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G. A. Hauptman -- 3/10/87

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COMMENTARY

Computer Software Protection Chart*

The foregoing chart tracks the progress of copyright legislation protecting computer software as a literary work. Column 1 shows that there is a clear worldwide trend in that direction and Column 2 demonstrates an even more extensive, ground swell of political support for computer software protection in accordance with traditional copyright principles. While many countries are favorably, and otherwise, addressing the computer software issues by legislation (Column 3) or by published judicial decisions (Column 4), only a few fail to provide any legal support at all for computer programs under existing copyright law (Column 5).

KEY TO CHART

"Computer software" includes programs and documentation explaining programs.

The listed countries include major industrial countries, countries developing computer software industries and countries harboring computer software pirates.

Column 1: Copyright statutes enacted or amended to protect computer software as a literary work.

Column 2: Legislators or industry, trade or professional associations favor protection of computer software as a literary work under copyright law.

Column 3: Bills drafted, or introduced into the legislature, to protect computer software under copyright law or otherwise.

Column 4: Judicial decisions specifically addressing (pro or con) the issue of copyright protection for computer programs.

Column 5: Clear official position that computer software is not protected by copyright law.

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Unity of Invention and PTO Credibility

Whereas the patent offices of other major examining countries merely tend to criticize differences in practices in the United States, we are certainly proud of the leadership role the PTO is presently taking in preparing concrete compromises toward harmonization. Even prior to current activity in that regard, the Commissioner's Notice (1046 TMOG 3) of August 1, 1984, expressly stating that, for patent applications in which separate claims were of different statutory classes (Product, Process of Making, Process of Using), the practice "is being changed to conform to Rule 13.2(i) of the Patent Cooperation Treaty (PCT)", was heralded by many as a giant leap toward ameliorating rather harsh procedures to conform practice in the U.S.A. to that found acceptable to a large segment of examining countries. Although the Notice referred specifically to MPEP[1] 806.05 (i), each of MPEP 806.05(e), (f), (g), (h) and (i) appears to be directly involved.

Unfortunately, the "giant leap" was virtually completely negated by what was, perhaps, a misdirected interpretation imposed by PTO officials. In one case the PTO initially ruled that claims of an application did not comply with PCT requirements for unity of invention because the method of claims 1 to 4 could be performed by a two-segment die, in addition to the three-segment die contemplated in the application. The acting Group Director later found the Applicant's protest to be unjustified, and upheld the Examiner's findings. The acting Group Director also ruled that the apparatus (i.e., the three-segment die), as claimed, could be used in a materially different process: a process of making a corrugated member. The Assistant Commissioner upheld the prior PTO decisions and reiterated his position on reconsideration.

Numerous other applicants undoubtedly had similar experiences, but this one went to court. In granting summary judgment to the Applicant, the Court[2] made it ultimately clear that the plain language of the involved PCT provision "refutes the interpretation" adopted by the PTO, that the PTO interpretation is unreasonable, and that the determination that the invention defined by method claims 1 to 4 and the invention defined by apparatus claims 5 to 9 lack "unity of invention" is contrary to law.

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[1] The Manual of Patenting Examining Procedure (MPEP) is an official interpretation of statutes or regulations with which it is not in conflict. Litton Systems, Inc. v. Whirlpool Corporation, 231 U.S.P.Q. 97, at 107 (Fed. Cir. 1984).

[2] Caterpillar Tractor Co. v. Commissioner of Patents and Trademarks, 231 U.S.P.Q. 590 (E.D. Va 1986).

Once more, faith in the judicial process was restored, and a seemingly insurmountable impediment in the progress of our patent system appeared to be removed. It now seemed that relief would be available for those who claimed, in a single application, product, process-of-making, process-of-using and, maybe, even apparatus-for-making aspects of what was truly only one invention. Requiring the filing and prosecution of plural applications under such circumstances places an inordinate burden on the very system the PTO presumably promotes.

Rather than appealing from the Court's decision or accepting it gracefully and proceeding with the solution of other problems, the PTO uttered a revised pronouncement in the form of a new Notice (1070 OG 11) which reflects a complete turnabout. This new Notice (dated August 15, 1986) clearly points out that PCT practice with regard to unity of invention will be respected by the PTO only for applications filed under the PCT and that the former harsher practice will be reverted to for other applications examined by the PTO.

The result — an incredible anomaly. Applicants all over the world scream that their applications are not treated fairly by foreign countries which favor applications of their own citizens. We now have a situation in which the PTO is actually according favored treatment to foreign applicants, rather than to those who most directly support the entire PTO operation.

Unity of invention, as interpreted by the PCT, was necessarily a compromise among the member countries, including the United States. If the PTO could accept an established procedure by treaty, no rationale is seen to preclude citizens from at least equal treatment. Such would be surely one step in reaching harmonization between conflicting practices around the world. The Notice of August 15, 1986, will undoubtedly be regarded as a giant step away from the very harmonization the PTO seeks.

Irwin M. Aisenberg

SOME AREAS OF BASIC DIFFERENCE BETWEEN UNITED STATES PATENT LAW AND THAT OF THE REST OF THE WORLD — AND WHY*

ROBERT H. RINES**

Underlying the conflict between the United States concepts of determining the "first inventor" and the one-year public use grace period before patent filing, and the first-to-file and "absolute novelty" patent law concepts of the rest of the world, including the People's Republic of China, are very different views as to the importance of the individual inventor and the real needs of the innovative process itself, as distinguished from the mere convenience of patent office or patent law administration.

While we currently witness efforts to harmonize and even unify basic objectives and practices of our world societies in many facets of human conduct, for such noble purposes as strengthening understanding and communication, and simplifying international intercourse, the fact remains that individual cultures do have legitimate values that are historically, emotionally and convictionally part of their birthright and very being, and that should not necessarily be sacrificed for the goals of international uniformity.

Underlying certain rather basic differences between United States patent law and that of the rest of the world, including particularly the European patent community and now the People's Republic of China, are such historical cultural convictions. They center about the way in which the American culture has looked, and continues to look, at the process of innovation and its strong dependence on individuals, not collective societies or the convenience of government.

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* Based on a presentation before the CCPIT, Beijing (People's Republic of China) October 28, 1985.

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Thus, in the United States, we do not give the patent to the first to file in the patent office; but rather, to the "inventors" of the "discoveries" — words mandated by the United States Constitution itself[1]. Europe[2] and China[3], and the rest of the world, except Canada and the Phillipines, choose the first to file.

There are very diverse cultural approaches, values and even objectives, however, that underlie these differences.

Historically, England (from whom all patent systems have really derived their fundamental origin) sought merely the introduction of new technology or trade into the country. The patent was bait to encourage such importation. Once disclosed in the country, however, there was no need to grant a patent since the objective of introducing the technology or trade to the realm was accomplished; hence, the practice evolved that it was too late to obtain a patent if the invention was made public in the country before applying for patent. No particular consideration was given whatsoever to the actual process of invention or entrepreneurship, or to the problems of the individual inventor in making and trying to launch inventions. The goal of the state to attract new technology and trade was really paramount, though the Statute of Monopolies at least spoke also of "the true and first inventor"[4].

In the eyes of Colonial America, however, it was recognized that inventions were the creation of individual private minds. The whole revolution against England, indeed, was fought for individual rights. A decision to make an invention known, as by entrepreneurial activities and resulting public disclosure of the same, involved the practical considerations of an individual risking not only energies and time, but capital, in creating and trying to market the inventive product or process; and further risking immediate competition (considered unfair) by those who would promptly seek to profit just by copying or pirating without creating.

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[1] Article I, Section 8 of the United States Constitution: "To Promote the Progress of Science and Useful Arts, by securing for Limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."

[2] Convention on the Grant of European Patents, October 5, 1973, effective October 7, 1977.

[3] Patent Law of the People's Republic of China of 1984, effective April 1, 1985.

[4] Statute of Monopolies, 21 Jac. I, C. 3 (1623).

Concentration on the benefit to the State of having the technology enter the country was not the paramount American objective, as in England. It was considered that such an objective, however, would be automatically achieved by stimulating the individual to invent and to risk making public disclosure, particularly, because the Constitution mandated a measure of "exclusive Rights" for "Limited Times"[5]. This took the form of patent laws which provided a right to ask the courts to enjoin the stealing of the property residing in the invention.[6]

Once it was decided that the patent would go to the inventor — namely the one who made the discovery first — there had to be developed some definition of the process and acts of invention itself (the real world of invention and obviously not just the fiction of filing a paper in a patent office). In addition, of course, definitions were evolved as to the kind of discoveries resulting in useful arts that would be recognized under the patent laws.

A public policy had to be established, furthermore, that would balance the inventor's incentives and rights with the public interest. As an illustration, it was not considered appropriate to recognize as a *first* inventor one who did not diligently pursue the invention, or one who even abandoned it for a period of time, since such conduct was the antithesis of the public policy expressed in the Constitution of promoting the "progress" of the useful arts.

And so there developed a body of law that would permit the patent office, and later the courts, to evaluate within these public policy considerations who among two or more claimants to an invention was, in American eyes, the *first* inventor. The conflict as to inventorship initiated by the existence of two or more interfering copending patent applications in the patent office was to be resolved by taking testimony and evidence of inventive conception and acts leading to reduction to practice (with strict American court rules applied as to credibility) — a so-called *interference proceeding*.[7] For example, at least two other inventors claimed to have preceded Alexander Graham Bell's telephone invention; but their proofs as to prior inventorship were found wanting.

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[5] Rines, Robert H. *Create or Perish — The Case for Invention and Patents,* (1964) MIT press, Academy of Applied Science; reprinted Acropolis Press, Washington, D.C. (1969), p. 9-12.

[6] United States Patent Law 1790.

[7] 35 U.S.C. 102 (g).

The results of such interferences almost invariably coincide with the first (at least American) inventor to have filed a patent application. Why not just settle, then, for the first-to-file doctrine of the rest of the world?

The interference proceeding, however, is perhaps the only potential protection available to the independent inventor, the university inventor, or the small company inventor, who must proceed cautiously with patenting expenses until sure of all practical working and commercial utility of an invention. The interference proceeding enables one to assert a rightful claim as the first inventor against, for example, large corporate and other institutional organizations having large patent departments punctually grinding out and filing applications on promising ideas, whether developed or not, as a matter of course. The fact that the first-to-file (so-called "senior party") usually succeeds, does not, in American culture, justify abandonment of this protection.

In a somewhat analogous situation, though the public prosecutors convict a very large proportion of those charged with crimes, this would not be cause, in American thinking, for depriving the accused of a presumption of innocence, or relaxing the requirement of putting the state to the strenuous burden of proof beyond a reasonable doubt.

The interference proceeding protection afforded a first inventor to upset the claims of a later inventor who happened to be the first to jump into the patent office with a filing date takes into account the real world activities involved in inventing, and not the bureaucratic convenience of government administrators in the patent office. An invention is not usually made by filing a piece of paper — and no "paper patents", to the author's knowledge, have ever made any real contribution to the launching of a useful art. Inventions require building, testing, evaluation, and improvement to a form where they may be useful or at least may indicate that they are feasible for practical development and commercial use. Anything short of this makes little or no contribution to injecting real products and processes into the stream of commerce.

It seems abundantly evident that the underlying Constitutional purpose was to encourage *innovation,* not mere bald invention. The history of the kinds of inventions patented by the separate colonies or states before the federal union (sawmill, grain mill, tobacco pipe factory, manufacture of iron, salt manufacture), shows that the inventors were all entrepreneurs, creating real businesses with their inventions and thus making real contributions to society and the progress of useful arts[8].

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[8] Note 5, supra at p. 8.

In any event, since American public policy is strongly vested in the *progress* of the useful arts, we do not take lightly the attitude by the rest of the world, save Canada, that the accident of a first piece of paper in a patent office should defeat earlier, diligent and real inventive conduct that actually promotes such progress. While we have experience with claim-jumpers in other facets of our American society (public lands, mineral rights, television frequency allocations, etc.) and appreciate how this eases the burdens of the government administrators, technology and its progress and the incentives to advance the same by private resources — one of the few reasons for America's greatness — cannot be trusted to chance.

Stemming from this very different attitude is the American law enabling the patent application to be filed within one year of a publication anywhere or a public use or sale in the United States — which is totally at variance with the "absolute novelty" of European, Japanese and now Chinese law.[9] This one-year period used to be two years, and still is in Canada.[10] The reasoning behind this, however, is again pinned to the real world realities of the processes of inventing and marketing. A product or process often must be tried in the market place to ascertain customers' real needs and to make vital improvements, changes and perfection that result in something practical and commercially useful. It is only a commercial activity that produces products and services to benefit society and to generate the profits that can sustain free-enterprise businesses, jobs and trade.

Pieces of paper rushed into patent offices for the convenience of first-to-file administration, and particularly under the concept of "absolute novelty", hardly fit the real world needs of the inventive community. While today we have to deal with these bureaucratic ideas if Americans want foreign protection, it is evident that those who created them were never inventors. Under pain of losing the right to practice their inventions, inventors must now file before they have fully developed their ideas, before they have received the critique of colleagues reading their papers, before receiving the experience of customers, and, of course, before a finished or potentially practical product is developed. This is an artificial and considerably destructive idea that, in the author's view, works against even the possibility of complete patent disclosures. It is an idea

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[9] 35 U.S.C. § 102 (b).

[10] Canadian-Patent Act R.C.S. 1952, amended 1953.

that works against conserving patent office administrative burdens (since multiple applications are invariably required to add the later-developed material that actually makes the invention work or gives it its proper scope); that works against free, normal and comfortable participation in information-disseminating technical and business conferences, trade shows and conventions; that works against the orderly, natural, relaxed and creative conduct of inventor-patent attorney relationships; and that decidedly works against the interests of the individual, university or small company inventor who does not have the resources for indiscriminate, immediate foreign filings upon just thinking of an idea.

This author predicted at the time this doctrine of "absolute novelty" became the rule in most of the world that the doctrine would soon prove so inimicable to the realities of inventive needs and to the way innovative organizations actually have to operate in practice, that it would have to be materially bent and have exceptions created for it, because it simply is out of tune with the actual way innovation operates.

The one-year publication or public use grace period doctrine in the United States again tries to accommodate these actual needs of the real world inventive process with the expectation that the inventor will file a pretty complete application for an invention that has been brought to a state where it has a chance to progress the useful arts and thus to benefit society and make jobs — and the public is protected against an unreasonable delay in this process. This policy takes into account, also, the important modern consideration of ascertaining safety and the corrollary of product liability, and compatibility with environmental standards, that just cannot be foreseen in a vacuum and can often only be adequately evaluated and perfected by use.

From this philosophy has also come what earlier used to be described as an "experimental use" doctrine — again quite foreign to the patent laws of the rest of the world — that relaxed even the two year (now one year) public use bar against filing the patent application; but which our current exclusive patent appeals court, The United States Court of Appeals For The Federal Circuit, prefers to recognize in terms of whether or not the conduct was actually a *"public* use" or unrestricted "sale".

In 1877, the United States Supreme Court in *City of Elizabeth v. Pavement Co.*,[11] refused to invalidate a patent for wooden road or pavement

[11] *City of Elizabeth v. Pavement Co.*, 97 U.S. 126 (1877).

blocks because the invention had been tested by the inventor on a street in Boston, Massachusetts for six years before the filing of the patent application. The Court held that there was no way of knowing the utility of the invention (at least in those days) except by *actual* sustained public use of the road, pointing out that (p.134)

> The use of an invention by the inventor himself, or of any other person under his direction, by way of experiment, and in order to bring the invention to perfection, has never been regarded as (a public use). . . ."

Our current Court of Appeals for the Federal Circuit, looking recently at whether certain acts of testing were a "public use", stated the following considerations[12] (p. 1535):

> the length of the test period, whether any payment (was) made for the device, whether there (was) a secrecy obligation on the part of the user, whether progress records were kept, whether persons other than the inventor conducted the asserted experiments, tests (that) were conducted, and how long the testing period was in relationship to tests of similar devices.

But note the recognition by the court of the practical necessity for testing and experimentation in the intended public applications; and the over-riding desire of our patent law, and the Constitution that begat the same, that it is, in our public interest, to encourage the inventor "to bring the invention to perfection".[13]

It is not because the "absolute novelty" doctrine is at variance with our American system that the author urges the world to, at least, modify this doctrine. It is rather because this author believes the American understanding of the needs of the inventive process is an intellectually superior understanding. It is far closer to the realities involved in the inventive process and the needs of the inventive community, and it additionally provides a leveling factor for the small, versus the large, inventive organizations.

As in all areas where freedom and the rights of individuals are to remain superior to the mere convenience of our administrators, it is admittedly more difficult to administer the American way or parts thereof. But that is the price of everything worthwhile in attaining individual rights.

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[12] *Hycar Corp. v. Schlueter Co.*, 740 F.2d 1529, 222 U.S.P.Q. 553 (Fed. Cir., 1984).

[13] Cione, Thomas J. "Patent Law's Experimental Use Doctrine: An Analysis of Court Decisions Including Cases of the United States Court of Appeals for the Federal Circuit", IDEA — The Journal of Law and Technology, Vol. 25, 1984, PTC Research Foundation of the Franklin Pierce Law Center, p. 225-242.

The American differences from the patent philosophies of the rest of the world should be explained and understood and practically compared in their actual contribution to the innovative process, and to those who are doing the inventing and creating the jobs and products and services. Whereas first-to-file and "absolute novelty" are far more convenient for the law and its administration, they are far less realistic and technologically useful doctrines for those who make the inventions. They also are void of fundamental fairness for that extraordinary and still sizable group of small inventors, world wide, to whom some authorities attribute *most* of the break-through inventions in modern society.[14]

[14] Rabinow, Jacob; "Are Patents Needed?", IDEA — The Patent, Trademark and Copyright Journal of Research and Education (now, also The Journal of Law and Technology) Vol. 18, 1976, PTC Research Foundation of The Franklin Pierce Law Center, p. 19-35.

SOFTWARE PROTECTION — INTEGRATING PATENT, COPYRIGHT AND TRADE SECRET LAW

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In intellectual property terms, software is a true hybrid. Although software has its origin in writing, it also possesses functionality, a property that clearly distinguishes it from ordinary writings. To write software is to formulate instructions for reconfiguring a collection of electronic logic gates and memory cells into a virtual structure capable of accomplishing a predetermined objective. Thus what begins intellectually as a form of coded writing ultimately operates as an electronic network. The same, certainly, cannot be said of other types of writings, which are simply not capable of reconfiguring logic gates, but only of expressing intellectual concepts. Similarly, other types of electronic networks are not capable of existing entirely in the form of writings. Software is a hybrid because it both expresses intellectual concepts and has the power to physically implement them with the aid of a computer.

