouth Corp.	54	23.40	2.31
05553145	1996	Micali; Silvia	Simultaneous electronic transactions with visible trusted parties	UNASSIGNED	53	29.15	1.82
06119098	2000	Guyot; Patrice D. Gautier; Laurent	System and method for targeting and distributing advertisements over a distributed network	GUYOT PATRICE D	52	24.10	2.16
06189029	2001	Fuerst; Carol	Web survey tool builder and result compiler	Silicon Graphics Inc.	50	15.41	3.25
06167441	2000	Himmel; Maria Azua	Customization of web pages based on requester type	International Business Machines Corp	50	15.47	3.23
05398292	1995	Aoyama; Chiaki	Edge detecting apparatus	Honda Motor Co. Ltd.(Giken Kogyo KK)	48	15.23	3.15
04930092	1990	Reilly; Shirley L.	POLYGON DISPLAY APPARATUS AND METHOD	AUTO-TROL TECHNOLOGY CORP	48	21.56	2.23
05331573	1994	Balaji; Vitukudi N. Singh; Chandra U.	Method of design of compounds that mimic conformational features of selected peptides	UNASSIGNED	48	23.25	2.06
04723209	1988	Hernandez; Irene H. Barker; Barbara A. Machart; Beverly H.	FLOW ATTRIBUTE FOR TEXT OBJECTS	International Business Machines Corp	48	24.63	1.95
04589144	1986	Namba; Hiromi	CHARACTER AND IMAGE PROCESSING APPARATUS	Toshiba Corp	48	26.22	1.83

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05408665	1995	Fitzgerald; Judith A.	System and methods for linking compiled code with extended dictionary support	BORLAND SOFTWARE CORP	48	27.14	1.77
05199077	1993	Wilcox; Lynn D. Bush; Marcia A.	Wordspotting for voice editing and indexing	Xerox Corp	47	17.03	2.76
04754489	1988	Bokser; Mindy R.	MEANS FOR RESOLVING AMBIGUITIES IN TEXT BASED UPON CHARACTER CONTEXT	PALANTIR CORP	47	23.32	2.02
05673369	1997	Kim; Michelle Yoonkyung	Authoring knowledge-based systems using interactive directed graphs	International Business Machines Corp	46	10.24	4.49
05923884	1999	Peyret; Patrice Lisimaque; Gilles	System and method for loading applications onto a smart card	Gemalto	46	15.08	3.05
05412772	1995	Monson; Lynn T.	System for permitting a view of an object or a user interface to be exchanged between operating system environments	Novell Inc.	46	25.39	1.81
05126962	1992	Chiang; Alice M.	Discrete cosine transform processing system	Massachusetts Institute of Technology	45	9.62	4.68
05393236	1995	Blackmer; Elizabeth R. Ferrier; Linda J.	Interactive speech pronunciation apparatus and method	Northeastern University (Boston MA)	45	13.54	3.32
05953718	1999	Wical; Kelly	Research mode for a knowledge base search and retrieval system	Oracle Corporation	45	26.84	1.68
04837843	1989	Owechko; Yuri	HYBRID OPTICAL AND ELECTRONIC ASSOCIATIVE MEMORY	Raytheon Co.	44	20.71	2.12
05103305	1992	Watanabe; Mutsumi	MOVING OBJECT DETECTING SYSTEM	Toshiba Corp	44	22.14	1.99
05940821	1999	Wical; Kelly	Information presentation in a knowledge base search and retrieval system	Oracle Corporation	43	20.32	2.12
05258998	1993	Koide; Yumi	Data communication apparatus permitting confidential communication	Canon Inc	43	21.68	1.98
05369577	1994	Kadashevich; A. Julie Harvey; Mary F. Clark; Cheryl	Text searching system	WANG LABORATORIES INC	43	23.48	1.83
06081774	2000	de Hita; Carolina Rubio Akker; David van den Govaers; Erik C. E. Platteau; Frank M. J. Deun; Kurt Van Macpherson; Melissa de Bie; Peter Laviolette; Sophie	Natural language information retrieval system and method	Novell Inc.	42	8.31	5.05
05566280	1996	Fukui; Mika Doi; Miwako	3D dynamic image production system with automatic viewpoint setting	Toshiba Corp	42	17.44	2.41

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05345514	1994	Mahdavi; Yaghoub Hedengren; Kristina H.	Method for inspecting components having complex geometric shapes	General Electric Company	42	19.43	2.16
05081692	1992	Kwon; Heemin Liang; Jeanine T.	UNSHARP MASKING USING CENTER WEIGHTED LOCAL VARIANCE FOR IMAGE SHARPENING AND NOISE SUPPRESSION	Eastman Kodak Company	42	22.14	1.90
04994966	1991	Hutchins; Sandra E.	SYSTEM AND METHOD FOR NATURAL LANGUAGE PARSING BY INITIATING PROCESSING PRIOR TO ENTRY OF COMPLETE SENTENCES	EMERSON & STERN ASSOCIATES INC	42	28.00	1.50
05109425	1992	Lawton; Teri B.	METHOD AND APPARATUS FOR PREDICTING THE DIRECTION OF MOVEMENT IN MACHINE VISION	The National Aeronautical and Space Admi	41	22.14	1.85
05429513	1995	Diaz-Plaza; Ruth R.	Interactive teaching apparatus and method for teaching graphemes, grapheme names, phonemes, and phonetics	UNASSIGNED	40	13.54	2.95
04635293	1987	Watanabe; Mutsumi	IMAGE PROCESSING SYSTEM	Toshiba Corp	40	22.06	1.81
05754782	1998	Masada; Debra Nakanishi	System and method for backing up and restoring groupware documents	International Business Machines Corp	40	22.60	1.77
04791587	1988	Doi; Miwako	System for translation of sentences from one language to another	Toshiba Corp	39	22.82	1.71
04773099	1988	Bokser; Mindy R.	Pattern classification means for use in a pattern recognition system	PALANTIR CORP	39	23.32	1.67
05282265	1994	Rohra Suda; Aruna Ito; Yoshie Takeda; Takako	Knowledge information processing system	Canon Inc	38	13.59	2.80
05652786	1997	Rogers; Catherine R.	Automated interactive bill payment system	TELEPAY	38	17.35	2.19
05293430	1994	Shiau; Jeng-Nan Farrell; Barbara L.	Automatic image segmentation using local area maximum and minimum image signals	Xerox Corp	38	19.43	1.96
05089956	1992	Macphail; Margaret G.	METHOD OF DISTRIBUTING RELATED DOCUMENTS TO IDENTIFIED END USERS IN AN INFORMATION PROCESSING SYSTEM	International Business Machines Corp	38	21.09	1.80
05557791	1996	Cheng; Josephine M. Mohan; Chandrasekaran Pirahesh; Mir H.	Outer join operations using responsibility regions assigned to inner tables in a relational database	International Business Machines Corp	38	24.26	1.57
05278946	1994	Shimada; Shigeru Matsushima; Hitoshi Kashioka; Seiji Sugihara; Akiko	Method of presenting multimedia data in a desired form by comparing and replacing a user template model with analogous portions of a system	Hitachi Ltd	37	13.59	2.72

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05548694	1996	Frisken Gibson; Sarah F.	Collision avoidance system for voxel?based object representation	Mitsubishi Electric Corp	37	15.30	2.42
05222160	1993	Sakai; Rieko Kitajima; Naoko Oshima; Chieko	Document revising system for use with document reading and translating system	Fujitsu Limited	37	19.21	1.93
04284975	1981	Odaka; Kazumi	ON?LINE PATTERN RECOGNITION SYSTEM FOR HAND?WRITTEN CHARACTERS	Nippon Telegraph & Telephone Corp.	37	23.08	1.60
06185527	2001	Petkovic; Dragutin Ponceleon; Dulce Beatriz Srinivasan; Savitha	System and method for automatic audio content analysis for word spotting, indexing, classification and retrieval	International Business Machines Corp	36	5.71	6.30
04694407	1987	Ogden; Joan M.	FRACTAL GENERATION, AS FOR VIDEO GRAPHIC DISPLAYS	General Electric Company	36	20.98	1.72
06041323	2000	Kubota; Rie	Information search method, information search device, and storage medium for storing an information search program	International Business Machines Corp	36	22.23	1.62
05576972	1996	Harrison; Dana C.	Intelligent area monitoring system	UNASSIGNED	35	12.18	2.87
05652828	1997	Silverman; Kim Ernest Alexander	Automated voice synthesis employing enhanced prosodic treatment of text, spelling of text and rate of annunciation	Verizon Communications Inc	35	15.67	2.23
04709390	1987	Atal; Bishnu S. Caspers; Barbara E.	SPEECH MESSAGE CODE MODIFYING ARRANGEMENT	Alcatel-Lucent	35	17.67	1.98
05163006	1992	Deziel; Michelle	System for designing custom?made, formfitted clothing, such as bathing suits, and method therefor	INDIVIDUAL PATENTER (US)	35	18.84	1.86
05745901	1998	Entner; Diane T. Wormington; Phyllis J. Lin; Chih Ru	Workflow initiated by graphical symbols	Eastman Kodak Company	34	22.24	1.53
05950167	1999	Yaker; Rhoda	Screen-less remote voice or tone-controlled computer program operations via telephone set	Alcatel-Lucent	33	9.62	3.43
06157924	2000	Austin; Pamela Sue	Systems, methods, and computer program products for delivering information in a preferred medium	BELL & HOWELL MAIL PROCESSING SY	33	18.53	1.78
05630079	1997	McLaughlin; Denise C.	Document job key to tailor multifunctional user interfaces	Xerox Corp	33	19.88	1.66
06307573	2001	Barros; Barbara L.	Graphic-information flow method and system for visually analyzing patterns and relationships	UNASSIGNED	32	9.00	3.56
05583950	1996	Prokoski; Francine J.	Method and apparatus for flash correlation	MIKOS LTD	32	14.95	2.14

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05644736	1997	Healy; Vivian Louise Huang; Hanhsi Nguyen; Tin Luong	System and method for selecting components of a hierarchical file structure	International Business Machines Corp	32	19.88	1.61
04866784	1989	Barski; Lori L.	SKEW DETECTOR FOR DIGITAL IMAGE PROCESSING SYSTEM	Eastman Kodak Company	32	20.71	1.54
05917491	1999	Bauersfeld; Kristin	Page proxy	Time Warner Inc.	31	11.38	2.72
05860064	1999	Henton; Caroline G.	Method and apparatus for automatic generation of vocal emotion in a synthetic text-to-speech system	Apple Computer Inc	31	12.56	2.47
06263447	2001	French; Jennifer Wildner; Jone	System and method for authentication of network users	EQUIFAX INC	31	12.91	2.40
05392137	1995	Okubo; Hiromi	Image processing apparatus in which filtering is selected for input image characteristics	Ricoh Co. Ltd.	31	13.10	2.37
04980917	1990	Hutchins; Sandra E.	METHOD AND APPARATUS FOR DETERMINING ARTICULATORY PARAMETERS FROM SPEECH DATA	EMERSON & STERN ASSOCIATES INC	31	20.45	1.52
05859891	1999	Hibbard; Lyn	Autosegmentation/autocontouring system and method for use with three-dimensional radiation therapy treatment planning	UNASSIGNED	30	6.46	4.64
05402520	1995	Schnitta; Bonnie S.	Neural network method and apparatus for retrieving signals embedded in noise and analyzing the retrieved signals	UNASSIGNED	29	9.83	2.95
05721938	1998	Stuckey; Barbara K.	Method and device for parsing and analyzing natural language sentences and text	UNASSIGNED	29	10.56	2.75
06029149	2000	Dykstra; Diana R. Wade; Patricia M.	Lender direct credit evaluation and loan processing system	THE GOLDEN 1 CREDIT UNION	29	13.07	2.22
05421731	1995	Walker; Susan M.	Method for teaching reading and spelling	UNASSIGNED	29	13.54	2.14
04696042	1987	Goudie; Kathleen M.	SYLLABLE BOUNDARY RECOGNITION FROM PHONOLOGICAL LINGUISTIC UNIT STRING DATA	Texas Instruments Inc	29	17.67	1.64
05999208	1999	McNerney; Michelle Yang; Rachel Y.	System for implementing multiple simultaneous meetings in a virtual reality mixed media meeting room	Alcatel-Lucent	28	7.81	3.59
06263334	2001	Fayyad; Usama Bennett; Kristin P. Geiger; Dan	Density-based indexing method for efficient execution of high dimensional nearest-neighbor queries on large databases	Microsoft Corporation	28	12.02	2.33
05157759	1992	Bachenko; Joan C.	Written language parser system	Alcatel-Lucent	28	16.54	1.69

