

2007-1130

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

In re Bernard L. Bilski and Rand A. Warsaw

APPEAL FROM THE UNITED STATES PATENT AND TRADEMARK
OFFICE BOARD OF PATENT APPEALS AND INTERFERENCES

**BRIEF FOR *AMICUS CURIAE* PROFESSOR LEE A. HOLLAAR IN
SUPPORT OF NEITHER PARTY**

Michael R. McCarthy
PARSONS BEHLE & LATIMER
201 South Main Street, Suite 1800
P.O. Box 45898
Salt Lake City, Utah 84145-0898
(801) 532-1234

Attorneys for Amicus Curiae
Professor Lee A. Hollaar

April 3, 2008

CERTIFICATE OF INTEREST

Counsel for Amicus Curiae Professor Lee A. Hollaar certifies the following:

1. The full name of every party represented by us is:

Professor Lee A. Hollaar

2. The name of the real parties in interest represented by us is:

Professor Lee A. Hollaar

3. All parent corporations and any public companies that own 10 percent or more of the stock of the party represented by us are:

None

4. The names of all law firms and the partners or associates that appeared for the parties now represented by me in the trial court or are expected to appear in this court are:

Michael R. McCarthy
PARSONS BEHLE & LATIMER
201 South Main Street, Suite 1800
P.O. Box 45898
Salt Lake City, UT 84145-0898

TABLE OF CONTENTS

STATEMENT OF INTEREST OF AMICUS CURIAE	1
ARGUMENT	2
Process Claims.....	3
Quotes in Context	7
Even Machines Implemented with Software Are Patentable.....	9
“Particularly Pointing Out and Distinctly Claiming”	13
Why Not Allow Patents On Any Activity?	19
CONCLUSION.....	25

TABLE OF AUTHORITIES

Cases

<i>AT & T Corp. v. Excel Communications Inc.</i> , 172 F.3d 1352, 50 U.S.P.Q. 2d 1447 (Fed. Cir. 1999)	4, 7
<i>Cochran v. Deener</i> , 94 U.S. 780 (1876)	3
<i>Diamond, Commissioner of Patents and Trademarks v. Chakrabarty</i> , 447 U.S. 303, 206 U.S.P.Q. 193 (1980)	9
<i>Diamond, Commissioner of Patents and Trademarks v. Diehr and Lutton</i> , 450 U.S. 175, 209 U.S.P.Q. 1 (1981)	2, 4, 7
<i>Gottschalk, Commissioner of Patents v. Benson et al.</i> , 409 U.S. 63, 175 U.S.P.Q. 673 (1972)	10, 14
<i>In re Alappat</i> , 33 F.3d 1526, 31 U.S.P.Q. 2d 1545 (Fed. Cir. 1994)	8, 11
<i>In re Bridgeford</i> , 357 F.2d 679, 149 U.S.P.Q. 55 (CCPA 1966)	18
<i>Parker, Acting Commissioner of Patents and Trademarks v. Flook</i> , 437 U.S. 584, 198 U.S.P.Q. 193 (1978)	17
<i>Sitrick v. Dreamworks LLC</i> , 85 U.S.P.Q. 2d 1826 (Fed. Cir. 2008)	18
<i>State Street Bank & Trust Co. v. Signature Financial Group Inc.</i> , 149 F.3d 1368, 47 U.S.P.Q. 2d 1596 (Fed. Cir. 1998)	4, 6, 7
<i>Whelan Associates Inc. v. Jaslow Dental Laboratory, Inc., et al.</i> , 797 F.2d 1222, 230 U.S.P.Q. 481 (3d Cir. 1986)	10

Federal Statutes

35 U.S.C. § 112	13, 14, 15
35 U.S.C. § 271(a)	20

17 U.S.C. § 102(b) 10

Federal Regulations

37 C.F.R. § 41.37(c)(1)(v) 15

Other Sources

James Bessen and Michael J. Meurer, *Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovation at Risk*, Princeton University Press, 2008 15

Ben Klemens, *Math You Can't Use: Patents, Copyright and Software*, Brookings Institution Press, 2005 10

Andrew Knight, "A Potentially New IP: Storyline Patents," *Journal of the Patent and Trademark Office Society*, Vol. 86, No. 11, pp. 859-877 (November 2004) 24

Reply Brief of Appellants 8

S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H.R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952) 8

Kenneth L. Thompson, "Text Matching Algorithm," United States Patent 3,568,156, granted March 2, 1971 13

Transcript of Oral Argument, *LabCorp v. Metabolite Labs*, No. 04-607 (S.Ct. Mar. 21, 2006) 9

Transcript of Oral Argument, *Quanta Computer v. LG Electronics*, No. 06-937 (S.Ct. Jan. 16, 2008) 22

Uniform Commercial Code, § 2-312(3) 21

STATEMENT OF INTEREST OF *AMICUS CURIAE*

Amicus files this brief pursuant to the Court's order of February 15, 2008.