It is the hybrid nature of software that causes its failure to fit neatly into any one existing category of intellectual property, resulting in seemingly endless confusion as to how it may best be protected. The purpose of this article is not to place software into any particular category of intellectual property protection, but rather, to identify the hybrid nature of software and to demonstrate that the very different intellectual property concepts embodied within software can be coextensively protected by patent, copyright, and trade secret. This article advocates a prospectively straightforward approach to protecting the various types of intellectual property found in software: an approach in which patents protect functioning implementations of concepts, copyrights protect modes of expression, and trade secrets protect functional aspects when patent protection is unavailable or undesirable.

* The author gratefully acknowledges the assistance of Donna L. Angotti, a law review student at Georgetown University Law Center.

As patent protection for software has experienced a more troubled legal history than copyright or trade secret protection, somewhat more emphasis is placed on historical development in this area than in the other areas.

I. Patent Protection

Misinformation concerning patent protection for software is widespread. Many programmers still believe that software cannot be protected by patent.[1] Pamphlets and publications make erroneous statements such as: "There is little chance in obtaining a patent for software"[2] and "[T]he great majority of software does not qualify for patent protection."[3] The academic community also misperceives the utility of patent protection. A recent law review comment states that case law "suggests that processes that use computers may be patented, but that protection does not extend to software programs themselves,"[4] and that "there continues to be no protection under current patent law for the large number of computer programs that are neither embodied in firmware nor related to a process of production."[5]

Confusion regarding the nonpatentability of software is not the fault of academic writers, but has its origin in case law.

The most troubling aspect of the case law is the part played in its development by the Patent and Trademark Office (PTO) because one would think that the PTO, the nation's only agency empowered to issue patents, would have had an interest in encouraging, rather than discouraging, the patenting of new technology. Early decisions of the Court of Custom and Patent Appeals (the predecessor of the Court of Appeals for the Federal Circuit) strongly suggested that the CCPA judged software patentable by the same standards as any other technology.[6] It was the PTO that originated the theory that software did not fall within the broad statutory classes of patentable technology set forth in 35 U.S.C. 101.[7]

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[1] ABA Comm. On Computer Software, Res. 406-3, discussion (1986).

[2] *Id.* (quoting How to Copyright Software and Secure Trademarks (Sofprotex ed. n.d.)).

[3] *Id.* (quoting Salone, How to Copyright Software (1984).

[4] Comment, *Combating Software Piracy: A Statutory Proposal to Strengthen Software Copyright*, 34 De Paul L. Rev. (1985), at 1005.

[5] *Id.* at 1006.

[6] *See In re* Benson, 441 F.2d 682 (C.C.P.A. 1971), *rev'd sub nom.* Gottschalk v. Benson, 409 U.S. 63 (1972); *In re* Flook, 559 F.2d 21 (C.C.P.A. 1977,) *rev'd sub nom.* Parker v. Flook, 437 U.S. 584 (1978).

[7] *See* Parker v. Flook, 437 U.S. 584, 587-588 (1978), *rev'g In re* Flook, 559 F.2d 21 (C.C.P.A. 1977).

Sadly, this theory had its origins in bureaucratic concerns over workload, rather than in careful theoretical analysis.[8] In the early 1970's, the PTO anticipated a deluge of software applications at a time when it did not have the resources to hire skilled software examiners.[9] Worry about workload and backlog motivated the PTO to lead the fight against software patentability.

The fight was against the respected logic of the CCPA and led to several rather tentative Supreme Court decisions.[10]

The first such decision was *Gottschalk v. Benson*[11] which involved a method for converting binary coded decimal numerals directly into binary numerals for use with a general purpose digital computer. The court stated that, since the mathematical formulas in the claimed process involved had no application except in connection with a computer, any patent "would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself."[12] Despite the courts' noble attempt at a thoeretical explanation of its pre-emption theory, its conclusion was influenced more by the cry for help from the PTO[13] than by sound principles of intellectual property law. In its opinion, the court cited the PTO's lack of classification techniques and search files to handle the supposed burden of examining software applications.[14] The court, persuaded by the PTO, felt that there was sufficient growth in the software industry without need for patent protection.[15] Thus, the Supreme Court, instigated by the PTO, relied as much upon bureaucratic economic arguments as legal principles in foreclosing one of the fastest growing areas of technology from adequate patent protection.

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[8] *See id.*

[9] *See id.*

[10] *See, e.g..*, Gottschalk v. Benson, 409 U.S. 63 (1972), *rev'g In re* Benson, 441 F.2d 682 (C.C.P.A. 1971); Dann v. Johnston, 425 U.S. 219 (1976), *rev'g In re* Johnston, 502 F.2d 765 (C.C.P.A. 1974) (finding obvious claims to a machine system for automatic recording of bank checks and deposits under which checks and deposits are customer labeled with code categories which are processed by a data processor, and permitting a bank to furnish a customer with a categorized breakdown of his transactions, despite the fact that the prior art did not possess the ability to allow a large number of small users to get the benefit of a large scale computer and still use individual bookkeeping methods); *Flook*, 437 U.S. 584.

[11] *Benson*, 409 U.S. 63.

[12] *Id.* at 72.

[13] *See id.* at 72-73 (quoting Report of the President's Commission on the Patent System (1966)).

[14] *Id.*

[15] *See id.* at 72. Without reviewing the scope or desirability of copyright protection, the court concluded that it was available.

The CCPA resisted the Supreme Court's questionable logic and there ensued a further conflict between the courts.[16] Subsequently, in *Parker v. Flook,* involving a method for updating alarm limits during a catalytic conversion process, the Supreme Court set forth its "point of novelty test" which determined that a claim was directed to unpatentable subject matter if the point of novelty lay in the formula or algorithm recited in the claims.[17] Conventional or obvious post solution activity was not sufficient to transform an unpatentable principle into a patentable process.[18] The court again considered the PTO's interest in not having to process "thousands of additional patent applications."[19]

This case truely marks the low point for patent protection of software inventions. The court's approach improperly imported into its analysis of eligibility of subject matter for patent protection (under § 101) the considerations of novelty and inventiveness which are the proper concerns of §§ 102 and 103.[20] The point of novelty test is wholly inconsistent with the conventional view that a patent claim must be considered as a whole.

Just prior to *Flook*, the CCPA had expressed its opinion that the "point of novelty" approach was inappropriate,[21] and had set forth its two step (*Freeman*) analysis for determining whether a claim pre-empts nonstatutory subject matter as a whole:

> First, it must be determined whether the claim directly or indirectly recites an algorithm in the *Benson* sense of that term, for a claim which fails even to recite an algorithm clearly cannot wholly preempt an algorithm. Second, the claim must be further analyzed to ascertain whether in its entirety it wholly preempts that algorithm.[22]

The *Freeman* court addressed the confusion regarding the word "algorithm." The *Benson* court had defined an algorithm as "A procedure

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[16] Meyer, *Patentability of Business Methods Implemented by Computer,* 2 Computer Law. 12, 14 (Feb. 1985); *see* Diamond v. Diehr, 450 U.S. 175, 205 (1981) (Stevens, J., dissenting), *aff'g In re* Diehr, 602 F.2d 982 (C.C.P.A. 1979).

[17] *See Flook,* 437 U.S. at 594.

[18] *See id.* at 590.

[19] *Id.* at 587-588.

[20] *Id.* at 600 (Stewart, J., dissenting).

[21] *In re* Freeman, 573 F.2d 1237-1243 (C.C.P.A. 1978) (involving a system for typesetting alphanumeric information which positions mathematical symbols in an expressions in accordance with their appearance while maintaining the mathematical integrity of the expression).

[22] *Id.* at 1245.

for solving a given type of mathematical problem."[23] In *Freeman*, the CCPA rejected a broader definition of an algorithm as "a step-by-step procedure for solving a problem or accomplishing some end."[24] Such a definition, said the court, is "unnecessarily detrimental to our patent system and leads to reading the word 'process' out of the statute."[25] The CCPA interpreted *Benson* as concerned only with mathematical algorithms.[26]

Following *Flook*, the CCPA once again rejected the "point of novelty" approach.[27] The CCPA did not read *Flook* as adopting a "point of novelty" test (despite the fact that this is exactly what the Supreme Court had done) because it could not believe that "the Supreme Court has acted in a manner so potentially destructive."[28] The CCPA restated the second step of the *Freeman* test:

> If it appears that the mathematical algorithm is implemented in a specific manner to define structural relationships between the physical elements of the claim (in apparatus claims) or to refine or limit claim steps (in process claims), the claim being otherswise statutory, the claim passes muster under § 101.[29]

Finally, in *Diamond v. Diehr*, the Supreme Court changed direction and upheld the eligibility for patent protection for claims drawn to a process for curing synthetic rubber.[30] The *Diehr* Court rejected the "point of novelty" approach by saying,

> In determining the eligibility . . . for patent protection[,] . . . claims must be considered as a whole. It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. . . . The question therefore of whether a particular invention is novel is wholly apart from whether the invention falls into a category of statutory subject matter.[31]

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[23] *Benson*, 409 U.S. at 65.

[24] *Freeman*, 573 F.2d at 1245-1246.

[25] *Id.* at 1246.

[26] *Id.*

[27] *See In re* Walter, 618 F.2d 758, 766 (C.C.P.A. 1980) (involving a method and apparatus for cross-correlating return jumbled signals with the original signal which was transmitted into the earth in seismic prospecting and surveying).

[28] *Id.*

[29] *Id.* at 767.

[30] *Diehr*, 450 U.S. 175.

[31] *Id.* at 188-189.

The confusion between the requirements of § 101 and those of §§ 102 and 103 was at last resolved. The court also addressed the confusion regarding the term "algorithm," rejecting the broad definition espoused by the PTO,[32] and affirming the narrow definition set forth in *Benson*.[33]

Though the majority in *Diehr* attempted to distinguish *Diehr* from *Flook* on the grounds that Flook's claimed invention contained insignificant post-solution activity while Diehrs' claimed invention transformed or reduced an article to a different state or thing,[34] this distinction is questionable in technical terms. Stevens' dissent in *Diehr* provides an excellent analysis of the striking similarity in the method of updating the curing time calculation in *Diehr* and the method of updating the alarm limit in *Flook*.[35] His analysis concludes that the most significant difference between the cases was not in the characteristics of the inventions, but rather the manner in which the claims were drafted.[36] If this analysis is accepted as accurate, it is clear that the *Flook* and *Diehr* cases should have been decided the same way;[37] in favor of eligibility for patent.

Later in *Diamond v. Bradley*, the Supreme Court affirmed the CCPA in holding that there was no "algorithm" in an invention relating to a firmware module which directs data transfers between registers and memory.[38] This solidified the narrow definition of the term "algorithm" adopted in *Benson*.

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[32] *Id.* at note 9. The PTO defined the term "algorithm" as:

> "1. A fixed step-by-step procedure for accomplishing a given result; usually a simplified procedure for solving a complex problem, also a full statement of a finite number of steps.
>
> 2. A defined process or set of rules that leads and assures development of a desired output from a given input. A sequence of formulas and/or algebraic/logical steps to calculate or determine a given task; processing rules."

[33] *Id.* at 186 (algorithm defined as a procedure for solving a given type of mathematical problem).

[34] *Id.* at 191-193.

[35] *Id.* at 209-210 (Stevens, J., dissenting).

[36] *Id.* at note 32 (Stevens, J., dissenting).

[37] The reasoning in Stevens' dissent goes astray in analyzing the requirements of § 101 and § 102. The dissent would further the confusion regarding the term "algorithm" by presenting yet another definition of the term:

> "the term algorithm... is synonymous with the term computer program." *Id.* at (Stevens, J., dissenting).

Furthermore, the dissent considers the burden on the PTO in deciding the case. *Id.* at 219.

[38] Diamond v. Bradley, 450 U.S. 381 (1981), *aff'g In re* Bradley, 600 F.2d 807 (C.C.P.A. 1979).

The CCPA further clarified the meaning of the term "algorithm," holding in *In re Pardo* that the applicants' use of the term "algorithm" to describe the invention is not an admission of nonstatutory subject matter.[39] The court found no mathematical formula or calculation present in the claims in the case.[40]

The CCPA again refined and finalized the *Freeman* software patentability test in the case *In re Abele*[41] stating: "Thus, if the claims would be 'otherwise statutory,' id., albeit inoperative or less useful without the algorithm, the claim likewise presents statutory subject matter when the algorithm is included."[42] The court found some claims ineligible for patent protection because they were "no more than the calculation of a number and display of the result, albeit in a particular format,"[43] while other similar claims were deemed eligible for patent protection.

The inescapable conclusion to be drawn from this case law is that all software claims are eligible for patent protection unless they simply involve the use of a mathematical formula to calculate and display a number.[44]

Software patentability is a de facto reality today, as the PTO now commonly issues patents for software inventions. Examples of patented software inventions include a process for a management control system for multiprogrammed data processing,[45] a method of constructing a task program for operating a word processing system,[46] a program that checks for spelling errors,[47] and a program that converts one programming language into another (an RPG to COBOL compiler).[48]

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[39] *In re* Pardo, 684 F.2d 912 (C.C.P.A. 1982).

[40] *Id.* at 916.

[41] *In re* Abele, 684 F.2d 902 (C.C.P.A. 1982).

[42] *Id.* at 907.

[43] *Id.* at 909.

[44] Sumner, *The Versatility of Software Patent Protection: From Subroutines to Look and Feel,* 3 Computer Law. 1, 3 (June 1986). An approach treating patent claims directed to subject matter implemented at least in part with software the same as other inventions has been adopted by the ABA. ABA Comm. on Computer Software, Res. 406-3 (1986).

[45] U.S. Patent 3,618,045.

[46] U.S. Patent 4,308,582.

[47] U.S. Patent 4,355,371.

[48] U.S. Patent 4,374,408.

A patent for an AC current control system is an example of how close claims can come to reciting calculations and still be accepted by the Patent Office.[49] Patents for software systems involving artificial intelligence have also been granted.[50]

Perhaps the best known software patent was issued to Merrill Lynch for a Securities Brokerage and Cash Management System.[51] This patent is the subject of a court action which resulted in an opinion denying a motion for summary judgment of invalidity under 35 U.S.C. § 101 for not claiming patentable subject matter.[52] The decision, following earlier CCPA precedent, rejected the contention that a computer program is inherently an algorithm[53] and found no direct or indirect recitation of a procedure for solving a mathematical problem.[54]

This initially favorable court action, together with the issuance of software patents by the PTO, lends considerable support to the premise that software is now generally patentable subject matter.

Stating that software is "patentable" is somewhat misleading because, as has been explained, software is a complex hybrid in terms of the intellectual property concepts it embodies. More accurately, the intellectual property embodied in the functional aspects of the software are protectable by patent. The mode of expression embodied in the code that comprises the software is not specifically protected by patent, but the basic organization of the software and the manner in which it operates are in principle protectable by patent — assuming all other standard requirements for patentability are met. Thus, while a patent may not protect against copying the mode of expression found in a software code, it would provide the legal right to prevent others from making, using,

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[49] U.S. Patent 4,555,755.

[50] U.S. Patents 4,593,367 and 4,599,693.

[51] U.S. Patent 4,346,442.

[52] Paine, Webber, Jackson and Curtis, Inc. v. Merrill Lynch, Pierce, Fenner and Smith, Inc.; 564 F. Supp. 1358 (D. Del. 1983).

[53] *See id.* at 1367, 1368.

[54] *Id.* at 1368. The court then addressed the issue of whether the claims were drawn to non-statutory subject matter for claiming a method of doing business. The court held that the claims effectuating a useful business method would be unpatentable if done by hand but pass the requirements of § 101 since they teach a method of operation on a computer to effectuate a business activity. *Id.* at 1369. For a discussion of the effect of the definition of "algorithm" on the issue of patent eligibility for methods of doing business, see Meyer, *supra* note 16, at 15, 16.

or selling the claimed software invention. On the other hand, it is difficult to imagine a situation in which copying software code would not also result in patent infringement.[55]

One of the important advantages of patents over copyrights is that patents protect against independent development, while copyrights only protect against derivation from protected works. Thus, a broadly claimed software patent could provide protection against a range of independently developed software, including programs achieving similar results with differing code structures, while copyright would provide no protection.

The patent's advantage in broader protection is, to an extent, offset by the significantly higher cost and level of difficulty in securing protection, relative to the simplicity and low cost and of obtaining a copyright. When basic or valuable software concepts are at stake, however, the cost and effort involved in obtaining patent protection are minor compared to the insurance value of the rights obtained.

II. Copyright Protection

Copyright protects original works of authorship,[56] meaning the intellectual property embodied in the mode of expression by which intellectual concepts are conveyed.[57] The copyright law expressly prohibits copyright protection of any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described.[58] A Copyright therefore, as applied to software, would appear to protect only the intellectual property embodied in software as a mode of expression.[59] Copyright arms its owner with the legal right to prevent copying of the protected work, to prevent the distribution of copies, and to prevent the preparation of derivative works;[60] all of which are valuable rights, since software is easily copied.

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[55] A discussion of the manner of enforcing by an infringement suit a method or system-apparatus claim for a software invention, against producers and distributors of software as well as against users, is beyond the scope of this article. It is noted that legal theories such as contributory infringement and inducement may be explored.

[56] 17 U.S.C. § 102(a).

[57] *See* Baker v. Selden, 101 U.S. 99 (1880) (setting forth the distinction between the description of the art which may be secured by copyright and the art itself which may only be secured by patent).

[58] 17 U.S.C. § 102(b).

[59] Applying the idea/expression dichotomy to computer programs, the court in Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1252 (3d Cir. 1983), identified the expression adopted by the programmer as the copyrightable element in a computer program.

[60] 17 U.S.C. § 106.

The originality and creativity of a computer program may lie in the appearance and presentation of software, known as the "look and feel."[61] Many have favored extending copyright to protect the mode of expression embodied in the "look and feel,"[62] as well as the literal text of software.