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05878156	1999	Okumura; Tomoko	Detection of the open/closed state of eyes based on analysis of relation between eye and eyebrow images in input face images	Mitsubishi Electric Corp	28	17.80	1.57
06480865	2002	Lee; Susan B. Sundaresan; Neelakantan	Facility for adding dynamism to an extensible markup language	International Business Machines Corp	27	4.92	5.49
05952942	1999	Balakrishnan; Sreeram Chen; Xixian Dong; Yu	Method and device for input of text messages from a keypad	Motorola Inc.	27	7.67	3.52
05515453	1996	Hennessey; A. Kathleen Lin; YouLing Hahn; Kwang-Soo	Apparatus and method for image processing in symbolic space	BEACON SYSTEM INC	27	12.17	2.22
05918236	1999	Wical; Kelly	Point of view gists and generic gists in a document browsing system	Oracle Corporation	27	14.36	1.88
04679096	1987	Nagashima; Nao	IMAGE PROCESSING APPARATUS	Canon Inc	27	16.33	1.65
05870733	1999	Bass; Theresa A. Brinlee; Kerry D.	Automated system and method for providing access data concerning an item of business property	Electronic Data Systems Corp.	27	17.99	1.50
06457038	2002	Defosse; Erin M.	Wide area network operation's center that sends and receives data from vending machines	ISOCHRON DATA CORP	26	5.48	4.75
05732192	1998	Malin; Jane T. Fleming; Land D.	Global qualitative flow-path modeling for local state determination in simulation and analysis	The National Aeronautical and Space Admi	26	9.15	2.84
06076083	2000	Baker; Michelle	Diagnostic system utilizing a Bayesian network model having link weights updated experimentally	UNASSIGNED	26	9.38	2.77
05562453	1996	Wen; Sheree H.-R.	Adaptive biofeedback speech tutor toy	UNASSIGNED	26	9.81	2.65
05839105	1998	Ostendorf; Mari Singer; Harald	Speaker-independent model generation apparatus and speech recognition apparatus each equipped with means for splitting state having maximum increase in likelihood	ATR INTERPRETING TELECOMMUNICA	26	12.76	2.04
05208897	1993	Hutchins; Sandra E.	Method and apparatus for speech recognition based on subsyllable spellings	EMERSON & STERN ASSOCIATES INC	26	15.11	1.72
05933141	1999	Smith; Kim C.	Mutatably transparent displays	Gateway Inc.	26	15.47	1.68
06078329	2000	Umeki; Naoko Doi; Miwako	Virtual object display apparatus and method employing viewpoint updating for realistic movement display in virtual reality	Toshiba Corp	25	7.83	3.19
06182029	2001	Friedman; Carol	System and method for language extraction and encoding utilizing the parsing of text data in accordance with domain parameters	Columbia University	24	6.09	3.94

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05963670	1999	Lipson; Pamela R. Grimson; W. Eric L. Sinha; Pawan Poggio; Tomaso	Method and apparatus for classifying and identifying images	Massachusetts Institute of Technology	24	8.22	2.92
06101279	2000	Nguyen; Truong Q. Tran; Trac D. Hu; Yu Hen	Image compression system using block transforms and tree-type coefficient truncation	University of Wisconsin	24	9.00	2.67
06330561	2001	Cohen; Edith Krishnamurthy; Balachander Rexford; Jennifer Lynn	Method and apparatus for improving end to end performance of a data network	AT&T Inc	24	9.16	2.62
06327570	2001	Stevens; Dian	Personal business service system and method	UNASSIGNED	24	10.00	2.40
05751906	1998	Silverman; Kim Ernest Alexander	Method for synthesizing speech from text and for spelling all or portions of the text by analogy	Verizon Communications Inc	24	12.36	1.94
06002401	1999	Baker; Michelle	User definable pictorial interface for accessing information in an electronic file system	UNASSIGNED	24	14.05	1.71
05054774	1991	Belsito; Anne W.	COMPUTER?CONTROLLED MUSCLE EXERCISING MACHINE HAVING SIMPLIFIED DATA ACCESS	CHATTECX	24	15.64	1.53
06324492	2001	Rowe; Michelle M.	Server stress testing using multiple concurrent client simulation	Microsoft Corporation	23	6.86	3.35
05546507	1996	Staub; Wendy C.	Apparatus and method for generating a knowledge base	Unisys Corp.	23	9.39	2.45
05508810	1996	Sato; Takako	Image recorder for properly orienting output images	Ricoh Co. Ltd.	23	9.76	2.36
04361828	1982	Hose; Wanda H.	AUTOMOTIVE COMMUNICATION	UNASSIGNED	23	12.84	1.79
05669007	1997	Tateishi; Yuka	Method and system for analyzing the logical structure of a document	International Business Machines Corp	23	15.27	1.51
05921780	1999	Myers; Nicole J.	Racecar simulator and driver training system and method	UNASSIGNED	22	8.15	2.70
06173068	2001	Prokoski; Francine J.	Method and apparatus for recognizing and classifying individuals based on minutiae	MIKOS LTD	22	8.93	2.46
06018748	2000	Smith; Jody K.	Dynamic linkable labels in a network browser page	Sun Microsystems Inc	22	13.20	1.67
05873108	1999	Goyal; Jai Goyal; Jean Tze-Yin Pang	Personal information manager information entry allowing for intermingling of items belonging to different categories within a single unified view	FUGA CORP	22	14.05	1.57
06026230	2000	Lin; Sharon Sheau-Pyng Tseng; Ping-Sheng	Memory simulation system and method	AXIS SYSTEMS INC	21	3.93	5.34

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06124811	2000	Acharya; Tinku Karam; Lina J. Marino; Francescomaria	Real time algorithms and architectures for coding images compressed by DWT-based techniques	Intel Corporation	21	5.67	3.71
06031549	2000	Hayes-Roth; Barbara	System and method for directed improvisation by computer controlled characters	EXTEMPO SYSTEMS INC	21	7.67	2.74
05451178	1995	Yorozu; Hiromu Hattori; Emi Yasuhara; Nae	Auditory playing device	Sony Corp	21	8.43	2.49
05708822	1998	Wical; Kelly	Methods and apparatus for thematic parsing of discourse	Oracle Corporation	21	10.56	1.99
05890117	1999	Silverman; Kim Ernest Alexander	Automated voice synthesis from text having a restricted known informational content	Verizon Communications Inc	21	12.56	1.67
06205716	2001	Peltz; Diane P.	Modular video conference enclosure	UNASSIGNED	20	4.89	4.09
06347313	2002	Ma; Wei-Ying Lee; Catherine S. Zhang; HongJiang	Information embedding based on user relevance feedback for object retrieval	Hewlett-Packard Co	20	5.96	3.35
06161111	2000	Mutalik; Madhav Senie; Faith M.	System and method for performing file-handling operations in a digital	EMC Corp.	20	7.00	2.86
05701770	1997	Cook; Nancy A. Murray; Anne M.	Gun safe with dual method of gaining access therein	UNASSIGNED	20	8.23	2.43
04627036	1986	Wyatt; Kay D.	VERTICAL SEISMIC PROFILING	ConocoPhillips	20	8.87	2.25
06005583	1999	Morrison; Teresa M.	Precise gradient calculation system and method for a texture mapping system of a computer graphics system	Hewlett-Packard Co	20	9.71	2.06
06505342	2003	Hartmann; Jean S. Imoberdorf; Claudio	System and method for functional testing of distributed, component-based software	Siemens Aktiengesellschaft	19	3.63	5.24
05432898	1995	Curb; Lisa A. Narayanawami; Chandrasekhar Saha; Avijit	System and method for producing anti?aliased lines	International Business Machines Corp	19	7.67	2.48
06112133	2000	Fishman; Lena	Visual system and method for generating a CNC program for machining parts with planar and curvilinear surfaces	IMCS INC	19	8.01	2.37
06205450	2001	Kanome; Namiko	Computer system capable of restarting system using disk image of arbitrary snapshot	Toshiba Corp	19	9.54	1.99
05828994	1998	Covell; Michele Withgott; M. Margaret	Non-uniform time scale modification of recorded audio	Interval Research Corp	19	10.56	1.80
06356903	2002	Baxter; Sarah Vogt; Lisa C.	Content management system	CGI Group Inc.	18	6.03	2.98

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06072903	2000	Maki; Atsuto Watanabe; Mutsumi Matsuda; Natsuko Wiles; Charles	Image processing apparatus and image processing method	Toshiba Corp	17	4.36	3.90
06041142	2000	Rao; R. Padmanabha Chin; Amanda L.	Analyzer and methods for detecting and processing video data types in a video data stream	Motorola Inc.	17	5.49	3.10
05930154	1999	Thalhammer-Reyero; Cristina	Computer-based system and methods for information storage, modeling and simulation of complex systems organized in discrete compartments in time and space	INTERTECH VENTURES LTD	17	8.15	2.09
05601432	1997	Bergman; Marilyn M.	Educational organizer	MASTERY REHABILITATION SYSTEMS I	17	10.21	1.67
05617513	1997	Schnitta; Bonnie S.	Method for analyzing activity in a signal	UNASSIGNED	17	10.24	1.66
05612895	1997	Balaji; Vitukudi N. Singh; Chandra U.	Method of rational drug design based on ab initio computer simulation of conformational features of peptides	UNASSIGNED	17	11.06	1.54
05878396	1999	Henton; Caroline G.	Method and apparatus for synthetic speech in facial animation	Apple Computer Inc	16	8.95	1.79
05954650	1999	Saito; Kazuyo Tanaka; Yuko	Medical image processing apparatus	Toshiba Corp	16	9.27	1.73
05828786	1998	Rao; R. Padmanabha Chin; Amanda L.	Analyzer and methods for detecting and processing video data types in a video data stream	Motorola Inc.	16	9.61	1.67
04897805	1990	Wang; Jane	METHOD AND APPARATUS FOR PERFORMING POLYGON FILLS IN GRAPHICAL APPLICATIONS	PRIME COMPUTER INC	16	10.36	1.54
06664978	2003	Kekic; Miodrag M. Lu; Grace N. Carlton; Eloise H.	Client-server computer network management architecture	Fujitsu Limited	15	2.94	5.10
06233408	2001	Allen; Loretta E.	Image forming device with token printing capabilities	Eastman Kodak Company	15	4.03	3.72
06088475	2000	Nagashima; Mieko Hatada; Akinobu Nagashima; Toku	Method and apparatus for forming and correcting color image	UNASSIGNED	15	5.00	3.00
04512581	1985	Levine; Paula B.	HIDDEN MESSAGE PUZZLE PACKET	PAULA BLAINE INTERNATIONAL LTD	15	5.33	2.81
06438549	2002	Aldred; Barry Keith Byrne; Debora Jean Shi; Shaw-Ben Stokes; Ellen J.	Method for storing sparse hierarchical data in a relational database	International Business Machines Corp	15	5.86	2.56
05963673	1999	Kodama; Hideo Urano; Takashi Kobayashi; Satoko Hamamoto; Yasuhachi Sugimoto; Etsuko	Method and apparatus for adaptively selecting a coding mode for video encoding	Sanyo Electric Co. Ltd.	15	7.14	2.10

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06346952	2002	Shtivelman; Yuri	Method and apparatus for summarizing previous threads in a communication-center chat session	Alcatel (France)	14	4.92	2.84
06349307	2002	Chen; Doreen Y.	Cooperative topical servers with automatic prefiltering and routing	Koninklijke Philips Electronics N.V.	14	5.48	2.56
06463426	2002	Lipson; Pamela R. Sinha; Pawan	Information search and retrieval system	Massachusetts Institute of Technology	14	5.96	2.35
06069634	2000	Gibson; Sarah	System for rapidly deforming a graphical object	Mitsubishi Electric Corp	14	6.10	2.30
06353824	2002	Boguraev; Branimir Bellamy; Rachel Katherine Emma Wong; Yin Yin	Method for dynamic presentation of the contents topically rich capsule overviews corresponding to the plurality of documents, resolving co-referentiality in document segments	Apple Computer Inc	14	6.39	2.19
05592342	1997	Hall; Dana Bitner; Haim	Method for packing variable size user data records into fixed size blocks on a storage medium	Quantum Corp.	14	7.00	2.00
06098155	2000	Chong, Jr.; Fay	Apparatus and method for streamlining data transfer with existing interconnect bandwidth	Sun Microsystems Inc	14	9.17	1.53
06433818	2002	Steinberg; Eran Prilutsky; Yuri	Digital camera with biometric security	FOTONATION INC	13	3.36	3.87
06185320	2001	Bick; Ulrich Giger; Maryellen L.	Method and system for detection of lesions in medical images	Arch Development Corp	13	3.67	3.55
06199034	2001	Wical; Kelly	Methods and apparatus for determining theme for discourse	Oracle Corporation	13	6.09	2.14
06260016	2001	Holm; Frode Hata; Kazue	Speech synthesis employing prosody templates	Matsushita Electric Industrial Co. Ltd.	13	6.18	2.10
06460034	2002	Wical; Kelly	Document knowledge base research and retrieval system	Oracle Corporation	13	6.39	2.03
06104441	2000	Wee; Susie J. Vasudev; Bhaskaran	System for editing compressed image sequences	Hewlett-Packard Co	13	6.47	2.01
06022222	2000	Guinan; Mary Beth	Icon language teaching system	GUINAN MARY BETH	13	7.08	1.84
05835890	1998	Matsui; Tomoko Furui; Sadaoki	Method for speaker adaptation of speech models recognition scheme using the method and recording medium having the speech recognition method recorded thereon	Nippon Telegraph & Telephone Corp.	13	8.65	1.50
06496594	2002	Prokoski; Francine J.	Method and apparatus for aligning and comparing images of the face and body from different imagers	UNASSIGNED	12	6.27	1.91
06041139	2000	Okubo; Hiromi Ishii; Rie	Image processing apparatus	Ricoh Co. Ltd.	12	7.70	1.56