Lee A. Hollaar is a professor of computer science in the School of Computing at the University of Utah, where he teaches courses in computer and intellectual property law and computer systems and networking. He has been programming computers since 1964 and designing computer hardware since 1969. He received his B.S. degree in electrical engineering from the Illinois Institute of Technology in 1969 and his Ph.D. in computer science from the University of Illinois at Urbana-Champaign in 1975.

Dr. Hollaar is the former chair of IEEE-USA's Intellectual Property Committee, where he supervised the filing of the amicus brief whose theory of foreseeability was adopted by the Supreme Court in *Festo*, and filed an amicus brief on his own behalf in *Grokster* whose theory of inducement liability was also adopted by the Supreme Court.

As an inventor and patentee of computer-related technology, a Registered Patent Agent involved with the prosecution of patent applications since 1989, an expert witness and special master in patent litigation, the author of *Legal Protection of Digital Information* (BNA Books, 2002) and course material on computer-based patents, and teacher of that material, he

is concerned that the decision in this case might continue the unclear lines of what is statutory subject matter by making distinctions not tied to real technological differences or may force inventors of computer-program-based inventions to claim them in ways that obscure the patentable advance over the prior art.

The views expressed here are solely those of Professor Hollaar.

ARGUMENT

In the over three decades since Diehr and Lutton first applied for a patent on a method of using a digital computer to control a rubber molding press¹ that the Supreme Court held claimed a statutory process,² the use of computer technology has expanded well beyond the (presumably novel and nonobvious) use of an expensive digital computer to control an industrial process to being present in most consumer electronics and appliances. Microwave ovens, washers and dryers, television sets and radios, thermostats, furnaces and boilers, sprinkler controllers, and clocks and watches are but a few of the appliances where an embedded computer has replaced mechanical timers, gears, and switches, resulting in more reliable products able to perform more functions at lower prices.

¹ Resulting in United States Patent 4,344,142, "Direct digital control of rubber molding presses," issued August 10, 1982.

² *Diamond, Commissioner of Patents and Trademarks v. Diehr and Lutton*, 450 U.S. 175, 209 USPQ 1 (1981).

Many of the new capabilities for such appliances are the result of novel and nonobvious computer programs that control traditional machines in ways that cannot be realistically done using mechanical controls. Much as Diehr and Lutton's invention sensed the actual tire mold temperature and determined what to do next, today's microwave ovens sense the temperature of meat being cooked and dryers sense the moisture content of the clothes.

Process Claims

Before the advent of computer technology, process claims in patents were used primarily to claim a new way of producing a known machine, manufacture, or composition of matter, the other classes of statutory subject matter. The first patent granted by the United States, in 1790, was for a new process for making potash. In *Cochran v. Deener*, 94 U.S. 780 (1886), the Supreme Court stated:

That a process may be patentable, irrespective of the particular form of the instrumentalities used, cannot be disputed. * * * A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject matter to be transformed and reduced to a different state or thing. If new and useful, it is just as patentable as is a piece of machinery. In the language of the patent law, it is an art. The machinery pointed out as suitable to perform the process may or may not be new or patentable; whilst the process itself may be altogether new, and produce an entirely new result. The process requires that certain things should be done with certain

substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence.”³

In *Diamond v. Diehr*, the Supreme Court held that just because “in several steps of the process a mathematical equation and a programmed digital computer are used,” the claimed “physical and chemical process for molding precision synthetic rubber products falls within the §101 categories of possibly patentable subject matter.”⁴

A series of decisions by this Court and its predecessor, culminating in *State Street Bank*⁵ and *AT&T*,⁶ expanded the process claims beyond the physical transformation of an article.