To constitute copyright infringment, there must be substantial similarity between the accused work and the work copyrighted, and that similarity must have been caused by the infringer "copying" the copyright owner's work.[63] Those in favor of protecting the "look and feel" of software by copyright adopt the position that two works are substantially similar if the "total concept and feel" of the works are alike.[64]

The farthest extention of copyright protection of computer programs can be found in *Whelan Associates, Inc. v. Jaslow Dental Lab.*,[65], a recent landmark decision holding that copyright protection of computer programs may extend beyond the programs' literal code to their structure, sequence, and organization. The court of appeals affirmed a holding which broadly defined the expression of an idea in a computer program as "the manner in which the program operates, controls and regulates the computer in receiving, assembling, calculating, retaining, correlating, and producing information either on a screen, print-out or by audio communication."[66] This case is very significant in extending the scope of copyright protection to methods of operation, procedures, and processes

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[61] Russo and Derwin, *Copyright in the "Look and Feel" of Computer Software,* 2 Computer Law. 1 (Feb. 1985).

[62] *Id.* at 11; *see* Whelan Assocs. v. Jaslow Dental Lab., Inc., 797 F.2d 1222 (3d Cir. 1986), *aff'g,* 609 F. Supp. 1307 (E.D. Pa. 1985) (discussed in following text), SAS Inst., Inc. v. S & H Computer Sys., Inc., 605 F. Supp. 816 (M.D. Tenn. 1985) (applying a broad test for substantial similarity and finding infringement in adopting the organizational scheme of another's code even though this code was independently written), Comment, *supra,* note 4, at 1019-1022. The court in Williams v. Arndt, 626 F. Supp. 571 (D. Mass 1985) extended the scope of copyright protection by finding liability in translating a prose work into computer language. See Gesmer, *Developments in the Law of Computer Software Copyright Infringement,* 26 Jurimetrics 224 (Spring 1986) for a discussion of the role of facts amounting to misconduct in *Whelan, SAS,* and *Arndt.*

[63] Roth Greeting Cards v. United Card Co., 429 F.2d 1106 (9th Cir. 1970) (finding infringement of the association of elements of a greeting card despite the lack of infringement of any of the individual elements).

[64] *See* Comment, *supra,* note 4, at 1019. The "total concept and feel" test originated in *Roth,* 429 F.2d at 1106. *Roth* is criticized for finding the whole work greater than the sum of its parts. *Id.* at 1110.

[65] *Whelan,* 797 F.2d 1222.

[66] Whelan Assocs. v. Jaslow Dental Lab. Inc., 609 F. Supp. 1307, 1320 (E.D. Pa. 1985), *aff'd,* 797 F.2d 1222 (3d Cir. 1986).

which would appear to have been expressly excluded from copyright protection under 17 U.S.C. 102(b) and which are perhaps better protected by patent.[67]

The rationale relied upon in favor of extending copyright protection for computer programs includes 1) the belief that computer programmers deserve some form of protection for the intellectual property they create, and 2) the assumption that there exists no other adequate means of protection.[68] In *Whelan* the court was concerned with providing the "proper incentive for programmers by protecting their most valuable efforts."[69] (Patent protection was not considered applicable at the time the software was created.)

The expansive definition of "expression" in *Whelan* could be interpreted as extending copyright protection to the internal workings of a computer, not the traditional subject of copyright,[70] and suggesting a substantial area of overlap between patent and copyright protection.

In effect, copyright protection has been stretched in *Whelan* to fill the gap left when the courts denied software inventions patent protection. Stretching copyright protection is understandable, from an equitable point of view, to protect software authors/inventors who were discouraged from seeking patent protection due to the changing status of the law regarding the patentability of software inventions. The equities are particularly important in cases involving misconduct. Prospectively, however, as the intellectual property community accepts the notion that software is patentable, there may ultimately be little need to so stretch the bounds of copyright protection.

It should be noted further that there is no central appeals court for copyrights as there is for patents. Thus, the scope of copyright law in protecting software may vary among the circuit courts of appeals. This fact, and the unusual circumstances of *Whelan*, suggest that it may not be prudent to conclude that copyright protection will be applied with the same breadth as in *Whelan* by other courts faced with other factual circumstances. Nonetheless, *Whelan* is an important precedent when one must rely exclusively upon copyright in software litigation.

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[67] Patents are meant to protect utilitarian creations. Patent protection can be viewed as stronger than copyright protection in that there is no defense of independent development against a claim of patent infringement.

[68] *See* Comment, *supra,* note 4; Final Report of National Commission on New Technological Uses of Copyrighted Works (1978), *reprinted in* A. Latman, Copyright for the 80's 129 (1985).

[69] *Whelan,* 797 F.2d at 1236.

[70] *Copyright in the Look and "Feel" of Computer Software,* 309 Copyright and New Technology 181 (1985).

One must not suppose that copyright and patent protection are in any way at odds. Copyright protection can mesh very neatly with patent protection to provide a unique continuum of intellectual property protection in the software environment. Copyright protects against literal copying and against slavish imitation of code or mode of expression.[71] Patent protects against infringing use, whether through derivation or independent development, of the broader functional aspects of software. Thus the combination of available copyright and patent protection would appear to make software the most protectable of all technology—a far cry from its position a decade ago.

III. Trade Secret Protection

Trade Secret law has also been relied upon to partially fill the void left when software was denied patent protection by the courts. The Uniform Trade Secret Act presents the following definition of a trade secret:

> Trade secret means information, including but not limited to, a formula, pattern, compilation, program, device, method, technique, or process, that:
>
> 1. Derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and
> 2. Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.[72]

Under this basic definition of trade secret, it is clear that a computer program including logic, structure, and organization can qualify for trade secret protection as long as it is not generally known.[73] Where major software is developed by corporations for internal use, or where a very limited distribution of software is anticipated, the traditionally required level of secrecy is easily maintained. Similarly, if software is developed for sale on a limited basis, contractual or licensing provisions can easily be provided to maintain trade secret protection. But in mass marketing software to over-the-counter customers, it is certainly questionable as

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[71] *See supra,* notes 57-59 and accompanying text. *But see supra,* notes 65-69 and accompanying text.

[72] Unif. Trade Secret Act.

[73] Rice, *Trade Secret Clauses in Shrink-Wrap Licenses,* 2 Computer Law. 17 (Feb. 1985).

to whether an adequate degree of secrecy can be maintained,[74] or whether any contractual trade secrecy provisions can be enforced to the extent traditionally required for trade secret protection.[75]

The concept of "shrink-wrap licensing" was developed in an intriguing attempt to accommodate the situation. Due to the dubious common law basis for enforcing shrink-wrap trade secret clauses,[76] states such as Louisiana have enacted laws to give these clauses legal effect.[77]

Just as in the area of copyrights, the "shrink-wrap" extension of trade secret law to protect mass marketed software might be interpreted as a response to a perceived lack of adequate protection by patent. Given that many software authors/inventors have been discouraged from seeking patent protection, it is understandable that techniques such as shrink-wrap licenses including trade secret clauses would be developed in order to obtain at least a modicum of intellectual property protection. Indeed, in some circumstances such as low cost, short life span or unpatentable software, such inexpensive protection may be all that is economically justified or available. But for more valuable, more unique software where patent protection is available, shrink-wrap licenses may be needed only while patents are pending, or not at all.

Trade Secrets and Patent Disclosure

Patent protection may, of course, coexist with trade secret protection.[78] Trade secret protection may be important during the pendency of a patent application, and may even protect undisclosed details of an invention during the term of, or after the expiration of, the patent. As trade secret protection is relinquished to the extent an invention is disclosed in a patent application, there is sometimes motivation to minimize the disclosure made in a patent application in order to obtain broad patent protection and yet retain significant trade secret protection. In software terms, this can mean a patent disclosure that does not reveal any code.

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[74] *See id.* at 18.

[75] *See id.* at 18, 19.

[76] A non-disclosure clause in a shrink-wrap license neither evidences nor creates a confidential relationship since special facts are required to transform an arms-length market transaction to a confidential one. *Id.* Furthermore, the remoteness of the parties precludes a finding of negotiated terms, and consequently, it would be difficult to enforce the clauses on contract theory. *Id.* at 19.

[77] *Id.* at 20. Such laws might perhaps be challenged on constitutional grounds for giving patent-like protection, in perpetuity, which violates the basic policy central to federal patent law. There are also possible conflicts with federal antitrust laws. Due to the uncertain theoretical basis of shrink-wrap trade secret clauses, any protection provided is fraught with doubt. *Id.*

[78] Sumner, *supra,* note 44 at 4.

Under 35 U.S.C. § 112, first paragraph, one must disclose the invention "in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use" it.[79] The best mode of carrying out the invention must also be disclosed.[80] A present issue of controversy is whether a program listing or other detailed code disclosure must be made in order to satisfy these statutory requirements. In the case of *In re Sherwood*,[81] disclosure of the listing of the program was found unnecessary to satisfy the best mode requirement because an outline of the methodology used was provided, and detail of the code was considered to be within the ability of typical programmers. On the other hand, in *White Consolidated*[82] a patent was invalidated for failure to comply with the disclosure requirements under 35 U.S.C. § 112 because key software was not disclosed. However, in *White Consolidated* no effort was made to disclose the missing software, other than an attempt to incorporate it into the patent by reference. Since the software in question was considered a trade secret and was not publically available, the court correctly concluded that the patent was invalid. Had the patent included a software disclosure of the level found in the *Sherwood* case, it may be assumed that the patent in *White Consolidated* would have been found valid.

Regarding this disclosure question, it is well established law that there is no need to describe any invention in the detail needed for direct production.[83] Reasonable experimentation may be required to make and use an invention disclosed in a patent specification. To require an applicant for a software patent to provide a complete program listing would raise the standard of disclosure for software inventions far above that for any other technology.[84] Such a requirement would require that an invention

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[79] 35 U.S.C. § 112.

[80] *Id.*

[81] *In re* Sherwood, 613 F.2d 809 (C.C.P.A. 1980), *cert. denied,* 450 U.S. 994 (1981).

[82] White Consol. Indus. v. Vega Servo-control, Inc., 713 F.2d 788 (Fed. Cir. 1983).

[83] Ill. Tool Works, Inc. v. Foster Grant Co., Inc., 547 F.2d 1300 (7th Cir. 1976), *cert. denied,* 431 U.S. 929; *affg,* 395 F. Supp. 234 (N.D. Ill. 1974) (exact identity of description is not required by the enablement requirement).

[84] *But see* Comment; *The Disclosure Requirements of 35 U.S.C. § 112 and Software-Related Patent Applications: Debugging the System,* 18 Conn. L. Rev. 857.

be disclosed so that a person of virtually no programming experience would be able to make and use it. Furthermore, all trade secrets in the program listing would be lost through publication. In general, therefore, it is consistent with well established law that complete program listings should not be required to satisfy statutory disclosure requirements in software patent applications. Disclosure of algorithms and techniques of attaining results sought must be described, but nothing further, as long as an ordinary skilled programmer could be expected to draft a workable code with no more than a reasonable degree of difficulty based upon the disclosure.

Block diagrams, flow charts and top-down diagrams are presently considered the preferable means of disclosing a program, as a person does not have to understand any particular computer language to understand such diagrams.[85] Whether or not a program listing is provided, a detailed and clearly written narrative of the program is required, since most patents examiners are not enthusiastic about disecting computer listings and normally will not issue patents on inventions they don't understand.[86]

Happily, the disclosure questions for software inventions appear to be resolving themselves to a degree. Disclosure must be sufficient for one of ordinary skill in the art, at the time of the invention, to make and use the invention without 'undue experimentation."[87] What is considered "undue experimentation" depends upon the nature of the invention and the level of "ordinary skill" in the art.[88] As the experience of nearly all technically educated people with software is increasing rapidly, it becomes apparent that "ordinary skill" today is nearly as common as it was rare a decade ago. Furthermore, today's rapid spread of computer technology in schools and even homes will assure continued growth in the level of sophistication among those of "ordinary skill." As a result, issues concerning fulfillment of the statutory disclosure requirements for software inventions should become less significant in the future.

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[85] *See* Hirschfeld v. Banner, 462 F. Supp. 135, 141-142 (D.D.C. 1978) (Markey, C. J., C.C.P.A., sitting by designation), *aff'd mem.*, 615 F.2d 1368 (D.C. Cir. 1980), *cert. denied*, 450 U.S. 994 (1981).

[86] *But see* Comment, *supra*, note 84 at 18-19.

[87] *Hirschfeld*, 462 F. Supp. at 142.

[88] *See White Consol.*, 713 F.2d at 791
(where the details of a program were required to be disclosed since no suitable substitutes were known or available and could not be obtained without 1½ to 2 years of effort).

CONCLUSION

Now that the courts and PTO have abandoned their excessive concern over the job of examining software applications, patent protection is presently available for virtually all software inventions. As software authors/inventors come to understand this, extensions of copyright and trade secret law to protect functionality will be less necessary. Patent, copyright, and trade secret law will again be able to resume their traditional scopes and continue their complementary relationships, particularly in protecting intellectual property embodied in software.

SOFTWARE AS SEEN BY THE U.S. COPYRIGHT OFFICE*

RALPH OMAN**

Hello. I'm delighted to bring you the Washington perspective, to help you spot trends in software protection. I promise I won't get into the intricacies of *Whelan v. Jaslow.* In my first year as Register of Copyrights, I've spent many hours working on computer software protection, both at home and abroad.

W.C. Fields once said "if it's worth having, it's worth stealing." And software is worth having, and it's stolen at home and abroad. I want to talk about what the Copyright Office is doing to help you protect it.

In the early sixties the Copyright Office faced the threshold question — whether it could register claims in computer programs. The Office had some doubts — it wasn't sure that a program was a "writing of an author," so it wasn't sure if it was copyrightable, and it wasn't sure that a machine readable reproduction was a copy that could be infringed. Following its long-standing practice the Office resolved this close question in favor of registration and passed the ball to the courts. In 1964 the Office announced that it would register computer program claims, but under the rule of doubt. It would do so if three conditions were met: first, the program had to contain significant amounts of original authorship; second, it had to be published with the required notice of copyright;[1] and, third, if the work was published only in machine readable form, the author had to deposit a human readable reproduction such as a printout. Eventually the courts supported our finding, and then Congress eliminated any lingering doubts by expressly protecting software in 1980, as you know.

In 1964 the Office registered three programs. The first program had only 55 lines of code, and it computed automobile braking distances. In 1965 the number jumped to 16. By the end of 1977 — 13 years after

*Delivered at a conference at the Massachusetts Institute of Technology, sponsored by the PTC Research Foundation of Franklin Pierce Law Center and others in January 1987.

** *Register of Copyrights.

the first registration — 2,000 computer programs had been registered. Today, we register about 200 claims every week — that's over 10,000 a year. These split pretty evenly between corporations and individuals and between new programs and updates or revised versions. The increase has many causes — the mass marketing of software, exclusive federal copyright protection for unpublished as well as published works, and a desire to obtain the maximum benefits available under the copyright law.

From a registration point of view, the toughest issue we've had to wrestle with is the appropriate deposit — what should the creator send in for our examination and our archives. The Office originally asked for source code, because that best represents the copyrightable authorship. But many copyright owners say that the source code version of a program contains valuable trade secrets. Under the copyright law, all deposits retained by the Copyright Office are available for public inspection, and they are retained by the Office for at least 5 years.

So the Office gave special relief to allow registration without disclosing trade secrets. Usually, we accepted an abbreviated deposit or a deposit with the trade secret material blocked out. Recently the Office published a proposed regulation providing alternative forms of identifying material for programs containing trade secrets. If you want copies of it, please give me your card and I'll mail it to you.

International protection for software goes hand in glove with domestic protection. The United States is trying to forge an international consensus to provide copyright protection for software and we would like to see existing copyright conventions form the basis for international protection.

Originally, the World Intellectual Property Organization (WIPO) — the UN agency responsible for international protection of both copyright and industrial property — thought *sui generis* protection would be more appropriate for computer software. But in the interim many national courts and legislatures of industrialized countries joined us in recognizing computer software as a kind of literary or scientific work under the copyright law. Programs are written instructions, carefully selected, arranged in a sequence of the author's choice and written in a particular programming language. As such, they are arguably no different from other works of authorship. Yet doubts still remain about the wisdom of applying traditional copyright to these "untraditional works."

Because of time limitations, I will focus my remarks on three countries — Japan, France and Brazil.

In Japan, the courts early on recognized computer programs as copyrightable subject matter and gave them broad protection. They also protected programs in object code. They recognized ROMS (read only memories) as copies and they made clear that downloading a program in a computer memory was a reproduction. To eliminate any lingering doubt, Japan's Agency for Cultural Affairs — which has in it the equivalent of the U.S. Copyright Office — recommended that the Diet amend the law to provide explicit copyright protection for computer programs. Japan's Ministry of Industry and Trade (MITI), a more powerful agency, felt differently; it believed that computer programs were very different from traditional copyright subject matter. It said that their purpose was more industrial than "cultural." MITI instead proposed a *sui generis* law that would provide protection for only 15 years. It also contained a registration system and required deposit of source code. Most shocking, it outlined an expedited arbitration system that amounted to mandatory licensing, since MITI could grant licenses to users when it was "in the public interest," whatever that means. Since Japanese courts had already recognized computer programs as copyrightable, this change would have greatly lowered the level of protection that U.S. programs enjoyed in Japan. Consequently, the United States Government made a concerted effort to talk Japan out of the MITI proposal.

Since Japan and the United States are two leading producers of software, we argued that it was in both countries' best interest to grant the highest level of protection. Additionally, if computer programs were the subject matter of the international copyright conventions, this retreat from copyright protection would violate those conventions and reduce protection around the world. Japan of course adheres to both the Universal Copyright Convention and the Berne Convention. We could argue that as subject matter of the U.C.C., computer programs must receive "adequate and effective" copyright protection without regard to the type of media in which it is fixed. To be fair to the Japanese, when they first discussed computer program protection reform, several countries had doubts about the suitability of copyright protection. In fact, in 1983 WIPO convened a meeting to consider a separate treaty for protecting computer software. At that meeting, the United States cautioned against a new international treaty. In the end, the Committee of Experts decided it was premature to recommend a special treaty.

The U.S. government relayed to the Japanese its great concerns about *sui generis* legislation. Coincidentally, Senator Lautenberg of New Jersey introduced a bill that would provide for the rule of the shorter term. Some saw it as a retaliatory gesture.