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06411947	2002	Rice; Amy Hsu; Julie	Automatic message interpretation and routing system	BRIGHTWARE INC	11	4.42	2.49
06269176	2001	Barski; Lori L. Wang; Xiaohui	Method for x-ray antiscatter grid detection and suppression in digital radiography	Eastman Kodak Company	11	5.27	2.09
06393422	2002	Wone; May Ngun	Navigation method for dynamically generated HTML pages	International Business Machines Corp	11	6.03	1.82
06266452	2001	McGuire; Morgan S.	Image registration method	NEC Corp	11	6.75	1.63
06601055	2003	Roberts; Linda M.	Explanation generation system for a diagnosis support tool employing an inference system	UNASSIGNED	10	1.77	5.65
06549660	2003	Lipson; Pamela R. Grimson; W. Eric L. Sinha; Pawan Poggio; Tomaso	Method and apparatus for classifying and identifying images	Massachusetts Institute of Technology	10	2.13	4.70
06404978	2002	Abe; Keiko	Apparatus for creating a visual edit decision list wherein audio and video displays are synchronized with corresponding textual data	Sony Corp	10	2.39	4.18
06430430	2002	Gosche; Karen M.	Method and system for knowledge guided hyperintensity detection and volumetric measurement	University of South Florida	10	4.00	2.50
06320980	2001	Hidaka; Yumiko	Image processing apparatus and method, and recording medium	Canon Inc	10	5.43	1.84
06040835	2000	Gibson; Sarah F.	System for depicting surfaces using volumetric distance maps	Mitsubishi Electric Corp	10	6.10	1.64
06727916	2004	Ballard; Barbara	Method and system for assisting a user to engage in a microbrowser-based interactive chat session	Sprint Nextel Corp.	9	1.27	7.10
06058223	2000	Strohbehn; Kim	Video-centroid integrated circuit	Johns Hopkins University	9	3.30	2.73
06526574	2003	Jones; Kerry N	System for finding differences between two computer files and updating the computer files	POCKET SOFT INC	9	3.63	2.48
06477260	2002	Shimomura; Noriko	Position measuring apparatus using a pair of electronic cameras	Nissan Motor Co. Ltd.	9	3.79	2.37
06493694	2002	Xu; Jiyang Nassif; Rodolphe Jean Swinney; Joan Marie Winston; Connie Dell	Method and system for correcting customer service orders	Qwest Communications International Inc.	9	4.42	2.04
06249594	2001	Hibbard; Lyn	Autosegmentation/autocontouring system and method	COMPUTERIZED MEDICAL SYSTEMS IN	9	5.27	1.71
06473751	2002	Nikolovska; Lira Martino; Jacquelyn Annette Camplin; Alison	Method and apparatus for defining search queries and user profiles and viewing search results	Koninklijke Philips Electronics N.V.	9	5.96	1.51

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06138089	2000	Guberman; Shelia	Apparatus system and method for speech compression and decompression	INFOLIO INC	8	4.00	2.00
06367011	2002	Lee; Alson Gorden; Mary L.	Personalization of smart cards	VISA INTERNATIONAL SERVICE ASSOC	8	4.92	1.63
06529631	2003	Peterson; Heidi Lee; Jungwoo	Apparatus and method for optimizing encoding and performing automated steerable image compression in an image coding system using a perceptual metric	SRI International	7	1.25	5.58
06546309	2003	Gazzuolo; Edith B.	Virtual fitting room	KINNEY & LANGE P A	7	2.25	3.11
06446058	2002	Brown; Abby H.	Computer platform alarm and control system	AT&T Inc	7	2.93	2.39
06560619	2003	Flood; Christine H. Agesen; Ole	Using atomic compare-and-swap operations for forwarding-pointer installation	Sun Microsystems Inc	7	3.50	2.00
06359622	2002	Hayes-Roth; Barbara	System and method for directed improvisation by computer controlled characters	EXTEMPO SYSTEMS INC	7	3.67	1.91
06539382	2003	Byrne; Debora Jean Lin; Dah-Haur Shi; Shaw-Ben Shepherd	Intelligent pre-caching algorithm for a directory server based on user data access history	International Business Machines Corp	7	4.48	1.56
06750873	2004	Bernardini; Fausto Martin; Ioana M. Rushmeier; Holly E.	High quality texture reconstruction from multiple scans	International Business Machines Corp	6	1.08	5.55
06769004	2004	Barrett; Kim A.	Method and system for incremental stack scanning	IROBOT CORP	6	1.23	4.89
06550683	2003	Augustine; Kimberly Michelle	Hand held portable device with multiple functions	Symbol Technologies Inc.	6	1.61	3.72
06236751	2001	Farrell; Barbara L.	Automatic method for determining piecewise linear transformation from an image histogram	Xerox Corp	6	2.09	2.87
06507662	2003	Brooks; Juliana H. J.	Method and system for biometric recognition based on electric and/or magnetic properties	QUID TECHNOLOGIES LLC	6	2.13	2.82
06577764	2003	Myler; Harley R. Van Dyke-Lewis; Michele	Method for measuring and analyzing digital video quality	TERANEX INC	6	2.13	2.82
06529616	2003	Rasmussen; D. Rene Dalal; Edul N. Zoltner; Susan June	Technique for accurate color-color registration measurements	Xerox Corp	6	2.18	2.76
06344900	2002	Hidaka; Yumiko	Image processing apparatus, method and recording system for providing color matching between a light source and a material color	Canon Inc	6	2.75	2.18
06609655	2003	Harrell; Martha F.	Smart card system for providing financial, travel, and entertainment-related services	UNASSIGNED	6	2.75	2.18

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Computer Software

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06570590	2003	Dubrow; Deborah L. Butler; Laura J. Dailey; Jane L. Giloi; Claus T.	Application sharing in a frame	Microsoft Corporation	6	2.94	2.04
06633670	2003	Matthews; Kristine Elizabeth	Mask generation for multi-layer image decomposition	Sharp Corp	6	3.20	1.88
06651053	2003	Rothschild; Leigh M.	Interactive system for investigating products on a network	BARPOINT COM INC	6	3.20	1.87
06487545	2002	Wical; Kelly	Methods and apparatus for classifying terminology utilizing a knowledge catalog	Oracle Corporation	6	3.29	1.82
06401059	2002	Shen; HongHai Cheng; Josephine Miu	Method and system for using a personal digital assistant as a remote control	International Business Machines Corp	6	3.67	1.64
06470329	2002	Livschitz; Victoria V.	One-way hash functions for distributed data synchronization	Sun Microsystems Inc	6	3.71	1.62
06467684	2002	Fite; Debra Lynn Doomernik; John Peter	Pre-paid card system for purchasing products or services	NETVISIONS INC	6	3.74	1.60
06556963	2003	Tetzlaff; Linda S.	User state sensitive system and method for nutrient analysis using natural language interface	International Business Machines Corp	6	4.00	1.50
06522778	2003	Tamagawa; Kiyomi	Method of converting colorimetric values, and color image output apparatus	Fuji Photo Film Co. Ltd	5	2.51	1.99
06601075	2003	Huang; Anita Wai-Ling Sundaresan; Neelakantan	System and method of ranking and retrieving documents based on authority scores of schemas and documents	International Business Machines Corp	5	2.67	1.87
06604108	2003	Nitahara; Kim	Information mart system and information mart browser	METASOLUTIONS INC	5	2.72	1.84
06526397	2003	Chee; Chuan Khay Chopra; Jeannie Lin Davies; Adrian Richard	Resource management facilitation	Nortel Networks Corp	5	2.85	1.76
06591260	2003	Schwarzhoff; Kelly Venkat; Ramshankar	Method of retrieving schemas for interpreting documents in an electronic commerce system	COMMERCE ONE OPERATIONS INC	5	2.85	1.75
06249618	2001	Hou; Alpha	Circuit architecture and method for switching sensor resolution	SYSCAN INC	5	2.91	1.72
06597377	2003	MacPhail; Margaret Gardner	Web links objects	International Business Machines Corp	5	2.94	1.70
06459858	2002	Davis; Susan M. F.	Electrophotographic imaging device having ink printing device for printing of metered postage	Hewlett-Packard Co	5	3.14	1.59

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05433651	1995	Lustig; Naftali E. Saenger; Katherine L. Tong; Ho-Ming	In?situ endpoint detection and process monitoring method and apparatus for chemical?mechanical polishing	International Business Machines Corp	267	11.87	22.50
04677318	1987	Veenstra; Kerry S.	PROGRAMMABLE LOGIC STORAGE ELEMENT FOR PROGRAMMABLE LOGIC DEVICES	Altera Corp.	207	16.37	12.65
05279029	1994	Burns; Carmen D.	Ultra high density integrated circuit packages method	STAKTEK CORP	145	7.69	18.86
05221642	1993	Burns; Carmen D.	Lead?on?chip integrated circuit fabrication method	STAKTEK CORP	126	9.60	13.12
05371042	1994	Ong; Edith	Method of filling contacts in semiconductor devices	Applied Materials Inc.	112	20.23	5.54
04630219	1986	DiGiacomo; Angela Khokhani; Kantilal H.	ELEMENT PLACEMENT METHOD	International Business Machines Corp	110	49.14	2.24
05137836	1992	Lam; Man K.	Method of manufacturing a repairable multi?chip module	Atmel Corp.	101	18.57	5.44
04355463	1982	Burns; Carmen D.	PROCESS FOR HERMETICALLY ENCAPSULATING SEMICONDUCTOR DEVICES	National Semiconductor Corp.	99	7.33	13.51
05072266	1991	Bulucea; Constantin Rossen; Rebecca	TRENCH DMOS POWER TRANSISTOR WITH FIELD?SHAPING BODY PROFILE AND THREE?DIMENSIONAL GEOMETRY	Vishay Intertechnology Inc.	95	14.55	6.53
04729061	1988	Brown; Candice H.	CHIP ON BOARD PACKAGE FOR INTEGRATED CIRCUIT DEVICES USING PRINTED CIRCUIT BOARDS AND MEANS FOR CONVEYING THE HEAT TO THE OPPOSITE SIDE OF THE PACKAGE FROM THE CHIP MOUNTING SIDE TO PERMIT THE HEAT TO DISSIPATE THEREFROM	Advanced Micro Devices Inc	87	13.02	6.68
05191510	1993	Huffman; Maria	Use of palladium as an adhesion layer and as an electrode in ferroelectric memory devices	Ramtron International Corp.	87	37.27	2.33
05887093	1999	Hansen; Per Bang Jacobovitz-Veselka; Gloria Regina	Optical fiber dispersion compensation	Alcatel-Lucent	83	13.17	6.30
05972192	1999	Dubin; Valery Ting; Chiu Cheung; Robin W.	Pulse electroplating copper or copper alloys	Advanced Micro Devices Inc	80	5.39	14.83
05224057	1993	Igarashi; Mutsunori Kora; Kaori	Arrangement method for logic cells in semiconductor IC device	Toshiba Corp	78	35.57	2.19
05024968	1991	Engelsberg; Audrey C.	REMOVAL OF SURFACE CONTAMINANTS BY IRRADIATION FROM A HIGH?ENERGY SOURCE	UNASSIGNED	76	18.85	4.03

