



STATEMENT

OF

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U.S. PATENT AND TRADEMARK OFFICE

ROUNDTABLE MEETING

ON

SMALL BUSINESS VIEWS ON THE INTERNATIONAL
HARMONIZATION OF PATENT LAWS

DECEMBER 19, 2002

I very much appreciate this opportunity to participate in this important roundtable meeting.

It is no overstatement to predict that historic opportunities are within our grasp to enhance the effectiveness of the U.S. patent system and of patent systems worldwide. I have been in the patent business for several decades, and I cannot recall a time when the incentives of the patent system were better appreciated and used by high technology concerns, both small and large, both profit seeking and non-profit.

The good news is that the use of the U.S. patent system and its counterparts abroad continues to increase at an exponential rate. In my view that reflects accurately the increase in applying science and technology to human endeavors. Some would argue that the increased use of the patent system actually is outstripping the increase in research development, but I seriously question whether the data support that position. In the research-based pharmaceutical industry, for example, R & D expenditures have increased more than ten-fold in the past 20 years — from \$2.3 billion in 1981 to more than \$30 billion in 2001. And patents granted in the pharmaceutical field (USPTO classes 424 and 514), although substantially increased, have not kept pace. In 1981, 2,017 such patents were granted, compared with 6,751 patents in the year 2000. Of course, many of those patents cover new life-saving and life-enhancing medications that would not have been invented except for the incentives provided by the U.S. patent system. I am certain that the pattern of the research-

based pharmaceutical industry is repeated in many other important fields of technology.

The importance of effective patent protection to small and medium size businesses is no more dramatically indicated than with respect to the biotechnology industry. It is only because of patents that small emerging biotechnology companies can hope to compete with more established concerns in the United States and worldwide. Thus, the miracle cures flowing abundantly from that industry depend directly upon a well working — and I would submit harmonized — patent system in the U.S. and in the major countries of the world.

The bad news regarding the increasing amplitude of work in the patent offices of the world is that the offices are having serious difficulty in keeping up with their respective workloads. Former Commissioner of the Japanese Patent Office, Hisamitsu Arai, in a cogent briefing entitled "Crisis in 2003" predicts that the average burden upon a patent examiner in the world will increase from 110 applications on his or her docket in 1995 to over 620 applications on his or her docket in 2003. I applaud the efforts of Undersecretary James Rogan and his staff that are reflected in the USPTO's 21st Century Strategic Plan. A key part of that Plan is to move towards meaningful work sharing among the major offices of the world. That is critically important. And although it does not depend totally on a harmonization of substantive patent laws, eventually a lack of such harmonization will amount to a damper or break on the enlightened efforts that are being pursued.

Whenever "international patent harmonization" is mentioned in the same breadth with "small business" the issue of first-inventor-to-file versus first inventor system of priority inevitably surfaces. The assertion is often heard that for the U.S. to adopt a first-inventor-to-file system in the U.S. would somehow favor large companies to the disadvantage of small entities. The data that exist regarding the use of the first-to-invent system with respect to small entities contradict that assertion.

I was pleased to work with the staff of the USPTO in compiling statistics on what happened to small entities during their history, i.e., from their creation legally in FY 1983 through the year FY 2000. I was pleased that the *Journal of the Patent and Trademark Office Society* chose to publish the results of this effort in its June 2002 issue. I have attached to my statement my *JPTOS* article, which you may wish to include in the record of this roundtable meeting.

In analyzing the data collected I defined terms in what I believe is a very straightforward way, which I will summarize today.

- I say that a small entity was *advantaged* by the first-to-invent system if the small entity was the *junior party* in an interference — i.e., the second person to file a patent application on the invention — and received a *favorable* decision.
- I say that a small entity was *disadvantaged* by the first-to-invent system if the small entity was the *senior party* in an interference — i.e., the first person to file a patent application on the invention — and received an *adverse* decision.

The data provided by the USPTO confirm empirically that the current first-to-invent system of priority provides no advantage to small entities. Historically, virtually the same number of small entities were advantaged by the first-to-invent system (203) as were disadvantaged (201). And with respect to independent inventors — among the most vocal of first-to-invent adherents — more were disadvantaged (115) than were advantaged (98) by the first-to-invent system.

In closing let me say that in my opinion it is not essential for the United States to adopt a first-inventor-to-file system to achieve meaningful forms of work sharing with our counterparts abroad. On the other hand, at some point the world's great patent systems are going to need to agree upon a definition of prior art if we are going to move beyond rudimentary or elementary steps in work sharing toward a truly international patent. That will require the U.S. to change to a first-inventor-to-file system, which system — based upon historic data — will actually work to the advantage of small enterprises.

Again, thank you very much for this opportunity to appear during this roundtable. I hope that my remarks have been useful. I would be pleased to respond to any questions you or your colleagues may have.