By early 1985, the next Meeting of Experts under WIPO auspices, the group of experts, including Japan, agreed to the need for a certain level of protection of computer software, but there were sharp differences as to what form such protection should take. While the United States observed that courts among Berne member states were applying copyright concepts to protect software, others thought that each nation must tailor-make program protection to suit its own unique national interests. In the meantime, the United States Trade Representative (U.S.T.R.) and Japanese officials held bilateral talks. By March of 1985, MITI informed U.S.T.R. that MITI would support copyright protection for software in the manner previously offered by the Agency for Cultural Affairs. The Japanese copyright law now specifically recognizes computer programs as copyrightable subject matter. Like the U.S. law it provides that programs created by "an employee in the course of his duties" belongs to the employer unless they stipulate to the contrary. The work is protected for a long time — 50 years after the author's death; for works created by salaried employees the term is 50 years after publication or 50 years after creation "if the work has not been made public." The copyright owner has the exclusive right to import, sell and distribute the computer program. As in the United States, the owner of a copy of a program may copy or adapt that program to the extent necessary to use the program, but if he or she no longer has possession of the original program, such copies must be destroyed.

So the trend seems to be toward copyright protection for software. In a *note verbale,* the European Economic Community also weighed in in favor of copyright protection.

Although no country has established a per se sui generis law for software, the consensus for copyright protection is just that — a consensus. It is not yet unanimous. In the moral equivalent of the dark of the night, France amended its copyright law to lower the standards of protection for computer programs.

Before the French amended their law, many experts thought that copyright protection for computer software was more extensive in the French courts than in the United States. The standard of proof for infringement was said to be lower than that established in United States courts. (That view, of course, predated *Whelan v. Jaslow.*) So when the French government rejected the Ministry of Culture's proposal to add computer programs to the copyright law, one would not necessarily have considered that as cause for alarm.

Instead the French legislature referred the software issue to the Minister of Industry for study. That Ministry's task force recommended

strengthening computer program protection but in a patent context, including shortening the term of protection, providing exclusivity of use, and protecting algorithms. But in accepting the recommendations, the French government announced its intention to consult with other countries through WIPO, and so it appeared that the United States would have an opportunity to raise its concerns in an international forum before any decision was taken. It also appeared that France itself would study the question for a few years before taking any action. After three months of deliberation, the French legislature surprised everyone by removing computer software from traditional copyright protection by making computer programs works of applied art. This had the effect of reducing the term of protection for computer programs from 50 years to 25 years. The French law also introduced reciprocity as a condition for works of foreign nationals published outside its territory.

It is disappointing to have the second largest consumer of computer programs reduce the amount of protection. The United States belongs only to the U.C.C. where a minimum term of only 25 years is required; thus, the United States can't challenge it under the terms of the treaty. Also, different considerations are involved. The real significance of the French law is symbolic. While it is copyright protection, it represents another possible model for protecting software. Also, for prospective members of Berne, placing programs in the applied art category is not an encouraging sign. Those looking forward to Convention guarantees may see this as one more example of a siphoning off of commitment to high level protection among Berne countries.

Many contend, on the other hand, that United States membership in Berne would improve our bargaining position. The United States would have increased credibility as a new interpreter of Berne obligations rather than a lonely voice from the sidelines. It's too early to say if the United States is willing to change its copyright law to the extent necessary to meet all of the obligations of Berne membership. In any event, as we continue to monitor the effect of the French amendment, effective since January 1, 1986, it still seems possible that it represents only a glitch in an otherwise solid trend toward international acceptance of the copyright regime for software protection.

Brazil is another story. The law originally proposed by Brazil's Special Secretariat on Informatics (SEI) represented a proposal that was unacceptable on its face. It departs substantially from copyright norms in many ways. Brazil is by far the most politically complex and volatile nation with whom we have dealt, and Brazil has tremendous symbolic importance. Brazilian officials strongly advocate *sui generis* protection

for software. On the international front, Brazil is a leader among newly industrialized countries. It participates fully in discussions sponsored by international copyright organizations, like WIPO, and its economic growth serves as a positive example to lesser developed countries. (LDC is a mantle which Brazil is fast outgrowing.) We would applaud if Brazil became a role-model for other developing countries — to prove that economic growth need not be built on piracy of intellectual property and unbridled protectionism.

Brazil has not yet passed a software protection law. It *did* enact an Informatics law, and the policies outlined there created a framework for the Special Informatics Council's copyright proposal. The stated objective of that policy is the cultural, economic and technological development of Brazilian society. To achieve that goal the Informatics Council wants to set a "market reserve" to protect its domestic computer industry. No one knows exactly what "market reserve" means, but under this name the government gives preference to informatics goods and services produced by Brazilian companies. Some experts predicted it would require 100 percent Brazilian suppliers, and completely freeze U.S. companies out of the market. Based on this reading, the President initiated a trade policy action against Brazil under section 301 of the Trade Act of 1974. This action charges that Brazil's Informatics law denies market access to U.S. computer hardware and software. The case is still in the discussion phase.

With regard to software, the Informatics Council originally proposed a *sui generis* law which called for a 10 year term of protection, compulsory licensing, and program registration with extensive disclosure requirements, including specifications on data interface functions. The Informatics Council wanted this detailed deposit for the express purpose of later use when the term of protection ended. This proposal mandated technical assistance to users and conditioned the continued enjoyment of the rights upon continuous use. If the owner of the rights in the program failed to exercise those rights within a five year period, the Informatics Council could authorize third parties to reproduce and distribute the program.

The United States obviously urged Brazil to reconsider. The Informatics Council, for its part, hosted an international seminar on protection for computer programs, hoping to explain its unique national needs to its trading partners. United States business and government representatives explained what *sui generis* protection for computer programs would mean in an international business context. Representatives from

Hungary and West Germany and WIPO officials emphasized that copyright had in fact evolved as the most appropriate means of protecting software.

In bilateral discussions, the United States pointed out that the predictability, efficiency, and high standard of protection afforded by copyright worked in Brazil's best interests. Despite the force of this withering logic, the Informatics Council stood fast.

But in 1985 the first civilian government in 20 years came into power in Brazil. President Sarney, a scholar and a distinguished writer, is sensitive to the importance of copyright. The winds of change also blew through the Special Informatics Office, and a different position toward computer program protection began to take shape. The proposal favoring pure copyright was seen as pro-United States, and was therefore popularly shunned. Another, offered by the Brazilian Data Processors Association (ASSESPRO) put forth a 25 year term and encouraged licensing within 5 years from the date of registration. A third, an intermediate position in Brazilian terms, proposed a fifteen year term of protection with compulsory licensing within two years. A fourth was based on the earlier SEI proposal, with a 10-year term of protection.

Last May, the Informatics Council published a survey of Brazil's computer industry. This survey showed that, as against multinational firms, the national firms invested little in software development. It concluded that Brazil would not be credible in the multinational software market, unless it devoted major human and capital resources to software development. In fact, the contraband market and the legitimate government informatics budget were almost equal, about $250 million dollars per year.

Last month President Sarney sent a new bill to the Brazilian Congress; since the Congress is in recess there will be no action on this bill before February. It proposes copyright principles with "some adjustments for the peculiarities inherent in computer programs." According to the translation that I've seen, it would appear that this legislation is modeled on the French law. The term of protection is 25 years measured from the date a program is introduced into the market. Programs of foreigners are to be protected only if the country in which a program is originated grants Brazilians equivalent rights, both in extent and duration.

The commercialization provisions in the bill are more controversial. To sell a computer program in Brazil the creator would have to register the program with the Special Informatics Secretariat. The Secretariat must then determine whether or not there is a "functionally equivalent" nationally developed program. If in its discretion it decides that

there is, registration will be denied, and that program could not be exploited in the Brazilian market. It also mandates fairly major technical assistance programs. With regard to contracts, the bill would declare null and void certain limiting provisions — for example, reciprocal exclusivity clauses.

A number of meetings have been held with U.S. government officials and representatives of major computer software companies on this proposal, and the United States Trade Representative will most likely ask for clarification on a number of points.

There's an important message in these war stories that I hope you'll bear in mind for the future — and perhaps you've reached the same conclusion yourself: the idea that copyright best protects computer programs must continue to prove itself.

From the beginning, when CONTU made public its report to Congress in 1978, a strong minority view has persisted that "mature" computer programs don't fit within copyright because of the popular theory that copyrightable works must in all forms be capable of communicating to humans. John Hersey, speaking for that minority argued that including computer programs under copyright's umbrella "tended to corrupt and erode the essential purposes of copyright."

Early on, not everyone in the computer industry agreed that copyright best protected their economic interests. If a "use" right was provided, *sui generis* protection would have had to be considered, for example, since it is considered inimical to copyright. Of course, over time the thinking among members of the industry has crystallized in favor of copyright protection.

But *sui generis* protection for programs has other distinguished advocates. Professor Paul Goldstein of Stanford University Law School says that copyright works only because the courts give functional works less protection than they give to traditional works. But if *Whelan v. Jaslow* is a model and plaintiffs begin to rely on the *language* of the case, they could argue that computer programs get even *greater* protection than traditional works.

Congress is already interested in a "big picture" view of copyright and information technology. It hears every day about the strain new technology puts on the copyright laws. As you know, Congress asked the Office of Technology Assessment to examine the big picture, and it concluded that computer software doesn't fit comfortably into existing categories of intellectual property law.

Congressman Kastenmeier of Wisconsin, Chairman of the subcommittee on Courts, Civil Liberties and the Administration of Justice, which

has the copyright portfolio, will hold a hearing on computer software protection in early 1987. In the past Chairman Kastenmeier has expressed concern about the lengthy term accorded computer programs. President Reagan has a Trade Policy Action Plan to provide better protection for "firmware." I don't know what legislative solution will emerge. I do know that for some time our international negotiations have made reliance on copyright almost indispensable. It seems decidedly unlikely that any retreat from this position at this time would further our international goals. And it could hurt our credibility in Brazil, France, and Japan.

The burden is on the United States as the leader in the software industry not only to protect our technological position in the world market but also to promote good relations among the international copyright community. The United States should seek a balanced path: bilateral negotiations to win high levels of protection, and the encouragement of the international consensus to protect computer software under copyright.

Finally, I have been asked to say a few words about "chip protection," that is, protection for "mask works" or designs of semiconductor chips.

As you probably know, the United States passed the first chip protection law in 1984. Rather than shoe-horn chip protection into the copyright law, we opted for a new, *sui generis* form of protection that gives 10 years of protection and requires registration. That choice has consequences for the development of international protection. The United States cannot rely on existing international copyright treaties as the basis for protection abroad. Instead Congress created a unique system of interim executive orders — known as the Section 914 procedure — to fill the gap until we negotiate a suitable international treaty. I will return to comment on the Section 914 procedure in a few minutes, but first let me update you on the progress toward a new international treaty for the protection of chips.

I served twice as the Head of United States delegations to international experts meetings organized by the World Intellectual Property Organization. We met in November 1985 and again in June 1986 to consider treaty drafts prepared by WIPO. A third experts meeting is scheduled for the last week in April, 1987.

We have made some progress, but not enough. The next meeting will be crucial. I have written to some of our major trading partners to try to work out a consensus before the April meeting. The two main points of concern among industrialized countries are the definitions in the treaty and the scope of permissible reverse engineering. I can't go into

details because negotiations are in progress, but I hope that the developed countries will see the advantage of speaking with one voice. Otherwise, we will continue to drift, and the treaty will elude us.

If we succeed in reaching that consensus, we can then see about building a bridge to the developing countries. Here, the issue of compulsory licensing looms large. The United States basically sees no justification for broad compulsory licensing given the narrow scope of protection. The draft treaty makes originality, not novelty, the basis of protection, so independent creation is possible; the term is only 10 years; the rights are limited by innocent infringement, first sale exhaustion of rights, teaching and research exemptions, and above all by the reverse engineering exemption. If a compulsory license is allowed on top of these limitations, the United States asks what protection is left? Why is the treaty necessary?

We need to persuade developing countries that if they want access to the advanced technology of industrialized countries, they have to offer a reasonable level of protection against unauthorized and uncompensated use. Without it, the innovative companies will have no incentive to create and disseminate the technology, or to invest in the developing world. And the developing countries will have no market for their high tech products.

As I say, the next experts meeting is critical. Unless we can show some likelihood of success, the governments will not convene the diplomatic conference.

Since it is not feasible to have a treaty in place by the end of 1987, the Assistant Secretary and Commissioner of Patents and Trademarks, Donald Quigg, and I have filed a Report with Congress recommending extension of the Secretary of Commerce's authority under title 17, Section 914. The present authority ends November 7, 1987. You can't take this extension for granted. If you want it, talk to both the Senate and House subcommittees as quickly as possible.

Will we get a chip treaty? We have a reasonable chance. I will be in a better position to assess our chances after the April meeting. If this comes to nothing, the United States and other like-minded countries may have to find a different venue for the creation of a treaty. So that's the Copyright Office view. I look forward to getting your advice in the months ahead. We need some enlightenment on these highly technical matters.

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COMPILED BY JUDITH GIRE*

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COMMENTARY

PRODUCT-BY-PROCESS CLAIMS IN THE U.S. PATENT PRACTICE

In the United States until 1974, the general rule was that product-by-process claims were improper. An exception would be made only if the product could not be defined and distinguished from the prior art except by reference to the process of making it. This rule originated in an 1891 decision of the Board of Appeals, *Ex parte Painter,* 1891 C.D. 200, 57 O.G. 999. However, no clear reason was given for the rule. The rule came under criticism because, as one court put it, "[b]y statute, 35 U.S.C. 112, Congress has placed no limitations on how an applicant claims his invention, so long as the specification concludes with claims which particularly point out and distinctly claim that invention." *In re Steppan,* 156 USPQ 143, 148 (CCPA 1968).

In 1974, the Patent Office apparently agreed with this and adopted the present rule which is that product-by-process claims are permitted as long as they are definite.

The present state of the law was reviewed by Judge Newman in *In re Thorpe,* 227 USPQ 964 (Fed. Cir. 1985). The invention in question was an improvement in the process of making carbonless copy paper containing microcapsules. The application claimed, e.g., "the product of the process of Claim 1." While the process of Claim 1 was admitted to be patentable, the product made by the process was apparently identical or nearly identical to the prior art. The court noted that "[i]f the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process," citing *In re Marosi,* 710 F.2d 799, 803, 218 USPQ 289, 292-93 (Fed. Cir. 1983), and several other cases. Thus if the PTO can show that the product of the (patentable) process is identical to or obvious from the prior art, the product is *prima facie* unpatentable and the burden shifts to the inventor "to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product." *In re Fitzgerald,* 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980); *In re Best,* 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977).

Thorpe did not attempt to show that his product differed from the prior art. Instead he argued that, as a matter of public policy, product-by-process claims should be permitted on old or obvious products when made by a new process. The CAFC refused to overrule the long-standing precedent, saying that it is "the province of Congress to make changes in law based on public policy," and that if Congress was debating whether to change the law in question, it would be inappropriate for the CAFC to second-guess the legislature.

If the law were changed to allow claims for old or obvious products made by patented processes, it would be easier for a process patent holder to stop imports of articles made by an infringing process. Interestingly, this point was made fifty years ago by Judge Learned Hand:

> Conceivably it might be possible to patent a product merely as the product of a machine or process, even though it were anticipated if made in other ways. While it would in that case not be infringed by anything but the product of the machine or of the process, it might be an important protection to the inventor, if the machine or the process was used in another country and the product imported. Such competition effectively diminishes the market for the patented machine or process. That is probably not the law, though it is hard to find instances, probably because the Patent Office does not grant product patents in that form. [*Buono v. Yankee Maid Dress Corp.*, 77 F.2d 274, 279, 26 USPQ 57, 61 (2nd Cir. 1935)].

As the law now stands, the patentee who would stop an importer from importing goods made by a patented process must petition the International Trade Commission and prove that an injury is being done to a domestic industry. The action is in the nature of an antitrust or unfair competition proceeding; merely showing that the patented process is being used is not enough to stop the importation.

However, the court in *Thorpe* makes it clear that for the law to change, Congress will have to act.

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Juris Doctor, 1987
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FRANKLIN PIERCE LAW CENTER PATENT SYSTEM MAJOR PROBLEMS CONFERENCE TUESDAY, MARCH 31, 1987

INTRODUCTION

BY HOMER O. BLAIR

On March 31, 1987, Franklin Pierce Law Center, in cooperation with the Kenneth J. Germeshausen Center for the Law of Innovation and Entrepreneurship and the PTC Research Foundation, both of which are located at Franklin Pierce Law Center, held a conference on the major problems of the patent system.

The conference attendees included faculty from Franklin Pierce Law Center and twenty-five invited guests from the judiciary, patent bar and private industry.

There were no prepared speeches. The purpose of the conference was to get the opinions of experienced people in the patent system as to what could be done to solve or alleviate what some see as major problems in the present U.S. patent system.

All attendees were previously provided with the following publications:

1) Section D. Different Classes or Forms of Patents, from section 4 OTHER MATTERS CONSIDERED IN THE U.S. DEPARTMENT OF COMMERCE'S September 1979 Report of the ADVISORY COMMITTEE ON INDUSTRIAL INNOVATION, Final Report, The Industrial Advisor Sub-committee on Patent and Information Policy, Report on Patent Policy: Pages 161-162.
2) Section F. Ideas for Reducing the Cost of Litigation, from section 4 OTHER MATTERS CONSIDERED IN THE U.S. DEPARTMENT OF COMMERCE'S September 1979 Report of the ADVISORY COMMITTEE ON INDUSTRIAL INNOVATION, Final Report, The Industrial Advisor Subcommittee on Patent and Information Policy, Report on Patent Policy: Pages 163-164.
3) Competitiveness Initiatives, Memorandum for the Economic Policy Council from the Working Group on Intellectual Property on stationary of the U.S. Patent and Trademark Office, November 5, 1986, Pages 1, 7-9. "Policy"

4) Section 3107, Patent Law Amendments to Reduce the Cost of Litigation, of U.S. Senate Bill S. 539 and Analysis appearing in the Patent, Trademark, and Copyright Journal, Bureau of National Affairs February 26, 1987. This is part of the Administration's "Competitiveness" Bill. "S. 539"
5) Donald R. Dunner, "First to File: Should our Interference System be Abolished?", 68 J. of the Patent and Trademark Office Society, 561-566 (November 1986). "Dunner"
6) Harold C. Wegner, "Patent Law Simplification — Phase I" similar to Harold C. Wegner, "Patent Law Simplification and the Geneva Patent Convention", 14 AIPLA Q.J. 154 (1986). "Wegner"
7) Report, Committee 108 — Patent System Policy Planning, American Bar Association, Patent, Trademark and Copyright Section 1987 (the "gray book"). "Armitage"

The papers listed above will be identified as "Policy", "S. 539", "Dunner", "Wegner", and "Armitage."