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05316974	1994	Crank; Sue E.	Integrated circuit copper metallization process using a lift-off seed layer and a thick-plated conductor layer	Texas Instruments Inc	75	20.23	3.71
05420751	1995	Burns; Carmen D.	Ultra high density modular integrated circuit package	STAKTEK CORP	75	21.77	3.45
05484959	1996	Burns; Carmen D.	High density lead-on-package fabrication method and apparatus	STAKTEK CORP	73	10.42	7.01
04603466	1986	Morley; Morgan J.	WAFER CHUCK	GCA CORP	71	7.47	9.51
05763315	1998	Benedict; John Preston Dobuzinsky; David Mark Flaitz; Philip Lee Hammerl; Erwin N. Ho; Herbert Moseman; James F. Palm; Herbert Yoshida; Seiko Takato; Hiroshi	Shallow trench isolation with oxide-nitride/oxynitride liner	International Business Machines Corp	71	39.68	1.79
05926496	1999	Ho; Seng-Tiong Rafizadeh; Deana	Semiconductor micro-resonator device	Northwestern University	69	10.64	6.48
05031187	1991	Orenstein; Meir Von Lehmen; Ann C.	PLANAR ARRAY OF VERTICAL-CAVITY, SURFACE-EMITTING LASERS	Telcordia Technologies Inc	69	13.69	5.04
06260179	2001	Ohsawa; Keiko Maruyama; Terunobu	Cell arrangement evaluating method, storage medium storing cell arrangement evaluating program, cell arranging apparatus and method, and storage medium storing cell arranging program	Fujitsu Limited	68	7.67	8.86
05010039	1991	Ku; San-Mei Perry; Kathleen A.	METHOD OF FORMING CONTACTS TO A SEMICONDUCTOR DEVICE	UNASSIGNED	66	18.85	3.50
05587923	1996	Wang; Deborah C.	Method for estimating routability and congestion in a cell placement for integrated circuit chip	LSI Logic Corp.	66	21.16	3.12
05876490	1999	Ronay; Maria	Polish process and slurry for planarization	International Business Machines Corp	62	5.77	10.74
05231590	1993	Kumar; Niraj Meunier; Jean P.	Technique for modifying an integrated circuit layout	ZiLog Inc.	62	35.57	1.74
05068634	1991	Shrier; Karen P.	OVERVOLTAGE PROTECTION DEVICE AND MATERIAL	ELECTROMER CORP	61	7.66	7.96
04446438	1984	Chang; Chieh Lee; Man S.	SWITCHED CAPACITOR N-PATH FILTER	GTE AUTOMATIC ELECTRIC INC	61	9.62	6.34
05568395	1996	Huang; Tammy	Modeling and estimating crosstalk noise and detecting false logic	LSI Logic Corp.	61	13.19	4.63
04751482	1988	Fukuta; Masumi Narita; Hisatoshi	SEMICONDUCTOR INTEGRATED CIRCUIT DEVICE HAVING A MULTI-LAYERED WIRING BOARD FOR ULTRA HIGH SPEED CONNECTION	Fujitsu Limited	60	7.54	7.96

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05673479	1997	Hawthorne; Emily	Method for mounting a microelectronic circuit peripherally-leaded package including integral support member with spacer	LSI Logic Corp.	59	23.27	2.54
04940507	1990	Harbarger; Josephine	LAPPING MEANS AND METHOD	Motorola Inc.	57	16.03	3.56
05759901	1998	Loh; Ying-Tsong Ding; Lily	Fabrication method for sub-half micron CMOS transistor	Koninklijke Philips Electronics N.V.	57	21.62	2.64
05377077	1994	Burns; Carmen D.	Ultra high density integrated circuit packages method and apparatus	STAKTEK CORP	56	23.47	2.39
05207836	1993	Chang; Mei	Cleaning process for removal of deposits from the susceptor of a chemical vapor deposition apparatus	Applied Materials Inc.	56	29.89	1.87
05225991	1993	Dougherty; Dawn K.	Optimized automated macro embedding for standard cell blocks	International Business Machines Corp	56	35.57	1.57
05041321	1991	Bendig; Anna L.	FIBERFORMED CERAMIC INSULATION AND METHOD	Boeing Co. (The)	54	10.69	5.05
05568563	1996	Tanaka; Ken-ichi Shimizu; Masako	Method and apparatus of pattern recognition	Mitsubishi Electric Corp	54	14.95	3.61
05220216	1993	Woo; Ann K.	Programmable driving power of a CMOS gate	UNASSIGNED	54	24.59	2.20
05552963	1996	Burns; Carmen D.	Bus communication system for stacked high density integrated circuit packages	STAKTEK CORP	53	13.72	3.86
04209355	1980	Burns; Carmen D.	MANUFACTURE OF BUMPED COMPOSITE TAPE FOR AUTOMATIC GANG BONDING OF SEMICONDUCTOR DEVICES	National Semiconductor Corp.	53	15.54	3.41
04963225	1990	Lehman-Lamer; Gail R.	METHOD OF FABRICATING A CONTACT DEVICE	Tektronix Inc	52	20.27	2.57
05239607	1993	da Silva; Valeria L. Silberberg; Yaron	Optical fiber amplifier with flattened gain	Telcordia Technologies Inc	51	9.81	5.20
04330790	1982	Burns; Carmen D.	TAPE OPERATED SEMICONDUCTOR DEVICE PACKAGING	National Semiconductor Corp.	51	13.75	3.71
04417948	1983	Mayne-Banton; Veronica I. Srinivasan; Rangaswamy	SELF DEVELOPING, PHOTOETCHING OF POLYESTERS BY FAR UV RADIATION	International Business Machines Corp	51	15.20	3.35
05398195	1995	Kim; Michelle Y.	Method and system for providing a non?rectangular floor plan	International Business Machines Corp	51	20.41	2.50
05418189	1995	Heinen; Katherine G.	Integrated circuit device and method to prevent cracking during surface mount	Texas Instruments Inc	51	22.40	2.28

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06519751	2003	Sriram; Mysore Huang; May	Method and apparatus for accurate crosspoint allocation in VLSI area routing	Intel Corporation	48	8.10	5.93
06197688	2001	Simpson; Cindy Reidsema	Interconnect structure in a semiconductor device and method of formation	Motorola Inc.	48	13.15	3.65
05761075	1998	Oi; Kazuko Koyama; Kiyomi	Apparatus for designing photomasks	Toshiba Corp	48	13.69	3.51
05136764	1992	Vasquez; Barbara	Method for forming a field emission device	Motorola Inc.	48	16.46	2.92
04847111	1989	Chow; Yu C. Liao; Kuan-Yang Chin; Maw-Rong	PLASMA-NITRIDATED SELF-ALIGNED TUNGSTEN SYSTEM FOR VLSI INTERCONNECTIONS	Raytheon Co.	48	18.76	2.56
06066574	2000	You; Lu Hopper; Dawn Streck; Christof	Hot plate cure process for BCB low k interlevel dielectric	Advanced Micro Devices Inc	47	8.79	5.34
04800100	1989	Herbots; Nicole Hellman; Olof C.	Combined ion and molecular beam apparatus and method for depositing materials	Massachusetts Institute of Technology	47	11.19	4.20
04331740	1982	Burns; Carmen D.	GANG BONDING INTERCONNECT TAPE PROCESS AND STRUCTURE FOR SEMICONDUCTOR DEVICE AUTOMATIC ASSEMBLY	National Semiconductor Corp.	47	13.13	3.58
04663645	1987	Kuroda; Kenichi Komori; Kazuhiro Sugiura; June	SEMICONDUCTOR DEVICE OF AN LDD STRUCTURE HAVING A FLOATING GATE	Hitachi Ltd	47	14.25	3.30
05543664	1996	Burns; Carmen D.	Ultra high density integrated circuit package	STAKTEK CORP	47	15.45	3.04
05455740	1995	Burns; Carmen D.	Bus communication system for stacked high density integrated circuit packages	STAKTEK CORP	47	15.46	3.04
05248903	1993	Heim; Dorothy A.	Composite bond pads for semiconductor devices	LSI Logic Corp.	47	16.36	2.87
04899071	1990	Morales; Lou	ACTIVE DELAY LINE CIRCUIT	Standard Microsystems Corporation	46	10.76	4.27
04907067	1990	Derryberry; Lesli A.	THERMALLY EFFICIENT POWER DEVICE PACKAGE	Texas Instruments Inc	46	15.12	3.04
04616406	1986	Brown; Candice H.	PROCESS OF MAKING A SEMICONDUCTOR DEVICE HAVING PARALLEL LEADS DIRECTLY CONNECTED PERPENDICULAR TO INTEGRATED CIRCUIT LAYERS THEREIN	Advanced Micro Devices Inc	46	18.44	2.49
05784289	1998	Wang; Deborah Chao	Method for estimating routability and congestion in a cell placement fo integrated circuit chip	LSI Logic Corp.	44	10.79	4.08
05155661	1992	Nagesh; Voddarahalli K. Chen; Kim H.	Aluminum nitride multi-chip module	Hewlett-Packard Co	44	14.00	3.14

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05227661	1993	Heinen; Katherine G.	Integrated circuit device having an aminopropyltriethoxysilane coating	Texas Instruments Inc	44	16.36	2.69
05495181	1996	Kolze; Paige A.	Integrated circuit facilitating simultaneous programming of multiple antifuses	QUICKLOGIC CORP	44	22.38	1.97
06236901	2001	Goss; Lois	Manufacturing system and method for assembly of computer systems in a build-to-order environment	Dell Inc	43	6.22	6.91
05312765	1994	Kanber; Hilda	Method of fabricating three dimensional gallium arsenide microelectronic device	Raytheon Co.	43	8.30	5.18
04359816	1982	Abbas; Shakir A. Magdo; Ingrid E.	SELF-ALIGNED METAL PROCESS FOR FIELD EFFECT TRANSISTOR INTEGRATED CIRCUITS	International Business Machines Corp	43	17.29	2.49
05059448	1991	Chandra; Grish Martin; Theresa E.	RAPID THERMAL PROCESS FOR OBTAINING SILICA COATINGS	Dow Corning Corp.	42	9.66	4.35
04686000	1987	Heath; Barbara A.	SELF-ALIGNED CONTACT PROCESS	UNASSIGNED	42	17.77	2.36
04987099	1991	Flanner; Janet	METHOD FOR SELECTIVELY FILLING CONTACTS OR VIAS OR VARIOUS DEPTHS WITH CVD TUNGSTEN	Koninklijke Philips Electronics N.V.	42	18.85	2.23
05250467	1993	Somekh; Sasson Nulman; Jaim Chang; Mei	Method for forming low resistance and low defect density tungsten contacts to silicon semiconductor wafer	Applied Materials Inc.	42	19.69	2.13
04978420	1990	Bach; Valerie A.	SINGLE CHAMBER VIA ETCH THROUGH A DUAL-LAYER DIELECTRIC	Hewlett-Packard Co	42	20.69	2.03
05566051	1996	Burns; Carmen D.	Ultra high density integrated circuit packages method and apparatus	STAKTEK CORP	42	20.89	2.01
05356722	1994	Nguyen; Bang Yieh; Ellie Galiano; Maria	Method for depositing ozone/TEOS silicon oxide films of reduced surface sensitivity	Applied Materials Inc.	41	9.35	4.39
05077601	1991	Hatada; Toshio Atarashi; Takayuki Daikoku; Takahiro Kobayashi; Satomi Zushi; Shizuo Kobayashi; Fumiyuki Iwai; Susumu	COOLING SYSTEM FOR COOLING AN ELECTRONIC DEVICE AND HEAT RADIATION FIN FOR USE IN THE COOLING SYSTEM	Hitachi Ltd	41	14.55	2.82
05825201	1998	Kolze; Paige A.	Programming architecture for a programmable integrated circuit employing antifuses	QUICKLOGIC CORP	41	18.15	2.26
05585668	1996	Burns; Carmen D.	Integrated circuit package with overlapped die on a common lead frame	STAKTEK CORP	41	21.94	1.87

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05276916	1994	Pawlsh; Joy N. Cohodes; Suzanne Y.	Communication device having a speaker and microphone	Motorola Inc.	41	23.58	1.74
05801437	1998	Burns; Carmen D.	Three-dimensional warp-resistant integrated circuit module method and apparatus	STAKTEK CORP	40	12.71	3.15
05644161	1997	Burns; Carmen D.	Ultra-high density warp-resistant memory module	STAKTEK CORP	40	24.94	1.60
04622058	1986	Leary-Renick; Pamela A. Srinivasan; Rangaswamy	FORMATION OF A MULTI-LAYER GLASS-METALLIZED STRUCTURE FORMED ON AND INTERCONNECTED TO MULTI-LAYERED-METALLIZED CERAMIC SUBSTRATE	International Business Machines Corp	39	7.66	5.09
04648021	1987	Alberkrack; Jade H.	FREQUENCY DOUBLER CIRCUIT AND METHOD	Motorola Inc.	39	10.99	3.55
05502629	1996	Ito; Hidenobu Mizuno; Hiroko	DC-DC converter	Fujitsu Limited	39	12.60	3.10
04633280	1986	Takasu; Hiromi	UNIT OF LIGHT EMITTING DIODE ARRAYS	Sanyo Electric Co. Ltd.	39	13.52	2.88
04656373	1987	Plus; Dora	HIGH-SPEED VOLTAGE LEVEL SHIFT CIRCUIT	General Electric Company	39	16.37	2.38
04691976	1987	Cowen; Judith A.	COAXIAL CABLE TAP CONNECTOR	LRC ELECTRONICS INC	38	11.42	3.33
04523249	1985	Arimoto; Satomi	ALTERNATING CURRENT LIMITING APPARATUS	Mitsubishi Electric Corp	38	12.72	2.99
04904611	1990	Chiang; Anne Wu; I-Wei Huang; Tiao-Yuan	FORMATION OF LARGE GRAIN POLYCRYSTALLINE FILMS	Xerox Corp	38	20.69	1.84
05632847	1997	Ohno; Reiko Matsuoka; Terumi	Film removing method and film removing agent	CHLORINE ENGINEERS CORP LTD	37	9.08	4.07
04471378	1984	Ng; Sing Tai	LIGHT AND PARTICLE IMAGE INTENSIFIER	Steris Corp.	37	14.17	2.61
05821175	1998	Engelsberg; Audrey C.	Removal of surface contaminants by irradiation using various methods to achieve desired inert gas flow over treated surface	CAULDRON LP	37	14.45	2.56
05825200	1998	Kolze; Paige A.	Programming architecture for a programmable integrated circuit employing antifuses	QUICKLOGIC CORP	37	15.38	2.40
04555842	1985	Levinstein; Hyman J. Vaidya; Sheila	METHOD OF FABRICATING VLSI CMOS DEVICES HAVING COMPLEMENTARY THRESHOLD VOLTAGES	Alcatel-Lucent	37	20.34	1.82
04282493	1981	Moreau; Deborah L.	REDUNDANT CLOCK SIGNAL GENERATING CIRCUITRY	Motorola Inc.	36	6.63	5.43
04591745	1986	Shen; Shannon N.	POWER-ON RESET PULSE GENERATOR	ITT Corp	36	9.82	3.67