THE U.S. FIRST-TO-INVENT SYSTEM HAS PROVIDED NO ADVANTAGE TO SMALL ENTITIES

by

Gerald J. Mossinghoff*

INTRODUCTION

As between two true inventors claiming the same invention — as contrasted with copiers — *every* nation in the world, except the United States, provides the patent to the inventor who first undertakes to use the patent system to disclose his/her invention to the public and gain protection.¹ In shorthand, this is called a first-to-file system of priority, but it is more appropriately called a first-inventor-to-file system. For reasons that perhaps made sense historically, the United States has a so-called first-to-invent system of priority that is intended to provide a patent to the first “inventor,” i.e., the first person to “conceive” and/or “reduce the invention to practice” under an arcane and burdensome complex of substantive and procedural rules and regulations governing what are called “interferences” in the U.S. Patent and Trademark Office (“USPTO”).²

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¹ At the end of 1997, there were two nations that used the so-called first-to-invent system: the United States and the Philippines. Effective January 1, 1998, under its Republic Act No. 8293, the Philippines adopted a first-to-file system, leaving the United States alone in the world in adhering to the first-to-invent system.

² In an article published at 82 JPTOS 891 (December 2000), Charles L. Gholz, an internationally recognized expert on interference practice, described graphically what can happen in an interference:

A couple of years ago I was handling a big ticket interference in which my side's inventors were named the Inventors of the Year by the Intellectual Property Owners Association. At about the same time, my client assigned the lead inventor to us full time. That is, it told him that it was more important for him to work with us to win the interference than it was for him to work at his laboratory bench making more inventions!

My client's decision was good for us, but it was grotesquely bad for the nation. While the inventor spent his time racking his brain trying to remember what he had done and when he had done it years before (and more importantly, trying to find documents to substantiate his hazy memory), he could have been back at his bench making more important inventions.

As things stand, important people (i.e., inventors—not patent attorneys!) spend enormous amounts of time on historical matters which, at least in most cases, are of absolutely no use to

As early as 1965, a major Presidential Commission studying the United States patent system strongly recommended that the United States adopt the otherwise universal first-to-file system.³ Given the increasing use of low-cost and easily filed *provisional applications*, such a system would be of significant benefit to small entities — the class that comprises independent inventors, small businesses and nonprofit institutions. However, assertions are heard that adopting a first-inventor-to-file system in the U.S. would somehow favor large companies to the disadvantage of small entities.

ESTABLISHMENT OF THE SMALL ENTITY STATUS

To provide adequate funding for the USPTO, I recommended in 1981 to the Secretary of Commerce and he in turn recommended to the President through the Office of Management and Budget (1) that the user fees for patents and trademarks be substantially increased and (2) that the USPTO be able to use the increased fees to fund its operations instead of those fees being deposited in the miscellaneous receipts of the U.S. Treasury. That recommendation was sent to the Congress in connection with the Administration's FY 1983 Budget, and Congress enacted it in P.L. 97-247.

A key part of the statutory patent fee structure enacted at that time was that it established a two-tier fee system that we had recommended. That two-tier system allows qualifying independent inventors, small businesses and nonprofit institutions — referred to collectively as "small entities" — to pay half of the standard patent filing fees, patent issue fees and patent maintenance fees.⁴

Thus, since fiscal year 1983, the USPTO has been able to keep track statistically of all patent applications that it receives and of all patents that it grants by four categories: (1) independent inventors, (2) small businesses, (3) nonprofit institutions and (4) large entities. Using the data thus collected by the USPTO — from the initiation of the small entity status in

anyone apart from the interference and of no interest to anyone at all for any reason. 82 JPTOS at 894.

³ "To Promote the Progress of ... Useful Arts" in an Age of Exploding Technology, Report of the President's Commission on the Patent System, Washington, D.C. (1966). This is not a partisan matter. The 1966 Commission Report was to President Johnson. In August 1992, the Advisory Commission on Patent Law Reform reached virtually identical conclusions in its report to the Secretary of Commerce in the Bush Administration. The Advisory Commission on Patent Law Reform, Report to the Secretary of Commerce (Aug. 1992). For a discussion of the advantages of a first-inventor-to-file system, see William S. Thompson, *Reforming the Patent System for the 21st Century*, 21 AM. INTELL. PROP. L. ASS'N. Q.J. 171 (1993).

⁴ 35 U.S.C. § 41, 37 C.F.R. §§ 1.16 et seq.

1983 through fiscal year 2000 — this article will document what happened historically to small entities when they became involved in interferences, i.e., the USPTO procedure used when two parties claim the same invention at nearly the same time.

DEFINITION OF TERMS

In this article ...

- ◆ I will say that a small entity was *advantaged* by the first-to-invent system if the small entity was the *junior party* in an interference — i.e., the second person to file a patent application on the invention — and received a *favorable* decision.
- ◆ I will say that a small entity was *disadvantaged* by the first-to-invent system if the small entity was the *senior party* in an interference — i.e., the first person to file a patent application on the invention — and received an *adverse* decision.