The attendees are set forth below:

ATTENDEES:

Judge Giles S. Rich
U.S. Court of Appeals for the Federal Circuit
Washington, DC

Judge Pauline Newman
U.S. Court of Appeals for the Federal Circuit
Washington, DC

Judge William C. Conner
U.S. District Court
New York, NY

Donald M. Alstadt
Chairman and Chief Executive Officer
Lord Corporation
Erie, PA

Tom Arnold, Esq.
Arnold, White & Durkee
Houston, TX

Professor Homer O. Blair
Franklin Pierce Law Center
Concord, NH

Joseph A. DeGrandi, Esq.
Beveridge, DeGrandi, & Weilacher
Washington, DC

Donald R. Dunner, Esq.
Finnegan, Henderson, Farabow, Garrett and Dunner
Washington, DC

Professor Thomas G. Field, Jr.
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Watts, Hoffmann, Fisher & Heinke
Cleveland, OH

Charles L. Gholz, Esq.
Oblon, Fisher, Spivak, McClelland & Maier
Arlington, VA

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Mobay Corporation
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Karl F. Jorda, Esq.
Corporate Patent Counsel
Ciba-Geigy Corporation
Ardsley, NY

Thomas Lord
Chairman, Executive Committee
Lord Corporation
Erie, PA

Roy H. Massengill, Esq.
General Patent Counsel
Allied-Signal Corporation
Morristown, NJ

John E. Maurer, Esq.
Arnold, White & Durkee
Houston, TX

Dr. Arthur S. Obermayer
Chairman of the Board
Moleculon Inc.
Cambridge, MA

President Robert H. Rines
Franklin Pierce Law Center
Concord, NH

Frank E. Robbins, Esq.
Robbins & Laramie
Washington, DC

Nelson Shapiro, Esq.
Shapiro & Shapiro
Arlington, VA

Professor Robert Shaw
Franklin Pierce Law Center
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John O. Tramontine, Esq.
Fish & Neave
New York, NY

Dean Robert M. Viles
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Harold G. Wegner, Esq.
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Marjorie L. Westphal, Esq.
Cleveland, OH

George W. Whitney, Esq.
Brumbaugh, Graves, Donohue & Raymond
New York, NY

Clyde F. Willian, Esq.
Willian, Brinks, Olds, Et Al
Chicago, IL

Richard C. Witte, Esq.
Chief Patent Counsel
The Proctor & Gamble Company
Cincinnati, OH

James W. Wright, Esq.
Vice President, Legal Affairs
Lord Corporation
Erie, PA

Attendees were also given, previous to the conference, the following agenda and discussion.

I. MAJOR PROBLEM AREA 1 — DETERMINATION OF VALIDITY OF PATENTS

A. *Different classes or forms of patents*

1. *Incontestable patents*

A trademark, after a certain period is regarded as incontestable, with certain exceptions, upon filing an appropriate affidavit.

It is proposed that, five years after a patent has issued, it would be incontestable with respect to Sec. 103 (obviousness over the prior art) and, with respect to prior art, it could only be held invalid under Sec. 102 — in effect, if the invention was, for all practical purposes, identically shown in the prior art. This would have the result that a patent could not be held invalid for obviousness over the prior art after a period of five years had passed after it was issued by the U.S. Patent and Trademark Office (USPTO).

As Sec. 103 obviousness is probably the major ground for invalidity of patents, incontestable patents could significantly reduce the cost of litigation, although a patent could still be held invalid if it was clearly shown in the prior art as provided for by Sec. 102 and for the other reasons provided in Sec. 102 and other parts of the various patent statutes.

Another suggestion was that a patent could be held incontestable against all attacks, rather than only Sec. 103 attacks.

It would also be possible to make the patent incontestable if it has been used commercially for a certain number of years, such as five years, rather than have the period run from the issue date.

Any of these incontestable patents could reduce the cost of litigation and increase certainty as to the enforceability of patents.

2. *Super patents*

These patents would require the payment of a significant additional fee, such as $1,000 and a statement by the applicant that a thorough prior art and validity search had been completed, within some specified period after the patent application was filed in the USPTO. The results of this search, with comments, would be submitted to the USPTO, and the USPTO

would then make a more comprehensive search and, a more thorough examination than usual, perhaps with two examiners. The additional search and examination, with the special search made by the applicant, would give the patent a stronger presumption of validity.

3. *Copypatents*

   Copypatents would require novelty (patentable over Sec. 102) but not unobviousness (Sec. 103); would be limited in scope to exact copies and close variations of the invention disclosed; and would run for less than ten years, preferably six to eight years. Access and copying would have to be shown before there would be infringement, as in the case with copyrights. Copypatents could be examined on the same basis as regular applications, except that they would not be subject to rejection for lack of obviousness under 35 U.S.C. 103. The USPTO would charge a lower fee for copypatents.

   Copypatents would be used for many of the minor and/or "defensive" inventions that are presently filed in the USPTO. They would provide all the protection the inventor needs in many instances, would not require the same use of USPTO resources as for regular patents, and would not be as expensive to litigate.

B. *Changes in the law which will reduce the cost (in time and complexity) of litigation.*

1. *Prior use must be substantial*

   Amend Sec. 102(a) and 102(b) to provide that prior use mentioned in these two sections would have to be a substantial amount, such as selling price of the products involved being at least $10,000, or the products being sold in a quantity of at least 1,000 units. Public use by the inventor, on the other hand, would continue as present law provides.

   Much patent litigation is involved with wide-ranging discovery in an attempt to find prior public use by others. In many lawsuits, days of depositions are taken in an attempt to find or prove an early public use by others which may have involved very small numbers of items or very small amounts of money and which was completely unnoticed by society until a defendant in a patent suit tried to discover it.

   If the public use was smaller than the amount mentioned above, it did not contribute to society and was unnoticed. On the other hand, if the use had to be at least this amount to be an effective public use bar, it should be much easier and cheaper

to discover and the time and cost of patent litigation would be reduced substantially.

Also Paragraph 2 on P. 9 of "Policy" provides: "Finally, patent litigation frequently involves wide-ranging discovery by defendants seeking to establish patent invalidity on the basis of prior public use of a patented invention. The Working Group believes that prior public use should not be available to invalidate a patent unless it involves a significant amount of public use of a product which, upon inspection, would clearly disclose the invention to the public. Unless both of these factors are present, the use which is being relied upon to invalidate a patent has, in reality, not effectively disclosed or made the invention available to the public. By excluding these acts from consideration, the incentive for discovery could be reduced and some litigation costs could be reduced."

2. *Nonobvious use is not prior use.*

Revise Sec. 102(a) and 102(b) so that any use not obvious to the public on inspection or analysis of the product sold or available to the public is not a bar to patentability.

It can be argued that the prior user who did not disclose the invention to the public, even though the end product of his invention was made available to the public, should not be entitled to prevent another who did disclose his invention to the public from obtaining a patent.

Such a change in the law could significantly reduce discovery in a lawsuit and thus reduce the cost. Possibly the prior practitioner of this public use should be permitted to be able to continue to use the invention, as provided in II C below.

3. *Use of an expert special master in patent validity trials.*

a. For supervising discovery, presiding at depositions, etc.

b. For the trial.

It has been suggested that the time and expense of such proceedings could be significantly reduced if an expert special master was appointed by the court (from a list of such people who were available or from lists provided by the parties) to supervise discovery, preside at depositions and other items preliminary to the actual trial. The use of a special master would be mandatory if it were requested by either party or by the judge.

Another suggestion is to have the special master also preside over the actual trial, with his opinion being submitted to the U.S. District Court for action by the court.

A related suggestion is to have the special masters act in a different manner than our present judges. The master would ask questions on his own initiative and would exert substantially more control over the proceedings than judges do at present.

People who have acted as special masters in patent litigation recommend such proceedings highly as a method to significantly reduce the effort and expense of uncontrolled discovery and the other aspects of litigation.

4. *Initial limited validity determination by the USPTO.*

The following quotation is from "the President's competitiveness initiative" fact sheet dated Tuesday, January 27, 1987 under the category "Enacting Omnibus Intellectual Property Reform." "Reduce the cost of defending patent rights by: (2) requiring challenges to patent validity based on publications to be considered first in an administrative proceeding before going to court."

Also Paragraph 1 of P. 9 of "Policy" states: "Another cost-cutting step believed appropriate would be to require both patentees and accused infringers to have any prior printed publications alleged to establish patent invalidity considered by the Patent and Trademark Office in a reexamination proceeding before they can rely on that information in Federal Court. This provides the parties as well as the judge with the patent examiner's expert opinion as to the relevancy and impact of information which was not available during the initial examination of the patent in question. The reexamination proceedings are relatively quick and inexpensive compared to district court litigation, and mandating their prior use would eliminate some infringement litigation and lessen the cost of many of the remaining cases. It should be noted that this suggestion was considered and rejected by the patent bar and Congress when the reexamination statute was enacted in 1980." Also see Sec. 3107 of S.539.

This is an idea which was initiated by the USPTO so that the USPTO makes the initial validity determination when publications or other prior art were the basis for arguing in validity of the patent. Some have said this would put us more

in line with the laws in other countries, such as Germany and Japan.

C. *Judicial reformation of patent claims.*

When faced with a patent in which no claims are held to be valid, yet the court is convinced that there is a legitimate invention disclosed in the patent, the court would be permitted to reform the claims to provide a valid claim. This would avoid the problem mentioned by the judge in the case of *Henry J. Kaiser Company v. McLouth Steel Company,* 150 USPQ 239-295 (E.D. Michigan 1966). In this case the court stated: "The Court reaches its conclusion that the patent in suit is invalid reluctantly, not only because of the statutory presumption of validity, but also because of the revolutionary nature of the invention disclosed in the specification." (p.294)

Also the court stated "It is not the responsibility of the courts to remedy deficiencies in patent claims which might have been avoided by more careful preparation and presentation to the initial Patent Office." (p.295)

The patent involved in the Kaiser case was the basic patent on the oxygen steel process, which some have said might have been the most valuable patent in U.S. history if it had been held valid. In any reformation of patent claims there would have to be provisions for intervening rights as is the case with reissue patents.

II. MAJOR PROBLEM AREA 2 — IMPROVEMENTS IN SYSTEMS OF OBTAINING PATENTS

A. *First-to-file is first inventor.*

First-to-file is a system in which a patent would be issued to the inventor who is the first-to-file a patent application rather than the inventor who is first-to-invent which is ostensibly the current U.S. system. The major advantage of first-to-file is that it is much simpler to determine who is to be the patentee. The first inventor is defined as the individual who is first-to-file a patent application in the USPTO.

Dunner discusses first-to-file and the reasons why he feels this system should be adopted.

Both Wegner and Armitage propose systems which, when combined with first-to-file, appear to answer a number of problems which have concerned some if a first-to-file system were adopted in the U.S.

For purposes of this conference I have selected certain items from both Wegner and Armitage, which in many respects are very similar.

First-to-file — discussion

While first-to-file may be one of the parts of the U.S. position in discussions of patent harmonization with both the Japanese and European patent offices as well as the World Intellectual Property Organization, for purposes of our discussion I believe we should discuss it on its merits and not as one of a possible number of "bargaining chips" which might be used in discussion with other nations in order to obtain more harmonization between our patent laws.

Wegner recommends first-to-file as a system which will safeguard small American business and give them a competitive advantage for both domestic and international filing through his Internal Priority Application System.

Wegner states that "the new system is far better for the individual inventor and small business, permitting competition on a more even footing against multinational companies at a more reasonable price."

Some have pointed out that our first-to-invent system is not really a first-to-invent system but is modified to being the "first" inventor who can prove, to the satisfaction of the USPTO, and occasionally the courts, that he has documents and/or witnesses who can collaborate his testimony that he was the first-to-invent. As all of us know there are some occasions in which the person that was really the first inventor is not able to prove this adequately and, as a result, the patent may actually go to the inventor who is second-to-invent. However, by definition, this individual is referred to as the "first" inventor.

I do not plan to put here a complete discussion of the reasons why some feel that a first-to-file system should be adopted but instead will refer to Dunner who lists a number of the advantages. Dunner states there are a small number of interferences per year. The vast majority of these are resolved in favor of the inventor who was the first-to-file a patent application. Dunner feels that because of the expense of determining the first-to-invent, as well as the necessity for inventors to keep detailed records over long periods of time, the system is really too expensive for the value society obtains from it.

It should also be noted that, in practice, those Americans who file patent applications in other countries, already live under a first-to-file system, and nearly always act as if the U.S. was a first-to-file country as far as not publishing, putting on sale, etc. before the first patent application is filed.

See Armitage, P. 4-12, especially his headings:

"Supporting Statement.
The Historical Objections to a 'First to File' Practice Have Largely Disappeared Constitutionality.
Impact on the 'Small' Inventor.
Loss of Preferential Treatment for Acts of Invention in the United States.
Judicial and Administrative Uncertainties in a 'Reformed' System.
Impact on the USPTO.
Impact on the Public's Right to a Full and Complete Patent Disclosure.
The Patent Bar's Economic Interest in Current Interference Practice.
The United States Already Has a De Facto 'First-to-File' Practice.
The Burden of Being 'First to Invent' Creates Unnecessary Hardships and Risks for United States Inventors.
A 'First-to-File' Would Facilitate Related Reforms to the Patent Examination System in the United States.
Advancing the Role of the United States as a Leader in the Worldwide Fight for More Effective Patent Laws."

Also see Wegner, P. ii.

With some of the additional items set forth below the first-to-file system becomes much more palatable.

1. *First-to-file, except for derivation from another.*

   Armitage (P. 1, resolution 1, P. B-14) proposes, under his first-to-file system, to still retain interferences for very limited purposes, one of which is to determine whether an invention by one has been derived from another and the later person did not really make the invention.

I would prefer not to retain interferences for any purpose but separately would provide for a derivation proceeding wherein a patent application which was proved to be derived from another could be assigned to the other and the other would also be named as the inventor. I believe this is one item that is necessary in a first-to-file system.

2. *Priority patent application.*
   a. Filed in the USPTO.
   b. Publications.

   Both Wegner (P. 6, Sec. 119(b)) and Armitage (P. 1, resolution 3; P. 3; P. A-3, Sec. 119(a); P. B-7 through B-12) provide for the initial filing of a document, which need not be as complete as the usual U.S. patent application with respect to its disclosure. In each case if a complete patent application is filed within a year of the initial filing, the filing date of the initial filing will be used.

   In addition Armitage provides in Sec. 123 (P. A-6) that a publication of an invention by an inventor can be regarded as a regularly filed application for a patent as of the publication date if the complete patent application is filed within one year of the publication and a few other requirements are met.

   Both Wegner and Armitage feel that the initial preliminary filing will give individual inventors and small companies an ability to compete with first-to-file systems in other countries which frequently do not require the complete disclosure that is required by the U.S. Thus a preliminary filing may be made at an early time and will provide the filing date as long as the requirement that a complete patent application be filed within one year after that time.

3. *Retention of one year grace period.*

   Both Wegner and Armitage retain the one year grace period. In international harmonization negotiations apparently most countries are willing to provide at least a six months grace period. All concerned seem to feel this is an important item to retain in the U.S.

4. *Early publication of patent applications.*
   a. Option not to publish under certain circumstances.

      Both Wegner (P. 7, Sec. 122) and Armitage (P. 1, resolution 3; P. A-5, Sec. 122) provide for publication of the patent application eighteen months after the effective filing date.

Each also provides that an applicant may keep the patent application secret if a statement is filed (Wegner) certifying that the application has no counterpart to be published in another patent office that regularly publishes patent applications in this eighteen months period or (Armitage) stating that the applicant has not made any commercial use of the invention claimed and has not placed the invention on sale in this country, etc.

Both feel that the early publication would have the advantage of getting the technical information out to the American public and put the U.S. on equal footing with those in other countries where patent applications are regularly published eighteen months after the effective filing date. While these may be obtained in the U.S., frequently they are in another language and translations are required. Under the proposed system the publications would be in English in the U.S. and would provide an earlier source of English language technology.

b. Right to royalties from the publication date until the patent issues.

Both Wegner (P. 9, Sec. 273) and Armitage (P. A-9, Sec. 154 (b)) provide that a patentee is entitled to a reasonable royalty from others who have infringed the invention prior to the grant of the patent but subsequent to the publication date of the patent application.

B. *Life of the patent runs from twenty years from the U.S. filing date.*

Both Wegner (P. 8, Sec. 154) and Armitage (P. A-9, Sec. 154(a)) provide that the term of a patent should be twenty years from the effective filing date of the patent application exclusive of priority under the initial publications.

C. *Right of prior user.*

Both Wegner (P. 10, Sec. 282(b)) and Armitage (P. A-9, Sec. 271(g)) have provisions for certain types of prior users to retain the right to continue to use the invention. Wegner provides if a person has placed an invention in commercial use in this country, or made substantial preparations before the effective filing date that person shall continue to have a personal right to use the invention.

Armitage provides this right for one who holds a "certification of prior invention." Armitage also provides in Sec. 271 (h) that

if an inventor has placed the invention in commercial use or on sale in this country prior to the filing date of the patent he shall also have a personal right to continue such use.

Both Wegner and Armitage have a number of additional features which we can discuss if time permits.

TRANSCRIPT FIRST SECTION*

MR. BLAIR: Good morning. I'd like to introduce Bob Rines, the President and founder of Franklin Pierce Law Center.

MR. RINES: Thank you, Homer. In 1973 we gave birth to the Franklin Pierce Law Center in an era of frustration with the lack of concern, if not hostility, of sectors of the federal judiciary and the Department of Justice to the cause of innovation, invention, and Article I, Section 8 of the Constitution, particularly as it applied to the useful arts. I suppose another example of the imposition by sectors of the judiciary of their idea of social norms upon society. The answer; until the country and the world became again inspired with regard to possibly a new Golden Age for patents and intellectual property and technology transfer, was perhaps to create a new breed of lawyer sensitive to the technology legal interface. This was the primary concern in the founding of the Franklin Pierce Law Center, which is an example of invention, free enterprise and entrepreneurship, not one that I'd like to go through again.