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04327835	1982	Leger; Laurie J.	UNIVERSAL SNAP-IN CARD GUIDE FOR PRINTED CIRCUIT CARD ENCLOSURES	Bull SA	36	10.40	3.46
05099557	1992	Engelsberg; Audrey C.	REMOVAL OF SURFACE CONTAMINANTS BY IRRADIATION FROM A HIGH-ENERGY SOURCE	UNASSIGNED	36	13.88	2.59
05475701	1995	Hibbs-Brenner; Mary K.	Integrated laser power monitor	Honeywell International Inc.	36	14.17	2.54
05422787	1995	Gourdine; Meredith C.	Apparatus and method for cooling heat generating electronic components in a cabinet	ENERGY INNOVATIONS INC	36	15.46	2.33
05451545	1995	Ramaswami; Seshadri Cheung; Robin W.	Process for forming stable local interconnect/active area silicide structure VLSI applications	Advanced Micro Devices Inc	36	18.51	1.94
05552726	1996	Wichman; Shannon A. Ko; Uming	High resolution digital phase locked loop with automatic recovery logic	Texas Instruments Inc	35	9.63	3.63
05198282	1993	Baker; Anna L. Preedy; Kristina S.	Tandem ceramic composite	Boeing Co. (The)	35	10.53	3.32
04926130	1990	Weaver; Lindsay A.	SYNCHRONOUS UP-CONVERSION DIRECT DIGITAL SYNTHESIZER	Qualcomm Inc	35	10.76	3.25
05583376	1996	Sickler; Janet Mace; Everitt W.	High performance semiconductor device with resin substrate and method for making the same	Motorola Inc.	35	15.45	2.26
04701349	1987	Koyanagi; Mitsumasa Kaneko; Hiroko	SEMICONDUCTOR INTEGRATED CIRCUIT DEVICE AND METHOD OF PRODUCING THE SAME	Hitachi Ltd	35	17.77	1.97
05282565	1994	Melton; Cynthia M.	Solder bump interconnection formed using spaced solder deposit and consumable path	Motorola Inc.	35	20.17	1.74
04629909	1986	Cameron; Kelly B.	FLIP-FLOP FOR STORING DATA ON BOTH LEADING AND TRAILING EDGES OF CLOCK SIGNAL	AMERICAN MICRO-SYSTEMS INC	34	9.82	3.46
05818111	1998	Jeng; Shin-Puu Taylor; Kelly J.	Low capacitance interconnect structures in integrated circuits using a stack of low dielectric materials	Texas Instruments Inc	34	12.71	2.68
05643472	1997	Engelsberg; Audrey C. Fitzpatrick; Donna R.	Selective removal of material by irradiation	CAULDRON LP	34	13.62	2.50
05360995	1994	Graas; Carole D.	Buffered capped interconnect for a semiconductor device	Texas Instruments Inc	34	15.32	2.22
05978220	1999	Frey; Toni Stuck; Alexander Zehringer; Raymond	Liquid cooling device for a high-power semiconductor module	ABB Ltd	34	18.00	1.89
05268065	1993	Gruppen-Shemansky; Melissa E.	Method for thinning a semiconductor wafer	Motorola Inc.	34	19.69	1.73

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05376561	1994	Vu; Duv-Pach Dingle; Brenda Cheong; Ngwe	High density electronic circuit modules	Kopin Corp.	34	20.23	1.68
04551910	1985	Patterson; Elizabeth L.	MOS ISOLATION PROCESSING	Intel Corporation	34	20.34	1.67
04666735	1987	Hoover; Merwin F. Salamone; Ann B. Vandebult; Jan	PROCESS FOR PRODUCING PRODUCT HAVING PATTERNED METAL LAYER	POLYONICS CORP INC	33	10.85	3.04
04555414	1985	Hoover; Merwin F. Salamone; Ann B. Vandebult; Jan	PROCESS FOR PRODUCING COMPOSITE PRODUCT HAVING PATTERNED METAL LAYER	POLYONICS CORP INC	33	10.86	3.04
04464726	1984	Chiang; Alice M.	CHARGE DOMAIN PARALLEL PROCESSING NETWORK	Massachusetts Institute of Technology	33	11.13	2.96
05479318	1995	Burns; Carmen D.	Bus communication system for stacked high density integrated circuit packages with trifurcated distal lead ends	STAKTEK CORP	33	15.46	2.13
05298442	1994	Bulucea; Constantin Rossen; Rebecca	Trench DMOS power transistor with field?shaping body profile and three?dimensional geometry	Vishay Intertechnology Inc.	33	20.23	1.63
05487018	1996	Loos; Joann Wang; Chao-Yuan Mahmood; Mossadeg	Electronic design automation apparatus and method utilizing a physical information database	Koninklijke Philips Electronics N.V.	33	21.16	1.56
06288902	2001	Kim; Kwang Ho McDonald; Julie	Modular data storage system for reducing mechanical shock and vibrations	Hewlett-Packard Co	32	7.91	4.05
04700214	1987	Johnson; Morgan	ELECTRICAL CIRCUITRY	LASERPATH CORP	32	14.25	2.24
05120680	1992	Foo; Pang-Dow Huo; Tai-Chan D. Yan; Man F.	Method for depositing dielectric layers	Alcatel-Lucent	32	18.57	1.72
05648175	1997	Russell; Kathleen Robles; Stuardo Nguyen; Bang C. Sivaramakrishnan; Visweswaren	Chemical vapor deposition reactor system and integrated circuit	Applied Materials Inc.	31	7.59	4.09
04648007	1987	Garner; Robin E.	COOLING MODULE FOR ELECTRONIC EQUIPMENT	Verizon Communications Inc	31	12.96	2.39
05493476	1996	Burns; Carmen D.	Bus communication system for stacked high density integrated circuit packages with bifurcated distal lead ends	STAKTEK CORP	31	13.72	2.26
04931852	1990	Brown; Candice H. Fatemi; Homi	HIGH THERMAL CONDUCTIVITY/LOW ALPHA EMISSION MOLDING COMPOUND CONTAINING HIGH PURITY SEMICONDUCTOR FILLER AND INTEGRATED CIRCUIT PACKAGE	Advanced Micro Devices Inc	31	15.12	2.05

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04953928	1990	Anderson; Janeen D.W. Mead; Carver A.	MOS DEVICE FOR LONG-TERM LEARNING	SYNAPTICS INC	31	15.12	2.05
04601778	1986	Robb; Francine Y.	MASKLESS ETCHING OF POLYSILICON	Motorola Inc.	31	18.44	1.68
04466183	1984	Burns; Carmen D.	INTEGRATED CIRCUIT PACKAGING PROCESS	National Semiconductor Corp.	30	7.00	4.29
05621207	1997	O'Mara; Kerry D.	Optical joystick using a plurality of multiplexed photoemitters and a corresponding photodetector	Hasbro Inc.	30	8.08	3.71
06027958	2000	Vu; Duy-Phach Dingle; Brenda Cheong; Ngwe K.	Transferred flexible integrated circuit	Kopin Corp.	30	8.79	3.41
04413404	1983	Burns; Carmen D.	PROCESS FOR MANUFACTURING A TEAR STRIP PLANARIZATION RING FOR GANG BONDED SEMICONDUCTOR DEVICE INTERCONNECT TAPE	National Semiconductor Corp.	30	9.75	3.08
06306768	2001	Klein; Rita J.	Method for planarizing microelectronic substrates having apertures	Micron Technology Inc.	30	10.00	3.00
04283249	1981	Ephrath; Linda M.	REACTIVE ION ETCHING	International Business Machines Corp	30	11.08	2.71
05499160	1996	Burns; Carmen D.	High density integrated circuit module with snap-on rail assemblies	STAKTEK CORP	30	13.72	2.19
05936836	1999	Scholder; Erica	Computer with an improved internal cooling system	Dell Inc	30	14.43	2.08
05534731	1996	Cheung; Robin W.	Layered low dielectric constant technology	Advanced Micro Devices Inc	30	15.45	1.94
05137837	1992	Chang; Chen-Chi P. Li; Mei F.	Radiation-hard, high-voltage semiconductive device structure fabricated on SOI substrate	Raytheon Co.	30	18.57	1.62
04720470	1988	Johnson; Morgan	METHOD OF MAKING ELECTRICAL CIRCUITRY	LASERPATH CORP	30	19.94	1.50
04371740	1983	Clem; Katherine V.	CONDUCTIVE ELEMENTS FOR PHOTOVOLTAIC CELLS	Eastman Kodak Company	29	9.25	3.14
05953467	1999	Madsen; Christi Kay	Switchable optical filter	Alcatel-Lucent	29	10.13	2.86
05804870	1998	Burns; Carmen D.	Hermetically sealed integrated circuit lead-on package configuration	STAKTEK CORP	29	11.26	2.58
05371328	1994	Gutierrez; Barbara L. Yu; Cheng-Yuan	Component rework	International Business Machines Corp	29	11.85	2.45
05703989	1997	Khan; Mujibun Nisa Zucker; Jane Elisa	Single-mode waveguide structure for optoelectronic integrated circuits and method of making same	Alcatel-Lucent	29	12.80	2.27

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05852545	1998	Pan-Ratzlaff; Ruby	Detachable electrical and mechanical mounting mechanism for snap mounting computer speakers	Dell Inc	29	15.40	1.88
05674769	1997	Alsmeier; Johann Dehm; Christine Hammerl; Erwin Stengl; Reinhard J.	Process for forming deep trench DRAMs with sub-groundrule gates	Siemens Aktiengesellschaft	29	16.77	1.73
05222082	1993	Plus; Dora	Shift register useful as a select line scanner for liquid crystal display	Thomson (formerly Multimedia)	28	6.51	4.30
04932110	1990	Tanaka; Hiromi	APPARATUS FOR MAKING AN ELECTRIC HARNESS	Tyco International Ltd	28	6.60	4.24
05785236	1998	Cheung; Robin W. Lin; Ming-Ren	Advanced copper interconnect system that is compatible with existing IC wire bonding technology	Advanced Micro Devices Inc	28	8.65	3.24
05034626	1991	Pirez; Yolanda M. Le; Kha H.	BIMOS CURRENT BIAS WITH LOW TEMPERATURE COEFFICIENT	Motorola Inc.	28	9.97	2.81
04535026	1985	Yoldas; Bulent E. Partlow; Deborah P.	ANTIREFLECTIVE GRADED INDEX SILICA COATING, METHOD FOR MAKING	United States of America Department of E	28	13.36	2.10
05010440	1991	Endo; Mamiko	PIPE LINER HAVING ELECTRICALLY CONDUCTIVE WIRES FOR HARDENING AND ELECTROSTATIC BUILDUP PREVENTION	UNASSIGNED	28	14.15	1.98
04424621	1984	Abbas; Shakir A. Magdo; Ingrid E.	METHOD TO FABRICATE STUD STRUCTURE FOR SELF-ALIGNED METALLIZATION	International Business Machines Corp	28	17.85	1.57
06185097	2001	Behl; Sunny	Convectively cooled memory storage device housing	INCLOSE DESIGN INC	27	7.55	3.58
05356947	1994	Ali; Mahfuza B. Pujol; Jean M.	Controllable radiation curable photoiniferter prepared adhesives for attachment of microelectronic devices and a method of attaching microelectronic devices therewith	Minnesota Mining and Manufacturing Com	27	9.94	2.72
05866931	1999	Bulucea; Constantin Rossen; Rebecca	DMOS power transistor with reduced number of contacts using integrated body-source connections	Vishay Intertechnology Inc.	27	10.87	2.48
04278990	1981	Fichot; Julie Y.	LOW THERMAL RESISTANCE, LOW STRESS SEMICONDUCTOR PACKAGE	General Electric Company	27	13.26	2.04
05420444	1995	Sawase; Kensuke Ogata; Hiromi	Light emitting diode and light emitting diode array having uniform light distribution	Rohm Co. Ltd.	27	14.16	1.91
05422832	1995	Moyal; Miki	Variable thermal sensor	Advanced Micro Devices Inc	27	14.24	1.90