STATISTICAL HISTORY 1983 –2000

From 1983 through 2000, the USPTO received 3,151,901 utility, plant and reissue applications and granted 1,779,906 such patents, as shown in Table 1. During that same period there were a total of 2,858 two-party decisions in interference cases, a tiny fraction of the applications filed and patents granted. Using the number of applications filed as the denominator, the number of two-party decisions amounted to less than 0.1% of the applications filed. Using the number of patents granted during the 18-year period as the denominator, the percentage of two-party decisions increases but is still less than 0.2% of the patents granted.

Favorable Decisions

As shown in Table 2, of the total of 2,858 two-party interference decisions in the 1983-2000 time frame, 1,917 were favorable to the senior party or first to file and 941 decisions were favorable to the junior party or second to file. Of the 941 decisions favorable to the junior party, 203 favored small entities and 738 favored large entities. Table 3 shows the breakdown of the 203 decisions that favored small entities: 98 favored independent inventors, 83 favored small business and 22 favored nonprofit institutions.

Adverse Decisions

As shown in Table 4, of the total 2,858 two-party interference decisions in the 1983-2000 time period, 1,917 decisions were adverse to the junior party or second to file, while 941 decisions were adverse to the senior party or first to file. Of the 941 decisions adverse to the senior party, 740 were adverse to large entities and 201 were adverse to small entities. Table 5

shows the breakdown of the 201 decisions that were adverse to a small entity that was a senior party: 115 were adverse to independent inventors, 75 were adverse to small businesses and 11 were adverse to nonprofit institutions.

CONCLUSION

Those of us who believe that adopting the first-inventor-to-file system of priority in the United States would actually favor small entities point out that the current system of forcing a small entity into an interference proceeding with a large and determined company that filed a patent application *after* the small entity could cost the small entity hundreds of thousands of dollars, even if it ultimately received a favorable decision. More importantly, small entities by their very nature can move more quickly than larger bureaucracies. And here is where the United States *provisional application* comes into play. By filing a complete technical disclosure of the invention, a small entity can readily secure priority rights in a first-inventor-to-file system without a major expenditure of resources. This then gives the small entity a year in which to file a professionally prepared patent application.

The data provided by the USPTO confirm empirically that the current first-to-invent system of priority provides no advantage to small entities. Table 6 speaks for itself. Historically, virtually the same number of small entities were advantaged by the first-to-invent system (203) as were disadvantaged (201). And with respect to independent inventors — among the most vocal of first-to-invent adherents — more were disadvantaged (115) than were advantaged (98) by the first-to-invent system.

There are many good reasons why the United States should join the rest of the world in adopting a first-inventor-to-file system — reasons well beyond the scope of this brief article. I hope that the data cited in this article — based on 18 years of actual experience — will add constructively to the debate on that very important public policy issue.

TABLES

<i>Year</i>	<i>Applications</i>	<i>Patents</i>
1983	97,448	55,314
1984	109,539	67,214
1985	116,427	70,244
1986	121,611	71,791
1987	126,407	82,871
1988	137,069	77,844
1989	151,331	96,868
1990	163,571	89,551
1991	167,715	92,474
1992	172,539	106,116
1993	174,553	97,386
1994	186,123	102,130
1995	221,304	102,579
1996	191,116	105,529
1997	220,773	112,646
1998	240,090	140,159
1999	261,041	143,686
2000	293,244	165,504
Total	3,151,901	1,779,906

Table 1.
US Applications filed and Patents Granted
FY 1983-2000
(Utility, Plant, and Reissue)

	<i>Large Entity Favorable Decisions</i>	<i>Small Entity Favorable Decisions</i>	<i>Total Favorable Decisions</i>
Senior Party	1581	336	1917
Junior Party	738	203	941
Total	2319	539	2858

Table 2.
Favorable Interference Decisions
FY 1983-2000

SMALL ENTITIES	<i>Favorable Decisions</i>
Independent Inventors	98
Small Businesses	83
Nonprofit Institutions	22
Total	203

Table 3.
Junior Party/Small Entity that Received Favorable Decision
FY 1983-2000

	<i>Large Entity Adverse Decisions</i>	<i>Small Entity Adverse Decisions</i>	<i>Total Adverse Decisions</i>
<i>Senior Party</i>	740	201	941
<i>Junior Party</i>	1459	458	1917
<i>Total</i>	2199	659	2858

Table 4.
Adverse Interference Decisions
FY 1983-2000

<i>Small Entities</i>	<i>Adverse Decisions</i>
<i>Independent Inventors</i>	115
<i>Small Businesses</i>	75
<i>Nonprofit Institutions</i>	11
<i>Total</i>	201

Table 5.
Senior Party/Small Entity that Received Adverse
Decision
FY 1983-2000

<i>Small Entities</i>	<i>Advantaged</i>	<i>Disadvantaged</i>
<i>Independent Inventors</i>	98	115
<i>Small Businesses</i>	83	75
<i>Nonprofit Institutions</i>	22	11
<i>Total</i>	203	201

Table 6.
Small Entities
Advantaged and Disadvantaged
by the First-to-Invent System
FY 1983-2000