Through the disinterest in that era of George Washington University and the perspicacity of the Academy of Applied Science, the PTC, Patent Trademark and Copyright Research Institute, and its journal *IDEA, The Journal of Law and Technology,* were gifts, if you will, to the infant law center. We were off on an exciting adventure to create a law center that would recognize the importance of the intellectual property field and the importance of a different type of lawyer who could be concerned with win-win philosophies that are so essential if technology and innovation are going to happen, as distinguished, from tort claims. The purpose was only to be a principal source of a training ground for intellectual property lawyers, but lawyers that are interdisciplinary; and to develop new methods of imparting legal skills, and even of someday providing a training ground for administrative and government personnel who have to deal every day in the interfaces of technology and society.

*The second of two sections will appear in the next issue of IDEA.

We've come a long way. In addition to being a principal source of, we think, very bright patent lawyers and technology law practitioners, (we are much broader than that, of course) we are at least starting to train foreign government administrators. Some of you had the opportunity yesterday to meet some of our students from the People's Republic of China and other developing countries, where we are performing a mission of trying to show them our American concepts of fair play, and the principles that underlie our common law tradition, and trying to persuade them as they go back and set the rules and regulations and the actual administration of their new patent law and their new joint venture law, to have an inventor, entrepreneur, legal system, and make a blend where we can live together with common expectation of fair play, which I think underlies the success of joint ventures and other types of relationships between our countries and amongst the other developing countries.

Under Homer's tutelage, this has attracted the attention of the United Nations bodies and we now are privileged to have amongst our students people from many developing countries, with all kinds of requests for the coming year. This can be a fantastic contribution to America.

It parallels what the Academy of Applied Science is doing with young people, starting all the way from the first grade on, to excite them in the concepts of innovation and where it comes from; in dealing with our brightest high school science students in the junior science symposia throughout the land, and rewarding them for invention and for coming and delivering papers at universities on their own pursuits in science and technology, and also in a program where the Academy represents several Chinese universities and ministries in attempting the reverse process, namely to take Chinese invention and innovation and seeing if we can't find American companies who might be interested in commercializing upon them in some sort of a partnership way.

Again, through Homer Blair's efforts we make a start here today at bringing together the bar, bench, and industrial and private intellectual property leaders to begin to dream again and to plan again for the future in what is now a Golden Age all over the world for the protection and fair use of intellectual property. If we're going to do anything, now is the time. I think this meeting couldn't be more timely. So from our point of view, we are proud of the unique clinic here today, we are grateful to you for coming; we're grateful to Homer and his staff for being able to impress upon all of us that this is a moment

for action; and we look forward to a wonderful day and certainly extend our warm welcome. Thank you.

MR. BLAIR: Thank you, Bob. Bob Rines, as I mentioned is President of the Franklin Pierce Law Center. Bob is analagous to a Chairman of the Board in the way we operate. In addition to spending some time at the Law Center, he also teaches courses here. At this time, I'd like to introduce Bob Viles, who is the Dean of the Law School. He is like the Chief Operating Officer of our school. He makes sure that we shape up and do the right things and tries to keep everybody under control, which is not an easy job in a law school.

MR. VILES: Thank you, Homer. I intended to get here early enough to speak before Bob Rines. The reason for that is that I assert constitutional precedence, my clause in the Constitution comes before your clause. My clause is the bankruptcy clause and I mention that because it allowed me to introduce President Rines appropriately last week when we were beginning our celebration of the bicentennial of the Constitution. I mention it today because it allows me to leave gracefully after I welcome you, unless you wish to recall me later on because of some interest in the treatment of trademarks or something in bankruptcy.

It is with a great deal of pride, and absolutely no basis of taking any credit whatsoever, that I join in welcoming you here today. This is, of course, Homer Blair's show, and many of you have been a colleague of Homer Blair far longer than I have. I am very grateful to have become relatively recently, one of Homer's colleagues. He has done a great deal for the school in the brief time he has been here to help us achieve greater strength as a training place in intellectual property. It is a testimony, a credit to Homer's achievement, that you are here today, that you have come to Concord to enjoy some of our splendid weather and to keep pace with the people of the political faith who come here for somewhat different, and some might say shallower purposes, on a regular basis. We hope you might come here more frequently than they do, although some of them come more frequently than we might want. In all seriousness, I am very interested as an academician in the fruits of this meeting. As you know, the principal vehicle for written expression in academia is the *Law Review,* and the *Law Review,* it seems to me, has always been rather stilted and limited in the ability of presenting views as well as presenting intellectual information. It seems to be here, today, in terms of making a record of the proceedings, there is a chance to bring out differences of opinion, the chance to juxtapose points of view and the chance to make

contributions in that way, that other forms of meeting and other forms of publication do not permit. So even though in watching and listening to the interplay, I might be more confused than I am at a tennis match, I'm going to be anxious to see how fruitful the results are. That's enough from me and I turn this back to Homer. I wish you well today, and I'm going to go back to bankruptcy.

MR. BLAIR: Thanks, Bob. One of Bob's major responsibilities is to make sure that Franklin Pierce Law Center doesn't go into bankruptcy. Most of us know each other, but some of us don't. I'd like to have each one of us briefly introduce ourselves with our name, affiliation and location. Jim Wright, will you start out?

MR. WRIGHT: Jim Wright, Lord Corporation, Erie, Pennsylvania.

MR. SHAPIRO: Nelson Shapiro, Law firm of Shapiro and Shapiro in Arlington, Virginia.

MR. WHITNEY: George Whitney, Brumbaugh, Graves, Donohue and Raymond in New York.

MR. WITTE: Dick Witte, Proctor & Gamble Company, Cincinnati, Ohio.

JUDGE RICH: Giles Rich, one time patent lawyer, first patent lawyer on the CCPA, and by virtue of the creation of the CAFC, now a Circuit Judge.

MR. JORDA: Karl Jorda, Corporate Patent Counsel, Ciba-Geigy Corporation, Ardsley, New York.

MR. SHAW: Bob Shaw, Franklin Pierce Law Center.

MR. WILLIAN: I'm in private practice in Chicago in the firm of Willian, Brinks, Olds, Hofer, Gibson and Lions.

MR. HARSH: Gene Harsh, Director of Patents, Mobay Corporation, Pittsburgh, Pennsylvania.

MR. DEGRANDI: Joe DeGrandi of Washington, D.C., with Beveridge, DeGrandi and Weilacher.

MR. MASSENGILL: Roy Massengill, General Patent Counsel, Allied Signal, Inc., Morristown, New Jersey.

MR. BLAIR: Homer Blair, Franklin Pierce Law Center, Concord, New Hampshire

MR. DUNNER: Don Dunner, Finnegan, Henderson, Farabow, Garrett and Dunner in Washington, D.C.

JUDGE CONNER: William Conner, Judge of the U.S. District Court for the Southern District of New York. Before I went on the bench I was for 28 years a member of the firm of Curtis, Morris and Sanford in New York City.

MR. RINES: Bob Rines, Franklin Pierce Law Center.

MR. MAURER: Jack Maurer, Arnold, White and Durkee, Houston, Texas.

MR. ROBBINS: Frank Robbins, Robbins and Laramie, Washington, D.C.

MR. OBERMAYER: Arthur Obermayer, Moleculon Research Company. I'm one of the few people who are nonlawyers here, but I have had a lot of practical experience with patent law.

MR. FISHER: Tom Fisher, Watts, Hoffmann, Fisher & Heinke, Cleveland, Ohio.

MR. ARNOLD: Tom Arnold, Arnold, White and Durkee, Houston.

MR. HENNESSEY: Bill Hennessey, PILOT Program, Franklin Pierce Law Center.

JUDGE NEWMAN: Polly Newman, Federal Circuit. Before I became a colleague of Judge Rich, I was Patent Counsel with FMC Corporation.

MR. WEGNER: Hal Wegner of Wegner & Bretschneider, Washington, D.C.

MR. GHOLZ: Chico Gholz, Oblon, Fisher, Spivak, McClelland & Maier, Arlington, Virginia.

MR. TRAMONTINE: John Tramontine, Fish and Neave, New York.

MR. BLAIR: Thank you. I want to talk a little bit about what we're going to do today. The object, of course, is to discuss some of the major problems of the patent system. The conference is being transcribed. We plan to give each one of you an opportunity to edit your comments for syntax and whatever, and then we will publish the transcript in *IDEA, The Journal of Law and Technology,* of which Bob Shaw is the editor. We'll keep him busy with the conference proceedings.

I will introduce each subject on the agenda and ask for comments. There will be no formal speeches. I would like each of you to tell us what you think. If you want to speak please raise your hand and I'll recognize you. That will help in transcribing the festivities here. I hope we would not have any more than one person talking at one time. I brought along my LES gavel, which I took off the plaque on the wall, and I can have somebody shut up if I have to. Also, try to speak clearly and loud enough so we can all hear and also the people in the audience can hear us.

When you talk I would prefer that, in addition to saying what you think about a particular item being discussed, you could give some reasons. It isn't too helpful for somebody to say, "I'm for this, it's a good idea. I'm against it, it's a bad idea." Why is it a good idea or why is it a bad idea?

I also want to avoid getting involved in any drafting problems or how we're going to write the language to embody some concept which may be very difficult to draft. Drafting would be far down the line and I'm not going to worry about that today. I hope most of us won't say the same thing that somebody else has said. If you want to say "I agree.", that's fine, but hopefully don't repeat too much. Also, I would like to make a rule that no one can speak more than twice on the same subject without my permission. You can see I'm using Blair's Rules of Order rather than Roberts' Rules of Order.

I reserve the right to terminate any speaker, but speakers all have the right to supplement their remarks in writing. It's a little bit like Congress, you can send in all kinds of goodies to expand on your views or if you want to work somebody else over for having some particularly stupid views.

In deciding who to invite I tried to make sure that you would not be in a meeting that everybody would agree with everything everybody was going to say. I don't think that's a heck of a lot of fun and I don't think that really accomplishes too much. I invited some people whom I know will have different views on different subjects and I think that will make it a lot more interesting.

In the agenda and schedule the times are for the purpose of illustration only with few exceptions. Lunch will take place at 12:00. You will pick up your food and bring it back to your seats. Those of you in the audience will put your chair on the inside of the U-shaped table arrangement and you can select who you want to sit opposite. After lunch we will put you back over in the audience area.

Also, at 4:30 P.M. the gavel comes down no matter how far along we are. I will be very surprised if we discussed all these problems and ended up with unanimous opinions on everything. A number of you have airplanes to catch, so at 4:30 P.M. we are through.

At the end of some of the discussion subjects I may ask for a show of hands, yes and no, whether you see that this subject is worthwhile for us to pursue in the future. I hope we will come out with a few subjects worth pursuing. Some of the subjects, as you will see, will be pursued by others anyhow, regardless of what we decide. Some of the others may not and we may decide to pursue some or we may decide in some cases they just aren't worth the effort.

When you get home, please send me any other comments, thoughts and recommendations you have.

I will introduce various subjects. I sent all of you packages of information which hopefully you have read. I know a lot of you are very

familiar with the subjects as you have worked in some of these areas all your lives and you certainly aren't going to learn anything from me on an awful lot of them.

DETERMINING THE VALIDITY OF PATENTS

I would like to start on the first broad major problem area. I have selected it but I had a lot of support and comments from others. Many people feel that the biggest problem today is determining the validity of patents once they are issued. Many say it is too expensive. For example, I have heard it said, and I don't disbelieve it, that in the *Polaroid v. Kodak* case, each side has already spent 10 million dollars. That's been going on for 13 years. Many of you know it's common for each side in a patent controversy to spend half a million or a million and often substantially more. We are doing a study here at Franklin Pierce Law Center, in which one of our students, Mark Ciotola, is reviewing all CAFC final decision patent infringement cases over the period of a year. He is contacting the parties on each side to attempt to get information about the litigation costs and the time the controversy has been pending. Obviously, any individual information that's sent in to the school will be confidential. We hope that some of you will cooperate if you are contacted. We plan to publish an article giving some factual information on what patent litigation costs are today. We've all heard wild tales and many of us have a lot of experience in patent litigation, and we know what those costs are. I think it would be useful if we had more facts on the subject. If all goes well we will publish the article in *IDEA, The Journal of Law and Technology.*

A number of you have been involved in some of these controversies that have gone on for years. The polypropylene controversy has lasted over twenty years, *Kodak v. Polaroid* has been going on over 13 years, and they haven't had the damages trial yet. The Gould laser controversy has gone on for many years. That situation will not be resolved until many early patents on lasers will have expired.

I recently wrote an article, which I'm not going to discuss at this conference, which is included, I think, in the issue of *IDEA* which you got today, with the title "The Court of Appeals for the Federal Circuit — Should its Judges be Technologically Literate or Illiterate?", Volume 27, *IDEA* 121. That's not a subject I want to get into here. However in that article I mention a rather interesting case which I'm sure will not be the model for all patent litigation, but it would be rather nice if it did, in which Judge Bill Conner here was the judge. It's the case of *Capri Jewelry v. Hattie Carnegie Jewelry Enterprises,* 191 USPQ (2nd

Cir. 1976), which I think must have set a record in having a patent infringement trial in the shortest time.

In this case the patent owner filed suit in the Southern District of New York on October 2, 1975. The defendant brought suit for a declaration that the patent was invalid and not infringed on October 8, 1975. The case was assigned to Judge Conner, apparently on the morning of October 9, 1975. Counsel were served a notice of hearing before the judge at 2:00 P.M. on October 9. The hearing was adjourned until the morning of October 10, when the judge directed the alleged infringer to furnish the patent owner with specimens of the allegedly infringing product and instructed the patent owner to state his position with respect to infringement on October 14. The judge then set trial for October 23.

Prior to the trial, the judge studied the patent, the history of its prosecution in the U.S. Patent Office and a prior art patent. The trial was started and completed on October 23 and counsel were directed to file briefs by 9:00 A.M. on October 28. The court then rendered its opinion that the patent was invalid before 5:00 P.M. on October 28.

Thus, a suit was filed, a trial was held, and a decision was rendered on a patent case in 26 days. The loser appealed and Judge Friendly, in the Court of Appeals opinion said, in affirming the opinion that the patent was invalid, that, "Appellant mounts a variety of attacks upon the speed with which the court decided the case. It is probably true that a judge less versed in patent law would have taken longer to reach a decision even in so clear a case as this. We agree that, except perhaps in cases of grave emergency, speed should not be a goal to be purchased at the cost of fairness. It was not so purchased here. When as here justice can be swift as well as sure, it attains its best. The court is fortunate to have a member who can understand and speak the arcane language of patent litigation as readily as ordinary English and can act, soundly and decisively from a background of knowledge of patent law which most of us must tediously acquire or reacquire for each case."

Now, I suspect that that is not going to be the model for disposing of cases in 26 days, but I think Judge Conner should be congratulated for doing it once. As he says, he doesn't do it every time. That's the other extreme from some of the problems we've heard about.

One of the concerns that some of us have is that some are opting out of the patent system. Some small companies and some individual inventors, because of the problems in enforcing patents are doing this. I've talked to people in small companies who keep their inventions

secret until they are ready to introduce the product. They introduce the product and sell as many as they can, until copiers come in and then they will go on to another product. It's very tough for small companies and individuals to use the system because they can't really enforce their product. What does a small organization do when someone is infringing their product? They can't afford the time or the expense to sue.

That's why I invited Art Obermayer here. Art, as he has pointed out, is a honest man, and is not a lawyer. He is president of a small corporation in Cambridge, Massachusetts. Art has been a member of the Licensing Executives Society for many years and, among other things his company is the plaintiff in the case of *Moleculon v. CBS,* which many of you will recognize is a case involving the patent that may cover Rubik's Cube. I'm sure Art will have some comments and thoughts on the expense and the time involved in litigation for a small company. Fortunately, he was able to find Brown Morton, who many of you know. Brown is very sorry he's not able to be here today. Brown was willing to take the case on a sort of contingency basis, and most of us can't do that and make a living. I think that's one possibility, but it's very difficult to do.

ALTERNATIVE PATENT VALIDITY DETERMINATION SYSTEM

I want to mention a few possible solutions which I suspect will not be greeted by acclamation. One is the *Homer Blair Patent Litigation Technique.* The patent owner files a complaint, the alleged infringer files the answer and each side files motions for summary judgement. If the judge cannot decide the case based on the motions for summary judgement, which rarely happens, the judge will invite counsel into his chambers. On the wall of the judge's chamber is a dart board. The dart board has indications of, "valid", "infringed", etc. The judge throws a dart. Many of you will snicker and think that's ridiculous. Maybe it is and maybe it isn't. Take a universe in which we have only a choice of two, my system and our present system. Mine is faster, it's cheaper, and maybe some might say it might reach the right result as often as our present system.

Another system which would help a lot in resolving validity situations is the following. When a patent is issued by the U.S. Patent and Trademark Office, it is valid and that's an irrebuttable presumption. That would simplify things, but I don't think too many of us would accept that.

Another system would be to say that the infringer would have to prove the patent invalid beyond a reasonable doubt, which again I

think many of us would not be too enthused about, but it would simplify a lot of litigation.

Some have even gone so far as to suggest that we should adopt what a few foreign countries have adopted, that the infringement of a patent is a felony punishable by imprisonment. Some of you probably think some infringers should be imprisoned, but so far we haven't done so.

I doubt that any of these suggestions are going to be accepted. If they are, I think we can probably adjourn the conference and go home.

On the other hand, I suspect we had better stay around and talk about some things that may or may not be a little more acceptable. What I will ask, and I don't think I'll have any trouble getting you folks to go along with this one, don't be shy about giving your comments and expressing your views. I have known most of you for a number of years and I know you are very good at expressing your views and I fully expect you will express them.

The first area is, should we investigate different classes or forms of patents?

INCONTESTABLE PATENTS

The first one, which is one mentioned in the report of President Carter's Advisory Commission, is the concept of an incontestable patent. As you know, trademarks, after a certain period of time, are regarded as incontestable. Some people have suggested that five years after a patent is issued, it should be incontestable with respect to § 103, unobviousness over the prior art. A patent could only be held invalid under § 102 as far as prior art is concerned. That would give the result that a patent, after five years, would be much more difficult to invalidate.

Now, the idea is not to come out with a system where a patent is valid if it really isn't valid. The idea is to see if we can come up with modifications that would help in determining the validity.

Section 103 is usually a major ground for invalidity of patents, and it is certainly the ground that many of you have used in trying to uncover information, taking depositions, internal investigations and so on.