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05757837	1998	Lim; Sui F. Chang-Hasnain; Connie J.	Intracavity quantum well photodetector integrated within a vertical-cavity surface-emitting laser and method of operating same	University of California	27	14.58	1.85
06026108	2000	Lim; Sui F. Huddings; Janice A. Lau; Kam-Yin Chang-Hasnain; Connie J.	Vertical-cavity surface-emitting laser with an intracavity quantum-well optical absorber	University of California	26	4.95	5.25
06383928	2002	Eissa; Mona M.	Post copper CMP clean	Texas Instruments Inc	26	5.10	5.09
04190474	1980	Berdan; Betty L. Luce; Betty M.	METHOD OF MAKING A PRINTED CIRCUIT BOARD HAVING MUTUALLY ETCHABLE COPPER AND NICKEL LAYERS	GOULD INC	26	9.74	2.67
04431861	1984	Claburn; Robin J. Penneck; Richard J.	HEAT RECOVERABLE ARTICLE FOR HIGH VOLTAGE CABLE TERMINATIONS AND SPLICES AND METHOD FOR MAKING TERMINATION AND SPLICES USING SAME	Tyco International Ltd	26	9.89	2.63
05426266	1995	Brown; Candice H. Roshanagh; Davar I.	Die bonding connector and method	PLANAR SYSTEMS INC	26	10.75	2.42
04312926	1982	Burns; Carmen D.	TEAR STRIP PLANARIZATION RING FOR GANG BONDED SEMICONDUCTOR DEVICE INTERCONNECT TAPE	National Semiconductor Corp.	26	13.13	1.98
05055921	1991	Usui; Yoshiko	COLOR READING LINE SENSOR	Canon Inc	26	14.99	1.74
05406444	1995	Selfried; Lynn M. Tettermer; Susan A.	Coated tantalum feedthrough pin	Medtronic Inc	26	15.46	1.68
04237609	1980	Claburn; Robin J. Penneck; Richard J.	HEAT RECOVERABLE CONNECTOR	Tyco International Ltd	25	7.00	3.57
05240746	1993	O'Connell Litteral; Mary	System for performing related operations on workpieces	Delphi Corp	25	9.66	2.59
04818239	1989	Erk; Kaya	STACKED MULTIPIN CONNECTORS	MAXCONN INC	25	11.01	2.27
05321399	1994	Notani; Hiromi Kondoh; Harufusa	Parallel/serial conversion circuit, serial/parallel conversion circuit and system including such circuits	Mitsubishi Electric Corp	25	11.59	2.16
05743606	1998	Scholder; Erica	Computer cabinet latching mechanism	Dell Inc	25	11.61	2.15
05939750	1999	Early; Kathleen R.	Use of implanted ions to reduce oxide-nitride-oxide (ONO) etch residue and polystringers	Advanced Micro Devices Inc	25	11.89	2.10
04355885	1982	Nagashima; Nao	IMAGE FORMING APPARATUS PROVIDED WITH SURFACE POTENTIAL CONTROL DEVICE	Canon Inc	25	12.39	2.02

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05621225	1997	Shieh; Chan-Long Lee; Hsing-Chung Holm; Paige M.	Light emitting diode display package	Motorola Inc.	25	15.43	1.62
05471093	1995	Cheung; Robin W.	Pseudo?low dielectric constant technology	Advanced Micro Devices Inc	25	15.62	1.60
05297005	1994	Gourdine; Meredith C.	Apparatus and method for cooling heat generating electronic components in a cabinet	ENERGY INNOVATIONS INC	25	16.33	1.53
05241214	1993	Herbots; Nicole Hellman; Olof C. Vancauwenberghe; Olivier P.	Oxides and nitrides of metastable group IV alloys and nitrides of Group IV elements and semiconductor devices formed thereof	Massachusetts Institute of Technology	25	16.36	1.53
06329685	2001	Lee; Dana	Self aligned method of forming a semiconductor memory array of floating gate memory cells and a memory array made thereby	Silicon Storage Technology Inc	24	6.52	3.68
06091846	2000	Lin; YouLing Hennessey; A. Kathleen Pattikonda; Ramakrishna Khaja; Veera S. Reddy; Rajasekar	Method and system for anomaly detection	Texas Instruments Inc	24	6.76	3.55
06046487	2000	Benedict; John Preston Dobuzinsky; David Mark Flaitz; Philip Lee Hammerl; Erwin N. Ho; Herbert Moseman; James F. Palm; Herbert Yoshida; Seiko Takato; Hiroshi	Shallow trench isolation with oxide-nitride/oxynitride liner	International Business Machines Corp	24	9.46	2.54
05047664	1991	Moyal; Miki	TRIMMING CIRCUIT	Advanced Micro Devices Inc	24	9.97	2.41
04315978	1982	Hartman; Susan E.	SOLID?STATE COLOR IMAGING DEVICE HAVING A COLOR FILTER ARRAY USING A PHOTOCROSSLINKABLE BARRIER	Eastman Kodak Company	24	10.17	2.36
06168970	2001	Burns; Carmen D.	Ultra high density integrated circuit packages	STAKTEK GROUP LP	24	10.48	2.29
04951113	1990	Huang; Tiao-Yuan Chiang; Anne Wu; I-Wei	SIMULTANEOUSLY DEPOSITED THIN FILM CMOS TFTS AND THEIR METHOD OF FABRICATION	Xerox Corp	24	11.55	2.08
05972734	1999	Carichner; Karla Y. Liang; Dexin	Interposer for ball grid array (BGA) package	LSI Logic Corp.	24	11.61	2.07
06008532	1999	Carichner; Karla Y.	Integrated circuit package having bond fingers with alternate bonding areas	LSI Logic Corp.	24	14.36	1.67
05353364	1994	Kurashima; Hiromi	Optical module with improved grounding of an optical element	Sumitomo Electric Industries Ltd.	24	14.52	1.65
04745579	1988	Mead; Carver Shen; Cecilia	ELECTRICALLY ERASABLE PROGRAMMABLE LOGIC ARRAY (EEPLA)	SILICON COMMUNICATIONS CORP	24	15.82	1.52

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05578342	1996	Tran; Ut Lee; Tai Son; Tran	Alignment of magnetic poles of thin film transducer	Western Digital Corp.	23	8.16	2.82
05531003	1996	Seifried; Lynn M. Tetterer; Susan A.	Fabricating a combination feedthrough/capacitor including a metallized tantalum or niobium pin	Medtronic Inc	23	9.89	2.33
06143582	2000	Vu; Duy-Phach Dingle; Brenda Cheong; Ngwe	High density electronic circuit modules	Kopin Corp.	23	10.13	2.27
04456500	1984	Ibata; Sachiko	METHOD OF MANUFACTURING A POLISHER	NIPPON TENSHASHI KK	23	12.22	1.88
06115235	2000	Naito; Kazumi	Capacitor	Showa Denko K.K.	23	12.40	1.85
04188438	1980	Burns; Carmen D.	ANTIOXIDANT COATING OF COPPER PARTS FOR THERMAL COMPRESSION GANG BONDING OF SEMICONDUCTIVE DEVICES	National Semiconductor Corp.	23	12.91	1.78
05631193	1997	Burns; Carmen D.	High density lead-on-package fabrication method	STAKTEK CORP	23	14.52	1.58
04918501	1990	Komori; Kazuhiro Kuroda; Kenichi Sugiura; June	SEMICONDUCTOR DEVICE AND METHOD OF PRODUCING THE SAME	Hitachi Ltd	23	15.12	1.52
06417019	2002	Mueller; Gerd O. Mueller-Mach; Regina B.	Phosphor converted light emitting diode	Koninklijke Philips Electronics N.V.	22	4.06	5.42
06081131	2000	Ishii; Kenya	Logical amplitude level conversion circuit, liquid crystal device and electronic apparatus	Seiko Epson Corporation	22	6.24	3.53
06046910	2000	Ghaem; Sanjar Melton; Cindy	Microelectronic assembly having slidable contacts and method for manufacturing the assembly	Motorola Inc.	22	9.34	2.35
04727453	1988	Ewing; Joan R.	ALTERNATING CURRENT INDUCTIVE CHARGING OF A PHOTORECEPTOR	Xerox Corp	22	9.73	2.26
06080670	2000	Miller; Gayle W. Shelton; Gail D. Chisholm; Brynne K.	Method of detecting a polishing endpoint layer of a semiconductor wafer which includes a non-reactive reporting specie	LSI Logic Corp.	22	11.08	1.99
04581680	1986	Garner; Robin E.	CHIP CARRIER MOUNTING ARRANGEMENT	Verizon Communications Inc	22	12.33	1.78
05307315	1994	Oowaki; Yukihito Takashima; Daisaburo Ohta; Masako	Integrated semiconductor memory with internal voltage booster of lesser dependency on power supply voltage	Toshiba Corp	22	13.91	1.58
06056864	2000	Cheung; Robin W.	Electropolishing copper film to enhance CMP throughput	Advanced Micro Devices Inc	21	4.81	4.37
04640010	1987	Brown; Candice H.	METHOD OF MAKING A PACKAGE UTILIZING A SELF-ALIGNING PHOTOEXPOSURE PROCESS	Advanced Micro Devices Inc	21	7.85	2.68

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04529860	1985	Robb; Francine Y.	PLASMA ETCHING OF ORGANIC MATERIALS	Motorola Inc.	21	10.72	1.96
05278851	1994	Goto; Chiaki	Solid?state laser	Fuji Photo Film Co. Ltd	21	11.00	1.91
05426561	1995	Yen; Shiao-Ping S. Lewis; Carol R.	High energy density and high power density ultracapacitors and supercapacitors	The National Aeronautical and Space Admi	21	11.92	1.76
04844981	1989	Landau; Adela	ADHESION PROMOTER FOR PRINTED CIRCUITS	MACDERMID INC	21	12.28	1.71
05654877	1997	Burns; Carmen D.	Lead-on-chip integrated circuit apparatus	STAKTEK CORP	21	12.86	1.63
05090790	1992	Zucker; Jane E.	POLARIZATION?INDEPENDENT SEMICONDUCTOR WAVEGUIDE	Alcatel-Lucent	21	13.40	1.57
06205654	2001	Burns; Carmen D.	Method of manufacturing a surface mount package	STAKTEK GROUP LP	20	5.08	3.94
04740986	1988	Reeder; Robin A.	LASER RESONATOR	Raytheon Co.	20	9.71	2.06
04918704	1990	Caprara; Andrea L. Heritier; Jean-Marc	Q?SWITCHED SOLID STATE PULSED LASER WITH INJECTION SEEDING AND A GAUSSIAN OUTPUT COUPLING MIRROR	QUANTEL INTERNATIONAL INC	20	10.09	1.98
05915197	1999	Yamanaka; Michiko Nishio; Naoharu	Fabrication process for semiconductor device	NEC Corp	20	11.69	1.71
05375064	1994	Bollinger; Lynn D.	Method and apparatus for moving a material removal tool with low tool accelerations	Raytheon Co.	20	13.31	1.50
06410437	2002	Flanner; Janet M. Morey; Ian	Method for etching dual damascene structures in organosilicate glass	Lam Research Corp.	19	4.94	3.85
05486223	1996	Carden; Robin A.	Metal matrix compositions and method of manufacture thereof	ALYN CORP	19	5.14	3.69
06457515	2002	Vafai; Kambiz Zhu; Lu	Two-layered micro channel heat sink, devices and systems incorporating same	Ohio State University	19	5.47	3.47
06389379	2002	Lin; Sharon Sheau-Pyng Tseng; Ping-Sheng	Converfication system and method	AXIS SYSTEMS INC	19	5.68	3.34
06258735	2001	Xia; Li-qun Lim; Tian-hoe Nguyen; Huong Thanh Sugiarto; Dian	Method for using bypass lines to stabilize gas flow and maintain plasma inside a deposition chamber	Applied Materials Inc.	19	5.85	3.25
04607779	1986	Burns; Carmen D.	NON?IMPACT THERMOCOMPRESSION GANG BONDING METHOD	National Semiconductor Corp.	19	8.17	2.32
05877063	1999	Gilchrist; Robin Lee	Method of forming rough polysilicon surfaces	Micron Technology Inc.	19	10.41	1.82