State Street Bank shouldn’t have been about process claims at all. Signature had originally filed twelve claims – six method claims and six corresponding machine claims. When the examiner objected to the method claims as not being statutory subject matter, Signature dropped them in the interest of getting its patent. The examiner then allowed the patent for the remaining machine claims. Claim 1 is representative of the machine claims,

³ 94 U.S. 780, 787-788 (1876), cited in *Diamond v. Diehr*, 450 U.S. at 182-183, 209 USPQ at 6.

⁴ 450 U.S. at 184-185, 209 USPQ at 7.

⁵ *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998).

⁶ *AT & T Corp. v. Excel Communications Inc.*, 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999).

with the bracketed language indicating what the written description discloses as structure for the “mean for” limitations.

1. A data processing system for managing a financial services configuration of a portfolio established as a partnership, each partner being one of a plurality of funds, comprising:

(a) computer processor means [a personal computer including a CPU] for processing data;

(b) storage means [a data disk] for storing data on a storage medium;

(c) first means [an arithmetic logic circuit configured to prepare the data disk to magnetically store selected data] for initializing the storage medium;

(d) second means [an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases or decreases based on specific input, allocate the results on a percentage basis, and store the output in a separate file] for processing data regarding assets in the portfolio and each of the funds from a previous day and data regarding increases or decreases in each of the funds, [sic, funds'] assets and for allocating the percentage share that each fund holds in the portfolio;

(e) third means [an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases and decreases based on specific input, allocate the results on a percentage basis and store the output in a separate file] for processing data regarding daily incremental income, expenses, and net realized gain or loss for the portfolio and for allocating such data among each fund;

(f) fourth means [an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases and decreases based on specific input, allocate the results on a percentage basis and store the output in

a separate file] for processing data regarding daily net unrealized gain or loss for the portfolio and for allocating such data among each fund; and

(g) fifth means [an arithmetic logic circuit configured to retrieve information from specific files, calculate that information on an aggregate basis and store the output in a separate file] for processing data regarding aggregate year-end income, expenses, and capital gain or loss for the portfolio and each of the funds.⁷

Clearly, the claim is to a specific machine, albeit one that may be implemented using a conventional digital computer. But through some legerdemain, the district court transformed the machine claims into method claims (much like the ones that had been dropped by Signature during the prosecution of the application), and then said the claimed subject matter was an unpatentable abstract idea or, alternatively, a business method, and therefore not patentable.

This Court properly condemned the “business method exception” as “ill-conceived,” noting that:

Since its inception, the “business method” exception has merely represented the application of some general, but no longer applicable legal principle, perhaps arising out of the “requirement for invention” – which was eliminated by Section 103. Since the 1952 Patent Act, business methods have been, and should have been, subject to the same legal requirements for patentability as applied to any other process or method.⁸

⁷ *State Street Bank*, 149 F.3d at 1372, 47 USPQ2d at 1600.

⁸ *State Street Bank*, 149 F.3d at 1375, 47 USPQ2d at 1602.

In AT&T, the claim really was written as a method, tied to a telecommunication system. Although nothing physical was being transformed, this Court noted:

The notion of “physical transformation” can be misunderstood. In the first place, it is not an invariable requirement, but merely one example of how a mathematical algorithm may bring about a useful application. As the Supreme Court itself noted, “when [a claimed invention] is performing a function which the patent laws were designed to protect (*e.g.*, transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of Section 101.” *Diehr*, 450 U.S. at 192 (emphasis added). The “*e.g.*” signal denotes an example, not an exclusive requirement.⁹

Quotes in Context

Appellants ignore the context of both *State Street Bank* (which, after all, was for a claimed machine and not a process at all) and *AT&T*, and ask this Court to extend those decisions to any activity that can produce any “useful, concrete, and tangible result” even if it does not involve a machine (as in *State Street Bank*) or a machine implemented process (as in *AT&T*). But that language, as used in *State Street Bank*,¹⁰ was in the context of a machine. That is also true for *Alappat*, the case where the quote originated.

This is not a disembodied mathematical concept which may be characterized as an “abstract idea,” but rather *a specific*

⁹ *AT&T*, 172 F.3d at 1378-1379, 50 USPQ2d at 1452.

¹⁰ *State Street Bank*, 149 F.3d at 1373, 47 USPQ2d at 1600-1601.