Another suggestion is maybe a patent could be held incontestable against all attacks. That's a little extreme. Others have said that maybe it should be only held as incontestable five years after the patented item has been introduced in commercial production. If the invention that the patent covers has been used for five years, it should get special status. I think that if we had incontestable patents, and I'm not neces-

sarily suggesting we should, but if we did have them, I think it would reduce the cost of litigation and the amount of certainty as to the enforcability of patents.

All of us have had many occasions when we've been asked by clients, employers or whatever, what is our opinion on the validity of a patent — Can we enforce it? Back in the days before the CAFC was established, as you know, there were rather interesting forum-shopping games played, so you might have to tell your client, "Well, it depends on where we sue the other people or where we get sued." This isn't a very satisfactory answer. I think the reason that the CAFC was established was an attempt to bring uniformity to patent law which is a national law. If the patent was valid in California, it would be valid in Massachusetts, or if it's invalid in Massachusetts, it would be invalid in California. I'd like to now throw the subject open for discussion on the idea of incontestable patents. Is that a worthwhile idea to fool with? Should we not pursue it? Are there any modifications that would make it worthwhile? Who is going to be first?

MR. DUNNER: I remember this coming up on President Carter's Commission and I didn't like it then and I don't think I like it now, although I am intrigued with part of the proposal more than other parts. I agree with the proposition that litigation has become unconscionably expensive, and we've got to do something about it. The problem is that to have an incontestable patent means that you are going to lock people out who may have no incentive to have challenged that patent during the periods of time you're talking about. Merely by way of example, in the pharmaceutical industry, with which I am somewhat familiar, some pharmaceuticals are not commercialized until five or six or seven or ten years after the patent is issued. In that situation you probably won't have anybody with a motive to challenge the patent and the worst situation would be where you foreclose all attacks on the patent. A not much better situation is where you foreclose a § 103 attack on the patent. If you leave somebody with only a § 102 attack, at least as far as prior art is concerned, you have really emasculated the prospect of any meaningful defense in that area, because you very rarely will find a Chinese copy, or is it unfashionable to call it a Chinese copy anymore?

MR. BLAIR: Particularly with the number of Chinese students we have in the audience.

MR. DUNNER: I am more intrigued with the five-year period after commercialization. That's a less draconian solution, in that at least you've got in effect an announcement to the world that here is a product and

it's being sold. Even there you run into the problem of, "What do you mean by commercialization?" If somebody sold a few copies of a few samples of something, that's probably not enough to alert the world to the attention of this technology.

MR. BLAIR: If I can interrupt one minute. I would think that would be in the category of a drafting problem, which I would rather not discuss.

MR. DUNNER: In any event, I basically feel that the solution, if any, resides in other areas. I think there are solutions, and the solution probably more parallels your opening comments of having judges who are willing to take charge of the case and control it, and do control it, like Judge Conner did. It doesn't need to be in 15 days, we'll take 20 or 25. I think this approach to incontestable patents is not the right approach.

MR. WHITNEY: Rarely do Don and I agree on something. I agree with the comments he has made. I think that it's highly important to recognize from a practical standpoint that there has to be an incentive to spend the time and money to make the necessary investigations that go on. I also think that today, in today's world with the laws that now stand, thanks in great part to the Federal Circuit, but also to general acceptance and understanding of intellectual property law and the patent system, one has to think of the power that is in the U. S. patent, the power for injunctive relief. We just have to look at the *Kodak v. Polaroid* case. The power that's in the matter of the possible awards of costs and attorney fees, the triple damages. The matters of the costs in some cases where the prejudgement interest exceeds the liability by the time you get down to there. When most of us started practicing you had patent awards, when they got into the millions of dollars, that was somewhat rare. I remember when our firm won a case in the Congoleum thing, we got up to 37 million. Hell, 37 million isn't the beginning of everything when you see some of the judgments around today. There's a real draconian effect in patents and they've got to be treated properly, and if there's going to be any element of incontestability, which I don't think is appropriate, one has to bear in mind there's got to be the incentive to spend the time and money and the resources. One other aspect is, as far as having been an examiner in the world before that of Giles Rich 1952 codification of patent law, and thinking back to those acts at that time, examiners tried to do a good job. Examiners had experience, but examiners in the U.S. patent system are not people with practical experience from the outside. They are not experts and one cannot accredit the examination procedure. It can

be quality and it can be good, but it's not expertise looking at things and there isn't the incentive for the participants, even the applicant, to present even with the burdens of candor that are upon them today, the full opportunity and disclosure and discussion of the matter.

MR. FISHER: Homer, as I drove up here yesterday I found a Boston radio station playing Irish songs and one that almost caused an accident, its lines conveyed the message about this little lady, who over the years took aspirin tablets believing them to be antifertility pills, birth control pills, and she had 19 children and never had a headache. The relevance to this meeting is that obviously to stop her fertility and 19 children, you attack the cause and not the result. As I look over your agenda and topics today, starting with this topic, I think in many cases we are tinkering with the result rather than getting to the cause. Rather than taking aspirin tablets to deal with the cancer of invalid patents, I would attack not just the Patent Office, but the whole federal system. We listen to budget and deficit talk and we say, "Well, it's too much on defense. It's too much on human rights." What it is, the largest single expense and the biggest problem the federal government has got, is people. It's wages and salaries for half work. Now, the Patent Office has one proposal on the floor, Quigg wants to take it out and make it private enterprise. Before we get to incontestable patents, I submit we've got to get to civil service reform. This concept that we have 500 or 700 primary examiners in the Patent Office, people that have the last say about the applicants' rights, except for the appellate process. You can no longer go to the boss and say, "Hey, this idiot has searched in the wrong place and he's rejecting me on nonart." You are dealing with 500 to 700, some large number, of standards of invention, when years ago we basically had three. When I started going to the Patent Office if you had a mechanical case you could keep going up the ladder until you got the guy that was in charge of all mechanical examination. His standard of patentability permeated all the way down to the beginning examiners. Now each of these guys is his own boss. I submit to you that before we get to things like incontestable patents, we've got to do something about the standards of patentability in the Patent Office. There is one man who handles one set of inventions for a major industry, and if we're going to publish this I don't want to get into who it is or what the subject matter is. I can tell you that it's an industry that's considered sick. One of its major problems is the consistent hasseling over patents that never should have been granted because this guy's standard of patentability is too low. Now, if it's too high you've got an appellate process, if

it's too low all you've got is their primitive attempts at quality control. Point one, before you get to any of these ideas of incontestability, I think you've got to get at the examining process and reorganize and get things in order. The other thing where I think we are going to tend to be looking at the result rather than the cause, is the cost of litigation. We don't have a monopoly on litigation that's unduly expensive. You talk of ten million in the *Polaroid v. Kodak* case. I read in *Forbes* or *Fortune* a prediction of a billion dollar recovery which happens to be the number I came up with before I read it, so I obviously agree with it. I don't think that 20 million in fees is that outlandish. What can be outlandish is where I tried a case some years ago that we couldn't settle, where our maximum exposure was, if we lost it all, treble damages and attorney fees, I calculated at $35,000. The other side, before we went to trial, spent $75,000. There has to be some control of the litigation costs by the clients, which is more and more happening. More than anything else, we've got a clogged judicial system where in a lot of districts the courts don't feel they have the time to administer their dockets. Now, there are some districts around this country where they are still doing it and you can get in and out of a case for reasonable prices. There was a status call attended by one of the folks in our office yesterday on a case that's four years old in our district and the answer isn't filed. Now, the pleading file is up to volume two with the various motions that have been filed, none of which have been ruled on. God knows what they've spent. First of all, I think if you are going to effect the cost of litigation, you've got to recognize it's not unique to us, it's a cancer in the system.

MR. BLAIR: I think that's true, the problem is I don't think that absent you becoming Commissioner of Patents, you can get the Patent Office straightened out. I don't think we can straighten out all the judges, even though a lot of us have tried from time to time. I agree that the problems you mentioned are major problems, but I don't know how to solve them.

MR. FISHER: I think we're myopic if we sit here and say, "We're going to be insular and solve our own problems" instead of trying to join a more general movement to attack the civil service problem or a more general movement to attack the problems of the clogged dockets in the courts. Our friends on the CAFC were maintaining a very current docket for a time, they really were living in a sort of false paradise because their backlog was still being handled by the other circuits. Ten percent of the average of assigned judgeships are vacancies, 20% or some number. There are always vacancies. If we could have two or

three more judges I would hope the docket would be more current.

MR. BLAIR: I agree, but I don't know how to solve that one.

MR. WEGNER: I'm shocked; perhaps it's the weather, because I'm agreeing with Dunner, Whitney and Fisher, all in one morning. I've never done that before, and I promise it will never happen again. I agree in particular with Tom Fisher about the problem of patent quality. What stands out to me, and maybe it's because of my international perspective, is the need for some kind of an opposition system. Now, before we start invoking the name of the Carter Commission report, at the time of the late 70's I, too, agreed that we shouldn't have a German style opposition. I still think we shouldn't. But, the European system should be very carefully explored. It provides a nine month period for an opposition, post grant. This gives everybody in the industry time to think — Do I really need to oppose this patent? Do I really have the best prior art necessary to successfully oppose this patent? A built-in incentive is provided for quality before grant because the applicant will want to avoid an opposition. The cost is high enough and the time is long enough so that instead of the 30 to 40% rate of oppositions that were predicted for the European Patent Office, it's more like 10%. Again, five years ago I would not have favored an opposition system, but the quality problem with the Patent Office is so fundamental, so pervasive that before we can entertain any thoughts about incontestability or better handling of problems in litigation, we've got to shape up the quality of the patents being granted.

MR. ARNOLD: I agree essentially with the points that have been made. I'm not real sure about the opposition but I essentially agree with everything else. Without taking time to say why, I would say that trademarks are substantially different and are not a precedent for this circumstance. I would suggest that the severity of the Patent Office issuing patents it shouldn't be issuing, must run to some substantial number higher than 20% of the patents. That many are issued on essentially novelty examinations alone. There are a lot of them out there. There are people here who head patent departments that absolutely "patent the wheel" every day. They paint it purple, they do something else, but they get a patent on the wheel or the wheel-equivalent every day. That's routine, that's easy. We all know you can do that.

Another point has to do with litigation. It seems to me that we don't put enough focus on this concept. The amount of money you spend on a patent infringement suit is not nearly as proportional to the issues

that are involved as it is proportional to the amount of time you spend between the issue being joined in the first instance and getting the case disposed of. If your case doesn't go to trial for four years, you continue to work on it off and on for four years and you think of new things to work on when it gets ready for trial and when you get ready for the postponement. If the case goes to trial in nine months, you can't work for four years. There is a degree in which this alone is a sensitive factor to pay attention to — time. The time between when the issue arrives and the time when you get a disposal.

By way of comment upon that malfunction, which we all know exists, I've had one case that went on for 27 years. In another, I got to argue the appeal before the Federal Circuit on the day the patent expired. The case had been filed 13 years earlier. There had been a trial, the patent held valid and infringed; then new evidence and a new trial. Finally, I argued the appeal on the day the patent expired. Now that is a malfunction of the judicial performance and it is not rare. Maybe 13 years is rare, but it is not rare that we have undue delay.

Still, as you say, Homer, I don't know what to do about it. Maybe there is nothing we can do about it because the courts will always remain backlogged, by the nature of our political process, the courts will always remain backlogged.

Finally, I would say that I believe that there are mechanisms for judges to take control of cases and shorten them. I say this partly because I have been an arbitrator where we did this and we got the case (I think it was a 28 or 29 million dollar case) disposed of for probably $60,000 or $70,000 a side. I don't believe that either party felt that they were denied a fair hearing in doing it this way. It's the kind of thing that I don't believe the federal judiciary is competent to do and therefore I think the exploration of what they do in Austria, where the patent lawyers become masters and decide the cases, at least in the first instance, may merit some further study. I'm not recommending it, but I think it's an interesting idea that we have patent lawyers appointed to be masters that can get at the case and get at it promptly and can take control of the case and do several things that we can discuss at another time because it would take too long here.

MR. GHOLZ: I'd like to get back to incontestable patents. We do have incontestable patents already to a very limited degree. 35 U.S.C. 121 provides one specific type of defense that you can't raise in litigation; incorrect restriction requirement. I would be very strongly opposed to taking 35 U.S.C. 102 or 103 out of a litigation context, but I do think that there may be a few defenses that currently come up from time

to time that would be appropriate to simply take out of litigation. One that comes immediately to my mind because of specific litigation, I think we all speak from individual historical perspectives, is reissue estoppel. That is something which is peculiarly a Patent Office problem. They handle it as for better or worse in the Patent Office, but it's horrible when it gets out in the courts. It seems to me that is one good candidate for an issue which by statute should not be available in litigation. Another is the granting of retroactive license for foreign filing under 35 U.S.C. 184. I suspect that there are others, but they are minor, technical issues which don't come up very often. The gut issues of 102 and 103 and 112, I think are not suitable for the incontestability status for the reasons advanced by Don Dunner. You have to have somebody with a very important financial incentive to litigate those issues when the time comes.

JUDGE NEWMAN: I had always felt when I was in the private sector that the problems of quality of the product of the Patent Office and the problems of judicial handling of litigation were pretty much outside of the control of just about all of us, even though we might exhort and wring out hands. Therefore, I was at one time a vocal proponent of some kind of incontestability. I felt that after seven or ten years there should be an opportunity to know that your patent wouldn't be subject to some of these major time consuming challenges. I felt that something was needed, we weren't all looking at it from the viewpoint of the investor or the inventor, that we were so concerned about the rights of the infringer, we forgot about the people who had made the commitment to proceed commercially at an early stage in their patent life. Having made that commitment and having commercialized, the invention and then as they were starting to reap the benefits of the risk they had taken to find that they were spending the rest of their patent life in court — it seemed to me that there should be a better recourse. The idea that after say seven years an infringer might not be permitted to challenge validity on certain grounds was very appealing to me. Now I am retreating from that viewpoint, not for the reasons that have been raised by George or Don, because I think they can be argued and neutralized from the viewpoint of the investor, but because of my observation in recent years that most patents are being challenged in the early part of their lives. Perhaps not in the pharmaceutical or agricultural or chemical field where they don't get commercialized until the latter half of their lives, but many patent suits appear to be filed earlier in the patent life. What concerns me is that we might expend an enormous amount of energy and con-

troversy on a subject that might not be of as much practical significance as I once thought it to be.

MR. WILLIAN: I don't think that the discovery procedure that you go through, even though it's protracted, is all bad. I don't mean from the economics for the lawyers, we realize we have a conflict of interest. A federal judge explained to me the other day, he said, "The trouble with cases like this is, I've got to give an answer that either he's right, or he's right, and the trouble is, probably there are no absolutely right answers or absolutely wrong answers in this case." Eighty percent — I've heard this number — 80% of the patent cases are settled. The parties have had an opportunity to take their discovery, they've gotten over their blood passion for each other, and now they're looking at the real thing. This guy has got some arguments, we've got some arguments. Basically, I think when you accelerate the procedure, the discovery procedure, and put the parties to a trial within a couple of months, the number of trials you're going to have per number of filings, is going to go way up because the parties do not have an opportunity to sit down and reflect on the facts that have been developed through the discovery. The next point I'd like to make with your incontestability, it would seem to me the thing you should consider is — Would this force parties to litigate against a patent, even though they haven't decided they wanted to go into it commercially? — Would this cause you to take an offensive measure if you were a competitor and say, "I can't make up my mind within that period of time." Therefore, they've made it up for me, I am going to litigate against that and if I decide seven years from now, I'll withdraw my lawsuit. So I question whether or not you're going to be able to foreclose the contesting of a patent for that very reason. I would also think that there is a constitutional issue here. I'm not smart enough to know what the constitutional ramifications are of real inventions or obviousness, but it would seem that would be contrary to some of the pronouncements of the Supreme Court, that we only give patents to real inventions, etc.

MR. JORDA: Homer, I would have loved to come up with contra arguments, but I have to side with prior speakers. I believe we are already there insofar as you want incontestable patents with respect to the defense of obviousness, if you believe Jerry Lee's maxim. You may recall that Jerry Lee, at the ABA-PTC meeting in New York, gave a talk on the subject of the most significant patent cases relating to the question of obviousness. He said point blank if you have no other attack against a patent or a defense than obviousness, then forget it. In other words, he was saying that very few patents are held invalid for ob-

viousness reasons. Federal Circuit Judges contest that statement, but they do hold that patents are born valid and, if you talk about making it incontestable after commercialization, well, at that stage, if you have a successful product, if you have licencees, the presumption of validity is strengthened. If you believe the headlines of the literature, there is so much talk about the surprising new power of patents. Now, this will trickle down, infringers will get the idea that their chances in Court are not too good unless they have some very, very good invalidity reasons. If somebody has some very good reasons, and I believe there are at least three dozen reasons for a patent to be invalid, let him bring them forth. I would think that in the light of the general strengthening of the patent system, the strengthening of the presumption of validity at some stage and under some circumstances — I agree with Tom Arnold that the trademark situation is no precedent — We should stay away from incontestable patents.

MR. DEGRANDI: I think Tom Fisher put his finger on it when he started talking. We have to go back to the basics. We have to come out of the Patent and Trademark Office with quality patents, with strong patents. Back in 1982 when the administration raised the fees, such as the filing fees, the issue fees, and fees for extensions of times, etc., we were told that one of the reasons it was doing this was to make sure that the PTO had enough money so that it could issue quality patents. I don't think that is the case right now. What has happened is that the office is still under the gun trying to get patents out with an average 18 month pendency. An examiner that examines a case today, spends, I believe, no more than about 15 hours from start to finish. Those of us who practice before the PTO know that 15 hours is just not enough time to really get involved and understand what the invention is, to read the claims, to get out there and do a very thorough search so that when you allow claims you feel comfortable that these claims are going to be held valid. I know the Office is spending millions of dollars on automation. Whether or not it's ever going to work, whether or not the examiner is ever going to have all of the art in front of him is very, very questionable, even though right now the Office is thinking of spending something like 600 million dollars for automation. There is one way of getting around this. Of course, the big thing is to make sure that when the examiner examines the application, he has all the best art before him. Theoretically he is supposed to do his own search and the bar is supposed to help him out. There is an awful lot of art that is overlooked, that the examiner will never see. That art usually arises or comes to light when the patent

gets involved in litigation. The other side will conduct a validity search and, if they come up with a good patent or patents, will say, "Your patent is invalid because of the patent to A or to B or to C, or a combination of them." Years ago, Bob Benson, former Chairman of the American Bar Association Patent Trademark and Copyright Law Section, had a very good idea; once a patent issues and gets involved in litigation and new art comes to light that the examiner did not have before him, let's submit that art to the Patent and Trademark Office in a reexamination proceeding. Let the examiner reopen the prosecution, look at the art, give the patentee an opportunity to amend the claims and then your patent will either issue or will not issue. If it issues over that art, then the validity of that patent is enhanced, it's a much stronger patent. Unfortunately, the reexamination system really isn't working in the PTO. One solution may be that once you get involved in litigation, and you have a very complex chemical case or very complex electronics case, you feel sorry for the poor judge that's going to have to sit there and listen to it. Maybe we should do what they do in other countries, namely, get all of the art back before a panel of experts in the PTO, and then let's have the PTO consider whether or not the claims of the patent are valid over this art. Let's take the job away from the Court, at least in the first stage. Basically, I think you could cut down the amount of litigation and you would probably cut down on the cost of litigation, if we could ever get to that stage where we end up with very strong, quality patents at the outset. I think we're a long way from that.