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05894173	1999	Jacobs; Elizabeth G. Heinen; Katherine G.	Stress relief matrix for integrated circuit packaging	Texas Instruments Inc	19	10.87	1.75
05371545	1994	Tults; Juri	Auxiliary video data slicer with adjustable window for detecting the run in clock	Thomson (formerly Multimedia)	19	11.67	1.63
05937325	1999	Ishida; Emi	Formation of low resistivity titanium silicide gates in semiconductor integrated circuits	Advanced Micro Devices Inc	19	11.69	1.63
05932914	1999	Horiguchi; Yoko	Semiconductor protection device formed inside a well having contact with a buried layer	NEC Corp	18	7.04	2.56
05707746	1998	Yaoi; Yoshihumij Katsuya; Yoko Tsuchimoto; Shuhei	Thin film transistor device with advanced characteristics by improved matching between a glass substrate and a silicon nitride layer	Sharp Corp	18	7.07	2.55
06242767	2001	How; Dana Srinivasan; Adi El Gamal; Abbas	Asic routing architecture	LIGHTSPEED SEMICONDUCTOR CORP	18	7.44	2.42
06277733	2001	Smith; Patricia B.	Oxygen-free, dry plasma process for polymer removal	Texas Instruments Inc	18	7.47	2.41
04489742	1984	Moore; Diane E. Reyes; Jaime M. Munteanu; Eugen	THERMOELECTRIC DEVICE AND METHOD OF MAKING AND USING SAME	Energy Conversion Devices Inc.	18	9.60	1.88
05864175	1999	Burns; Carmen D.	Wrap-resistant ultra-thin integrated circuit package fabrication method	STAKTEK CORP	18	10.87	1.66
04589942	1986	Korinek; Robin	METHOD FOR LAMINATING A COMPOSITE ASSEMBLY	TRANSILWRAP CO INC	18	11.03	1.63
05309986	1994	Itoh; Satomi	Heat pipe	UNASSIGNED	18	11.17	1.61
06377440	2002	Zhu; Yongfei Sengupta; Louise C. Zhang; Xubai	Dielectric varactors with offset two-layer electrodes	Paratek Microwave Inc.	17	3.67	4.64
06043428	2000	Han; Liyuan Obata; Takatsugu Inoue; Yuko	Photoelectric material using organic photosensitising dyes and manufacturing method thereof	Sharp Corp	17	3.88	4.38
06465372	2002	Xia; Li-Qun Lim; Tian-Hoe Gaillard; Frederic Yieh; Ellie	Surface treatment of C-doped SiO2 film to enhance film stability during O2 ashing	Applied Materials Inc.	17	5.50	3.09
06014038	2000	How; Dana Srinivasan; Adi El Gamal; Abbas	Function block architecture for gate array	LIGHTSPEED SEMICONDUCTOR CORP	17	6.98	2.44
04311267	1982	Lim; Linda W.	METHOD OF SCREENING PASTE SOLDER ONTO LEADED HYBRID SUBSTRATES	GTE AUTOMATIC ELECTRIC LABORATO	17	9.34	1.82

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
04412331	1983	Chapman; Lynn C.	FEEDBACK CIRCUIT FOR CONTROLLING THE PEAK OPTICAL OUTPUT POWER OF AN INJECTION LASER	Tyco International Ltd	17	9.41	1.81
05778522	1998	Burns; Carmen D.	Method of manufacturing a high density integrated circuit module with complex electrical interconnect rails having electrical interconnect strain relief	STAKTEK CORP	17	10.38	1.64
05426391	1995	Tedrow; Kerry D. Javanifard; Jahanshir J. Taub; Mase J.	Method and apparatus for providing selectable sources of voltage	Intel Corporation	17	10.46	1.63
05278855	1994	Jacobovitz-Veselka; Gloria R. Keller; Ursula	Broadband semiconductor saturable absorber	Alcatel-Lucent	17	11.00	1.55
06404614	2002	Zhu; Yongfei Sengupta; Louise C.	Voltage tuned dielectric varactors with bottom electrodes	Paratek Microwave Inc.	16	3.67	4.36
06194720	2001	Li; Du Zou; Rose	Preparation of transmission electron microscope samples	Micron Technology Inc.	16	4.00	4.00
06627532	2003	Gaillard; Frederic Xia; Li-Qun Lim; Tian-Hoe Yieh; Ellie Yau; Wai-Fan Jeng; Shin-Puu Liu; Kuowei Lu; Yung-Cheng	Method of decreasing the K value in SiOC layer deposited by chemical vapor deposition	Applied Materials Inc.	16	4.24	3.77
04218532	1980	Dunkleberger; LaRue N.	PHOTOLITHOGRAPHIC TECHNIQUE FOR DEPOSITING THIN FILMS	Alcatel-Lucent	16	9.22	1.74
06072232	2000	Li; Zong-Fu Sengupta; Kabul Thompson; Deborah L.	Windowed non-ceramic package having embedded frame	Intel Corporation	16	9.30	1.72
05721445	1998	Singh; Ranbir Thoma; Morgan Jones	Semiconductor device with increased parasitic emitter resistance and improved latch-up immunity	Alcatel-Lucent	16	9.83	1.63
05534804	1996	Woo; Ann K.	CMOS power?on reset circuit using hysteresis	Advanced Micro Devices Inc	16	10.06	1.59
06094095	2000	Murray; Kenelm Whately; Morgan	Efficient pump for generating voltages above and/or below operating voltages	Cypress Semiconductor Corp.	15	5.15	2.91
04530138	1985	Ritter; Catharine A.	METHOD OF MAKING A TRANSDUCER ASSEMBLY	Toshiba Corp	15	5.72	2.62
05344893	1994	Asai; Motoo Onishi; Chie	Epoxy/amino powder resin adhesive for printed circuit board	Ibiden Co. Ltd.	15	6.37	2.35
05924785	1999	Zhang; Lu Xin Zhang; Long Bao	Light source arrangement	UNASSIGNED	15	6.80	2.21
05814377	1998	Robles; Stuardo Sivaramakrishnan; Visweswaren Galiano; Maria Kithcart; Victoria	Method and apparatus for creating strong interface between in-situ SACVD and PECVD silicon oxide films	Applied Materials Inc.	15	6.89	2.18

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06262716	2001	Raasch; Lisa Ann	Information processing apparatus having a numeric keypad with cover that functions as a palm rest	Gateway Inc.	15	7.45	2.01
04375625	1983	Lee; Man S.	SWITCHED?CAPACITOR SOURCE RESISTOR SIMULATION CIRCUIT	GTE AUTOMATIC ELECTRIC LABORATO	15	8.35	1.80
05626729	1997	Thompson; Lillian C. Li; Changming Lian; Ke K.	Modified polymer electrodes for energy storage devices and method of making same	Motorola Inc.	15	8.38	1.79
06088142	2000	Cao; Xiaofan Zheng; Yu	System and method for precision wavelength monitoring	Oplink Communications Inc.	15	9.67	1.55
05588015	1996	Yang; Rui Q.	Light emitting devices based on interband transitions in type?II quantum well heterostructures	University of Houston	15	9.83	1.53
05499209	1996	Oowaki; Yukihito Takashima; Daisaburo Ohta; Masako	Integrated semiconductor memory with internal voltage booster of lesser dependency on power supply voltage	Toshiba Corp	15	9.96	1.51
06207552	2001	Wang; Pin-Chin C. You; Lu	Forming and filling a recess in interconnect for encapsulation to minimize electromigration	Advanced Micro Devices Inc	14	4.85	2.89
05956837	1999	Shiota; Iku Tsuboi; Kyo	Method of detaching object to be processed from electrostatic chuck	Tokyo Electron Limited	14	5.07	2.76
05960539	1999	Burns; Carmen D.	Method of making high density integrated circuit module	STAKTEK CORP	14	5.07	2.76
06414845	2002	Bonet; Sandra E.	Multiple-fan modular cooling component	Hewlett-Packard Co	14	5.63	2.49
05980768	1999	Abraham; Susan C.	Methods and apparatus for removing photoresist mask defects in a plasma reactor	Lam Research Corp.	14	6.57	2.13
04183136	1980	Colla; Jeannine O.	TEMPERATURE SENSING RESISTANCE DEVICE	Johnson Controls Inc	14	7.00	2.00
06163053	2000	Kawashima; Ikue	Semiconductor device having opposite-polarity region under channel	Ricoh Co. Ltd.	14	7.64	1.83
06023403	2000	McGuire; Katherine M. Luciano; Honorio	Surface mountable electrical device comprising a PTC and fusible element	Littelfuse Inc	14	8.13	1.72
04246548	1981	Rutz; Elisabeth M.	COHERENT SEMICONDUCTOR INJECTION LASER ARRAY	International Business Machines Corp	14	8.25	1.70
05462809	1995	Berkowitz; Ami	Giant magnetoresistant single film alloys	University of California	14	9.03	1.55
05111136	1992	Kawashima; Hiromi	Semiconductor circuit	Fujitsu Limited	14	9.09	1.54

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05933729	1999	Chan; Maria Chow	Reduction of ONO fence during self-aligned etch to eliminate poly stringers	Advanced Micro Devices Inc	14	9.26	1.51
06381164	2002	Fan; Zhineng Le; Ai D. Li; Che-Yu	Low profile, high density memory system	HIGH CONNECTION DENSITY INC	13	3.60	3.61
06500773	2002	Gaillard; Frederic Xia; Li-Qun Yieh; Ellie	Method of depositing organosilicate layers	Applied Materials Inc.	13	3.95	3.29
06221787	2001	Ogata; Kunie	Apparatus and method of forming resist film	Tokyo Electron Limited	13	5.20	2.50
06486061	2002	Xia; Li-Qun Gaillard; Frederic Yieh; Ellie Lim; Tian H.	Post-deposition treatment to enhance properties of Si-O-C low K films	Applied Materials Inc.	13	5.35	2.43
06013571	2000	Morrell; Michelle J.	Microelectronic assembly including columnar interconnections and method for forming same	Motorola Inc.	13	7.52	1.73
04881979	1989	Lewis; Carol L.R.	JUNCTIONS FOR MONOLITHIC CASCADE SOLAR CELLS AND METHODS	Varian Medical Systems Inc.	13	8.26	1.57
04268916	1981	Kusakabe; Hiromi	FREQUENCY CONVERTING CIRCUIT	Toshiba Corp	13	8.56	1.52
06603329	2003	Wang; Xiaobao Sung; Chiakang Wang; Bonnie I. Nguyen; Khai	Systems and methods for on-chip impedance termination	Altera Corp.	12	3.24	3.70
05980602	1999	Carden; Robin A.	Metal matrix composite	ALYN CORP	12	3.60	3.33
06048588	2000	Engelsberg; Audrey C.	Method for enhancing chemisorption of material	CAULDRON LP	12	4.51	2.66
06191611	2001	Altaf; K. Risa	Driver circuitry for programmable logic devices with hierarchical interconnection resources	Altera Corp.	12	6.87	1.75
05605592	1997	Burns; Carmen D.	Method of manufacturing a bus communication system for stacked high density integrated circuit packages	STAKTEK CORP	12	6.88	1.75
06094297	2000	Injeyan; Hagop Hoefer; Carolyn S.	End pumped zig-zag slab laser gain medium	Northrop Grumman Corp	12	7.09	1.69
05802713	1998	Deamer; Kerry L.	Circuit board manufacturing method	FAIRCHILD SPACE & DEFENSE CORPO	12	7.43	1.62
05795356	1998	Leveen; Lindsay	Microelectronic component fabrication facility, and process for making and using the facility	SLSP PARTNERS INC	12	7.48	1.61
06429497	2002	Nickel; Janice H.	Method for improving breakdown voltage in magnetic tunnel junctions	Hewlett-Packard Co	11	2.92	3.77
06455397	2002	Belford; Rona E.	Method of producing strained microelectronic and/or optical integrated and discrete devices	UNASSIGNED	11	3.95	2.79

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06265893	2001	Bates; Sarah E.	Signal line drivers	Intel Corporation	11	4.44	2.48
06383879	2002	Kizilyalli; Isik C. Singh; Ranbir Stirling; Lori	Semiconductor device having a metal gate with a work function compatible with a semiconductor device	Agere Systems Inc.	11	4.46	2.47
06365978	2002	Ibnabdeljalil; M'hamed Phoenix; S. Leigh	Electrical redundancy for improved mechanical reliability in ball grid array packages	Texas Instruments Inc	11	4.61	2.39
05381085	1995	Fischer; Lynn R.	Phase lock loop with self test circuitry and method for using the same	Motorola Inc.	11	5.33	2.06
05594383	1997	Tamba; Yuko	Analog filter circuit and semiconductor integrated circuit device using the same	Hitachi Ltd	11	5.45	2.02
04270465	1981	Lim; Linda W.	APPARATUS FOR SCREENING PASTE SOLDER ONTO LEADED HYBRID SUBSTRATES	GTE AUTOMATIC ELECTRIC LABORATO	11	6.39	1.72
05719514	1998	Sato; Yu	Delay circuit compensating for variations in delay time	Yokogawa Electric Corp.	11	6.73	1.64
05800878	1998	Yao; Xiang Yu	Reducing hydrogen concentration in pecvd amorphous silicon carbide films	Applied Materials Inc.	11	6.89	1.60
04316322	1982	Tranberg; Stephanie K.	METHOD OF FABRICATING ELECTRICAL CONTACTS IN A PRINTED CIRCUIT BOARD	Unisys Corp.	11	7.33	1.50
06147869	2000	Furnival; Courtney	Adaptable planar module	International Rectifier Corp.	10	3.42	2.93
06297680	2001	Kondo; Takako	Internal clock generator that minimizes the phase difference between an external clock signal and an internal clock signal	Oki Electric Industry Co. Ltd.	10	3.68	2.72
06159863	2000	Chen; Susan Rizzuto; Judi Quan Sanderfer; Anne E.	Insitu hardmask and metal etch in a single etcher	Advanced Micro Devices Inc	10	4.58	2.18
06285208	2001	Ohkubo; Miyoshi	Activation speed of signal wiring line in semiconductor integrated circuit	NEC Corp	10	4.78	2.09
06459588	2002	Morizumi; Ken-ichi Izumitani; Kazumi	Noncontact IC card and fabrication method thereof	Dai Nippon Printing Co. Ltd.	10	5.30	1.89
06485989	2002	Signorini; Karen	MRAM sense layer isolation	Micron Technology Inc.	10	5.46	1.83
06017390	2000	Charych; Deborah H. Berman; Amir	Growth of oriented crystals at polymerized membranes	University of California	10	5.97	1.68
06313982	2001	Hino; Mariko	Protective case for portable electronic apparatus	Sony Corp	10	5.98	1.67
05697751	1997	Takahashi; Kazue	Wafer transfer apparatus and method	Hitachi Ltd	10	6.49	1.54
06072686	2000	Yarbrough; Allyson D.	Micromachined rotating integrated switch	Aerospace Corp.	10	6.64	1.51

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06596195	2003	Srivastava; Alok Mani Setlur; Anant Achyut Comanzo; Holly Ann	Broad-spectrum terbium-containing garnet phosphors and white-light sources incorporating the same	General Electric Company	9	1.52	5.94
06514836	2003	Belford; Rona Elizabeth	Methods of producing strained microelectronic and/or optical integrated and discrete devices	UNASSIGNED	9	2.11	4.26
06251835	2001	Chu; Wei-Kan Wu; Judy Z.	Surface planarization of high temperature superconductors	JDS Uniphase Corp	9	2.19	4.10
06509267	2003	Woo; Christy Mei-Chu Pangrle; Suzette K. Wang; Connie Pin-Chin	Method of forming low resistance barrier on low k interconnect with electrolessly plated copper seed layer	Advanced Micro Devices Inc	9	2.47	3.65
06255882	2001	Hirai; Miho	Method and system of switching clock signal	NEC Corp	9	2.61	3.45
06651225	2003	Lin; Sharon Sheau-Pyng Tseng; Ping-Sheng Chang; Chwen-Cher Hwang; Su-Jen	Dynamic evaluation logic system and method	AXIS SYSTEMS INC	9	2.79	3.22
06339030	2002	Constant; Kristen Subramania; Ganapathi S. Biswas; Rana Ho; Kai-Ming	Fabrication of photonic band gap materials	United States of America Department of E	9	2.89	3.11
06479309	2002	Wright; Marilyn I.	Method and apparatus for determining process layer conformality	Advanced Micro Devices Inc	9	3.17	2.84
06456487	2002	Hetterick; Charlotte	Enclosure for wireless communication device	Nokia Corp	9	3.43	2.63
06202256	2001	Bovio; Michele Kanjiram; Jitender	Hinge system for a portable computer	Hewlett-Packard Co	9	3.68	2.45
06055368	2000	Kunioka; Michiko	Batch execution control programming device and method	Mitsubishi Electric Corp	9	3.93	2.29
06358819	2002	Shelton; Gail D. Miller; Gayle W.	Dual gate oxide process for deep submicron ICS	LSI Logic Corp.	9	3.95	2.28
06316734	2001	Yang; Rui	Flexible circuits with static discharge protection and process for manufacture	Minnesota Mining and Manufacturing Com	9	4.45	2.02
06215064	2001	Noble; Jennifer D. Gordon; Carrie Lynn	Electronics jumper management assembly	SIECOR OPERATIONS LLC	9	4.45	2.02
06404634	2002	Mann; Kristina L	Single piece heat sink for computer chip	Hewlett-Packard Co	9	4.97	1.81
06121544	2000	Petsinger; Julie Ann	Electromagnetic shield to prevent surreptitious access to contactless smartcards	UNASSIGNED	9	5.02	1.79
05884391	1999	McGuire; Katherine M. Luciano; Honorio	Process for manufacturing an electrical device comprising a PTC element	Littelfuse Inc	9	5.07	1.77

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
05994888	1999	Yanagawa; Miki	Semiconductor device reducing voltage consumption in voltage-detection circuit	Fujitsu Limited	9	5.35	1.68
06399489	2002	M'Saad; Hichem Cho; Seon Mee Tribula; Dana	Barrier layer deposition using HDP-CVD	Applied Materials Inc.	9	5.35	1.68
04531267	1985	Royer; Michele	METHOD FOR FORMING A PRESSURE SENSOR	Honeywell International Inc.	9	5.72	1.57
05980017	1999	Sato; Tamaki	Process for the production of a liquid jet recording head	Canon Inc	9	5.91	1.52
06288907	2001	Burns; Carmen D.	High density integrated circuit module with complex electrical interconnect rails having electrical interconnect strain relief	STAKTEK GROUP LP	9	5.98	1.51
04926437	1990	Ford; Carol M.	CERAMIC CATHODE FOR RING LASERS	UNASSIGNED	9	6.00	1.50
06762869	2004	Maleki; Luftollah Yu; Nan	Atomic clock based on an opto-electronic oscillator	California Institute of Technology	8	0.74	10.83
06511576	2003	Klein; Rita J.	System for planarizing microelectronic substrates having apertures	Micron Technology Inc.	8	1.42	5.63
06538930	2003	Ishii; Motoharu Omoto; Kayoko	Charge pump circuit for generating positive and negative voltage with reverse current prevention circuit and a nonvolatile memory using the same	Mitsubishi Electric Corp	8	1.90	4.21
06590698	2003	Ohtsuki; Tomoko Owa; Soichi	Ultraviolet laser apparatus and exposure apparatus using same	Nikon Corp.	8	1.92	4.17
06649445	2003	Qi; Jing Danvir; Janice Klosowiak; Tomasz	Wafer coating and singulation method	Motorola Inc.	8	2.78	2.88
06350666	2002	Kryliouk; Olga	Method and apparatus for producing group-III nitrides	University of Florida	8	3.95	2.03
05300158	1994	Chen; Szuchain Yukov; Nina	Protective coating having adhesion improving characteristics	OLIN CORP	8	4.92	1.63
06724176	2004	Wong; Kern W. Xin-Leblanc; Jane	Low power, low noise band-gap circuit using second order curvature correction	National Semiconductor Corp.	7	1.08	6.46
06638876	2003	Levy; Sagy Bloom; Robin S. Kepten; Avashai	Method of forming dielectric films	Mattson Technology Inc.	7	2.11	3.32
06403211	2002	Yang; Rui Mao; Guoping	Liquid crystal polymer for flexible circuits	Minnesota Mining and Manufacturing Com	7	2.21	3.17
06526549	2003	You; Eileen H.	Hierarchical parasitic capacitance extraction for ultra large scale integrated circuits	Sun Microsystems Inc	7	2.88	2.43
06403998	2002	Inoue; Ikuko	Solid-state image sensor of a MOS structure	Toshiba Corp	7	3.09	2.27

Appendix A - Highly Cited Information Technology Patents with Female Inventors

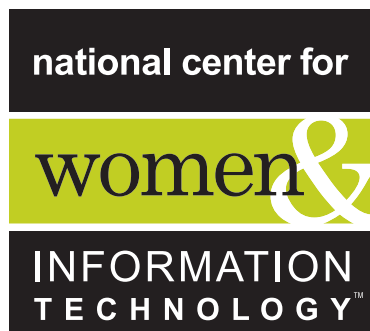
Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06277203	2001	Jiang; Linda Hymes; Diane J.	Method and apparatus for cleaning low K dielectric and metal wafer surfaces	Lam Research Corp.	7	3.11	2.25
06220091	2001	Chen; Fufa Chang; Yu Tzu; Gwo	Liquid level pressure sensor and method	Applied Materials Inc.	7	3.16	2.22
06192580	2001	Hayami; Keiko	Method of making laminate printed circuit board with leads for plating	Oki Electric Industry Co. Ltd.	7	3.73	1.88
06501100	2002	Srivastava; Alok Mani Comanzo; Holly Ann	White light emitting phosphor blend for LED devices	General Electric Company	7	3.80	1.84
06399432	2002	Zheng; Tammy Bothra; Subhas	Process to control poly silicon profiles in a dual doped poly silicon process	Koninklijke Philips Electronics N.V.	7	3.95	1.77
06239986	2001	Otsuka; Yumiko	Housing body of electronic equipment	JTEKT Corp (Formerly Koyo Seiko Co Ltd)	7	4.21	1.66
05669059	1997	Carden; Robin A.	Metal matrix compositions and method of manufacturing thereof	ALYN CORP	7	4.32	1.62
06713390	2004	M'Saad; Hichem Cho; Seon Mee Tribula; Dana	Barrier layer deposition using HDP-CVD	Applied Materials Inc.	6	1.14	5.27
06509790	2003	Yang; Yu Ang	Switched-capacitor circuits and methods with improved settling time and systems using the same	Cirrus Logic Inc.	6	1.46	4.11
06559708	2003	Notani; Hiromi	Virtual and backgate supply line circuit	Mitsubishi Electric Corp	6	1.58	3.79
06503783	2003	Mouli; Chandra V.	SOI CMOS device with reduced DIBL	Micron Technology Inc.	6	1.64	3.67
06423200	2002	Hymes; Diane J.	Copper interconnect seed layer treatment methods and apparatuses for treating the same	Lam Research Corp.	6	2.01	2.98
06630736	2003	Ignaut; Sharon L.	Light barrier for light sensitive semiconductor devices	National Semiconductor Corp.	6	2.17	2.77
06518198	2003	Klein; Rita J.	Electroless deposition of doped noble metals and noble metal alloys	Micron Technology Inc.	6	2.52	2.38
06624003	2003	Rice; Janet L.	Integrated MEMS device and package	TERAVICTA TECHNOLOGIES INC	6	2.52	2.38
06420222	2002	Watanabe; Hitomi	Method of producing semiconductor having two-layer polycrystalline silicon structure	Seiko Instruments	6	2.92	2.06
06521944	2003	Mirgorodski; Yuri	Split gate memory cell with a floating gate in the corner of a trench	National Semiconductor Corp.	6	3.00	2.00
06452777	2002	Naito; Kazumi	Capacitor	Showa Denko K.K.	6	3.16	1.90
06347032	2002	Naito; Kazumi	Capacitor	Showa Denko K.K.	6	3.16	1.90

Appendix A - Highly Cited Information Technology Patents with Female Inventors

Semiconductors/Solid-State Devices

<i>Patent #</i>	<i>Year</i>	<i>Inventors</i>	<i>Title</i>	<i>Assignee</i>	<i>Cite Count</i>	<i>Exp Cite Count</i>	<i>Cite Index</i>
06362518	2002	Yatsuda; Hiromi	Electronic compoment to be mounted on a circuit board having electronic circuit device sealed therein and method of manufacturing the same	JAPAN RADIO CO LTD	6	4.00	1.50
06387150	2002	Naito; Kazumi	Powdered niobium, sintered body thereof, capacitor using the sintered body and production method of the capacitor	Showa Denko K.K.	5	1.01	4.95
06503843	2003	Xia; Li-Qun Yieh; Ellie	Multistep chamber cleaning and film deposition process using a remote plasma that also enhances film gap fill	Applied Materials Inc.	5	1.42	3.52
06642747	2003	Chiu; Hon Kin	Frequency detector for a phase locked loop system	National Semiconductor Corp.	5	1.46	3.43
06352595	2002	Svirchevski; Julia S. Mikhaylich; Katrina A.	Method and system for cleaning a chemical mechanical polishing pad	Lam Research Corp.	5	2.00	2.50
06703962	2004	Marics; Monica Stevens; Clarke Lawrence; Lev	Modular remote controller	MEDIAONE GROUP INC	5	2.18	2.30
06583497	2003	Xia; Li-Qun Lim; Tian-Hoe Gaillard; Frederic Yieh; Ellie	Surface treatment of c-doped SiO2 film to enhance film stability during O2 ashing	Applied Materials Inc.	5	2.27	2.20
06355927	2002	Snyder; Tanya J.	Interpolation methods and circuits for increasing the resolution of optical encoders	Agilent Technologies Inc	5	2.48	2.02
06360685	2002	Xia; Li-Qun Yieh; Ellie	Sub-atmospheric chemical vapor deposition system with dopant bypass	Applied Materials Inc.	5	2.53	1.98



This report was produced with support from the **NCWIT Workforce Alliance.**

The National Center for Women & Information Technology (NCWIT) would like to thank our Investment Partners for their generous support.



NCWIT
University of Colorado
322 UCB
Boulder, CO 80309-0322
www.ncwit.org
Catherine.ashcraft@colorado.edu

1790 Analytics, LLC
East Gate Center, Suite 200
309 Fellowship Road
Mount Laurel, NJ 08054