MR. WRIGHT: I'd like to make a couple of comments in favor of the incontestability of patents. Being with a corporation there is a lot of merit to business people, inventors and corporations that are exploiting inventions to know with some degree of certainty what the consequences will be of the action they are about to take. I think much of the litigation and large amounts of money that are spent in litigation is the result of businesses having made business commitments based upon legal opinions they have gotten having a degree of uncertainty about its patent position. Once you have made the investment to get into a particular business, it's very difficult not to continue to fight even as your chances of being successful diminish. You've still got so much money invested in the program that you are forced to continue to try to press your case because the consequences of getting out of the business is much higher than the cost of litigation. I think you can also say if a business or an inventor had a perspective that he was not allowed to get into a particular area, if that was much

clearer, he would put more incentive into finding alternative ways to get around a particular patent that's involved. I think it could be looked on as promoting the useful arts by directing attention to other ways of accomplishing the same type objections.

MR. MAURER: I recognize that the Patent Office isn't being represented here today and I hate to keep using them as a whipping boy. . .

MR. BLAIR: Don Quigg said he would like to be here but he had to go to Geneva.

MR. MAURER: One of the things that bothers me is that it goes back to something that both Tom Fisher and Joe said. Often you find the situation where the examiner maybe didn't have the "best" art, but he had very good art, and it is not applied properly. If it isn't absolutely a § 102, the amount of applying by the examiner and the perfunctory response that's allowed doesn't ever focus on the issues. There's no argument, there's no nothing. It's just "Let's get it out of the way." To me, that is a very serious problem when you're trying to focus on invalidity. The fact is that the examination in the first instance isn't being done properly in order, in my mind, to establish a sound basis for allowing incontestability. Again, it's probably due to the pressures on the examiner, but somehow having more examiners, if we are going to follow that pattern, doesn't solve the problem.

MR. TRAMONTINE: I think we have suffered over the years from the creation of a myth. A few of the speakers have already touched upon it, and that myth is expertise in the Patent Office. I was an examiner and I can assure you I was not an expert in any area of technology. I don't know of a single examiner who has ever been called as an expert witness in technology. Your examiners are like a judge that only hears from claimants throughout his life. I do not think you can expect patents that will always be upheld with that system.

MR. BLAIR: Is there anybody that hasn't spoken yet that wants to talk?

MR. FIELD: All through this conversation about the examination process, I've been thinking of efficiency. It seems to me that it is not very wise to invest the resources in examining all patent applications that would be warranted in only a few instances. The point is similar to the one Mr. Dunner makes about the interference system.

The real questions are: How much of an examination is appropriate for the vast majority of applications, and how do you crank up the process for the few who may call for more? I don't have any answers, but those questions must be faced.

MR. BLAIR: As I recall, in the past I've heard Tom Arnold say in his opinion we have a deferred examination system. The initial examina-

tion isn't that great, we get the real examination when we get into court. So what you're saying is if you could somehow determine which ones should get a real examination, the system would be improved.

MR. ROBBINS: I think George Whitney made one side of the story clear when he talked about the power of a patent and the tremendous impact of the Polaroid judgment on Eastman Kodak. Jim raised another point which I think shows the other side of the story, and that is that businessmen need some degree of certainty. I've been thinking here during this entire discussion about incontestability, about the problem that the head of a corporate patent department faces every day. This problem is on which inventions does he get applications filed and in what priority. It's an impossible task. It is like throwing darts at the dart board. There are different kinds of patents and I think that's one element that has not been discussed. There are patents that are taken out just to protect the technology, with no thought that they are going to be very useful. Then there are real contributions to the art, and sometimes the art takes ten years to catch up with them. If those patents were incontestable, there would be no incentive to challenge them because the art is busy trying to catch up to them. I think for that reason I would go along with the majority, although I'm much more comfortable usually being in the minority.

MR. FISHER: I wanted to supplement a little bit. Joe raised something that really ties into what I was going to say, and that's this automation of the Patent Office.

MR. BLAIR: For the 800 million dollars.

MR. FISHER: Brad Heuther's job didn't exist when Ronald Reagan was elected. Last year, Brad Heuther's department had, if you count the full-time consultants, something over 400 people, and he wanted another 10% increase. Now, if we'd spent the cost of 400 people on examiners and grunts, clerks, who manually maintain the integrity of the files, we'd have their 18 months in 1987, we'd have the quality we're talking about. When Rene Tegtmeyer reported to the National Council in October, he noted that the young examiners, based on their quality control checks, the actions by the young examiners were of a quality commensurate with, and indeed in many cases better than, the guys I'm complaining about who are primaries and unsupervised as a practical matter. Why were they better? Because with the younger folks they are back to the old system where they've got a supervisor that works with them, that suggests further search, suggests, "Have you considered this?", and so on. Now that you're finding that result when you're back to the old system of supervision, is there any way

you can return to that for all the examination process. The response I just got from that wall, is just as good as what Rene had to say. He couldn't understand what I was talking about. There is something we can do with pressure from the bar about the management of that office. We can complain about the money going down the sewer for that automation process. How many of you have seen a demonstration of what they've got? Anybody besides me? Joe, were you as unimpressed as I was? The only thing it has got to offer is probably, the examiner will be able to find all the references that ought to be in the subclass. If he's been there a while, he knows all the good ones anyhow. Lowell Heinke tells me the guy that used to share a cubicle with him in the Patent Office, he thought was a damned good examiner and he searched through his private collection of patent copies in his desk drawer because he'd been there long enough to know which 10% of the patents in each of his subs represented the teaching of that sub. You don't need them all, you need to know what should be there. What they've got, I swear, is going to slow the examiner down. It's not going to enhance his searching and examining process.

MR. RINES: I don't know the answers either, but I think one important question we aren't asking ourselves is, what can we afford as a country? What is our public policy determination now about values in this country?

The Patent Office search provides only a presumption at best. Maybe it's a lousy search. I was an examiner and I did some lousy ones, and I did some good ones. It's a way of getting things going; saying it looks like this might be an invention, so give them a patent. The question is, to what decimal place are we going to carry the answer on data that inherently isn't accurate even to the first place, and what's the sense of talking about the sixth place? While we recognize that there's nothing against making things better, I don't think the answer to this resides in a perfect patent at all. I don't think we can afford it. You take a first crack at it; you do the best you can. Now, this gives business and industry some kind of a feeling on the basis of which to take business risks.

I want to stop for a moment and tell you what happened to me a few months ago, not that I'm advocating this, but there were certain things that I admired in it. We think our judicial system is bad. I hope some of you have had the experience of litigating abroad, particularly in the courts of Germany, never mind Italy. You get into Germany now, after nine years you finally get to the Supreme Court on the issue of validity. The Supreme Court sends us a letter. Why don't you amend

the claim to put this in the introduction? Of course, we do it. The Supreme Court really tells us, "We don't give a darn what the Patent Office said, we'll decide what the invention is", even though they go through the German, now the European mechanism, of pretending to argue about claims. The fact is, strangely in a West German Court there is something that our tradition invented, Anglo-Saxon equity. The power in the Court to make that claim what it really was intended to cover.

The objection I have with our brethren, including the Courts, is that we are the victims of real property lawyers of centuries ago who, with the idea of metes and bounds, have bound to the rule that the precious claim has to be correct. All it is, is an expression in language of an idea that we think is the gist of something that ought to be protected; and now we're married to it. When the Court is hostile, it finds a reason why there is no infringement. I don't think the Courts were any more friendly than they are today, with one possible exception, at least we're keeping them honest today, thanks to your Court, Judge Giles.

The Doctrine of Equivalents was an equitable doctrine. I remember my dad telling me about a case he tried in the Federal Court in Massachusetts for the preservation of pistachio nuts. There was no way to preserve them and there was some kind of a salt coating with gum arabic. The defendant wasn't using gum arabic, he was using something else, but the patent claim said gum arabic. An equity court — Have we lost that idea of equity that's supposed to abhor forfeitures and so forth? — says the invention is a broad idea; we are not going to let somebody get by; we're going to reform the claim. We never say that in America, we don't seem to have the guts to. But that's what the Court did in this case, saying this is the same thing, I don't care what the language said.

My thought has always been, yes, try to make our Patent Office better and so forth, but understanding we can't afford much better. If we could get some kind of dispute resolution system that was predicated on equity again, and that we weren't married to words, but appreciated what these things are in terms of ideas, I think a lot of our problems will go away. Having said that heresy, I will be quiet.

MR. OBERMAYER: I had two comments I'd like to make, one on the question of the Patent Office and the other on reduction of the cost of litigation. I think there's a fundamental problem related to the costs of operating the Patent Office in the last five years. That is, the costs are being paid by the user. When you have a regulatory agency where the costs are being paid by the user, there is no one in a practical po-

sition to or need to control costs. The Congress may not be the perfect organization to control costs, but when the Patent Office budget must be approved by the Congress, and is competing with other agencies for limited funds, there exists a better basis for controlling costs. When the user has to pay, there is just no way of controlling the costs within the Patent Office.

On the question of reducing the costs of litigation of patents, I have had a surfeit of experience with the huge costs and the long time for litigation. I see the fundamental problem being that there are few penalties to prolonged litigation, and I really mean few financial penalties. The infringer can usually get a better result by extending the litigation, and that seems to be a rather common practice. The results of litigation ultimately depend on the financial resources and the staying power of the two parties rather than on what I would call justice. The key question is — What can be done to provide disincentives for prolonged litigation? I think those disincentives really should end up as a monetary cost for continuing litigation. Apparently, it's rather uncommon for judges to require the losing party pay the winner's attorneys fees. The abuse has to be extreme for this to happen.

There is another choice I would like to suggest. Right now in patent infringement suits the amount of post-judgment interest is determined by law and pre-judgment interest is also paid at prevailing rates. If the interest paid were twice the prevailing rates, for example, that would be a major incentive to keeping litigation short. It would be a major incentive for the infringer not to prolong the litigation. For such an incentive to work, the courts must be required to respond rapidly. In my own business I deal a great deal with the Food and Drug Administration. According to their regulations they have to respond to certain kinds of actions within 30 days, and certain other kinds of actions within six months. Also, patent examiners must respond within a specific time. It may be a radical thought to require some kind of specific time response from the courts, but I don't know why the courts can't be required to respond promptly just as others are.

MR. DUNNER: I'm hearing an awful lot that I disagree with and we're sort of getting off the topic. I'd like to make a general statement. I think that for this proposal and a lot of the other proposals on your list, we are looking at the wrong thing. I agree completely with what Bob Rines said when he started out. As he went along, I think he lost a companion in terms of the thoughts that he expressed. I think there is a limit to what we can do by tinkering with the patents by having superpatents, copypatents, incontestable patents. I really think that

the core of the problem is the courts, and I personally think there is something that can be done about it. I personally think that if anything comes out of this conference it will be this thought. I think the problem is discovery abuse. I disagree with Art that if you have a bigger penalty in terms of double the rate of prevailing interest you are going to dissuade anybody from anything. Given the Federal Circuit holdings on damages, you've got an in terrorem effect in existence right now. They are sustaining huge damage awards, they are going, in my opinion, beyond the realm of real world evaluation of damage awards and it scares the living bee-jeebes out of me and it scares the living bee-jeebes out of some clients, but it doesn't deter lawyers from litigating the living heck out of a lawsuit. I have seen cases, I'm involved in one now, where the Federal Circuit has already ruled on the patent, and probably each side has spent a million dollars on a preliminary injunction in a second suit on the same patent that's been litigated, and the validity of which has been upheld, or as Judge Markey would say, "It has not been found invalid." The fact is, litigation can be controlled. It's controlled in the Eastern District of Virginia. When you go into that courtroom you had better be prepared to try a case on Superbowl Sunday, as I did a couple of years ago. That case went from cradle to grave, for at least one of the parties, in less than a year. It can be done, but what it requires is tight control by the trial judge who is willing to step in and absolutely hold intolerable the discovery abuses, the abuse of the Federal Rules of Civil Procedure by both sides, the game plan. I agree, if you have a lot of discovery it sometimes leads to settlement. The point was made that 80% of the cases were settled; Clyde Willian mentioned that. The problem is at what cost? You can settle cases very quickly if you go in and if the judge says, "Here's the timetable, you've got three months for discovery, maybe six months for discovery, and you had better be finished at the end of six months, because when it's all over, you're not going to get any extensions of time. There's going to be a pretrial hearing X-months after that, and the trial is going to be Y-months after that." You can't spend abusive amounts of money if you don't have time to spend it. Now, in a year you can spend a lot of money, but the problem is not the one year cases, the problem is the five year cases. I agree with Bob completely, we can't spend enough money in the Patent Office to get the effect that we want out of that grant. We thought we could do it with reexamination, but that's not solving the problem. A lot of people are refusing to reexamine, both plaintiffs and defendants. They're afraid to go into the Patent Office. The courts are the

answer, and it can be done within our system. Unfortunately it's not being done except by a few courts. It's too bad there aren't more Judge Conners around because I have litigated in his courtroom. He doesn't owe me any favors and I'm not going to get any from him because I don't have any cases in front of him, but that case was a model and it went right through. It was a pleasure to try that case, though it wasn't tried as quickly as this ten or fifteen day case. A lot of judges can do that, and some do, but most don't.

MR. BLAIR: I've been at a number of bar meetings, where the problem of litigation costs has been discussed. I've heard a number of people say exactly the thing that you said, and I think you'd all agree with that. The problem is that the courts don't control litigation and costs, the courts are not going to control litigation costs. How do we get it to happen? One way might be, as Art suggested, the judges would have to do certain things within certain periods of time. My impression is that judges are not too enthused about that kind of arrangement. How can we get the judges to act quickly? I do not have a solution for that. I agree with you that they can and some judges do. Sometimes it's not their fault, sometimes it's a problem with the docket in a particular area. How do we solve that problem? Tom Arnold?

MR. ARNOLD: We amend the Constitution and not allow any judge to draw his salary until he can certify that every issue that has been submitted to him for more than 45 days has been decided. Only then can he draw a salary.

Let me turn quickly to other points. The total mode of conversation here is good and constructive and desirable, but don't forget that the competitors of patents also need equity, need justice, need the certainty on which they base their business decisions to build a plant or not build a plant, and the nation needs their capacity to move out, to make a decision and move their business undertaking. That is also something we don't want to forget.

On incontestability, I would provide a new sentence reading, "The Patent Office shall be very strict in requiring full compliance with § 112 to the full extent that the knowledge of the technology permits. However, upon litigation of a patent, the burden of proof for any attacks under § 112 shall be beyond a reasonable doubt, and it shall be required that the attacker prove that there was an intentional violation of § 112 before he can invalidate a patent on § 112." Now, why do I take that position? I think that the examiners do have, generally, an understanding of the knowledge of the technology that is recorded there. They read the references, they know whether this is a disclosure

or is not a disclosure. I think society can tolerate the error that exists in the examiner's judgment as to whether there is a disclosure and as to whether there is a claim.

Then I jump back to joining in with John Tramontine, they are essentially incompetent to decide obviousness or nonobviousness. They should never be trusted with an incontestable ultimate decision on that. It is fundamental to recognize that they do not innovate, they always look at things by hindsight and don't realize that there are 139 diversionary ideas that look to design engineers or chemists to be just as good as this other idea. The innovator is working by foresight, as distinguished from examiners that are looking at it by hindsight. We kid ourselves if we think the examiners are always going to do the job right in an ex parte proceeding.

This gets us back to a point that Homer raised that I've been preaching for years: it is important to have the two step procedure, ex parte in the PTO and inter parties in court. The best we can do in an ex parte proceeding, the best we can afford, may be 15 or 20 hours of examiners work. Let's have the best we can in an ex parte examination, and then have the efficient reexamination in the court in which we have an adverse party there. We do know it can be done well in the court, it is done well by some masters, and it is done well in the Eastern District of Virginia, it is done well in Bill Conner's court. It can be done well in the courts if we insist and if we were to have the best we can do in the Patent Office. If that's only 15 or 20 hours of the examiner's time, I'm sorry, but get it out. Get the ex parte examination done and get the patent out, and get on with the reexamination, the real reexamination in the courthouse where you've got adverse parties representing their own interests.

JUDGE RICH: Following up on Tom Arnold's suggestion that the examiner is not really qualified to pass on unobviousness, I would just like to remind you all that 30 years ago when I got onto the CCPA, there was a rule which the CCPA used to follow that doubts about patentability shall be resolved in favor of the patent applicant. This would be your preliminary decision. The Patent Office, largely through the efforts of a very active solicitor of the Patent Office, decided that they couldn't indulge in a resolution of doubts in favor of an applicant and still adhere to the idea that a patent issued by the Patent Office is prima facie valid or enjoys a presumption of validity. The Patent Office initiated the move to kill that policy and it was killed, first in the Patent Office, and it finally died a natural death in the CCPA.

MR. WHITNEY: On the business of quality and what has been said about doing a job as well as we can and then let's get it out to let the parties do it, I endorse that concept. I would also like to make the comment that we fail to think about from time to time that is really in the public interest. It's in the public interest to get these patents out. They've had this preliminary view by the Patent Office and that sort of thing, and then there's an incentive. It's just like in licensing, people talk about, "Well, how many millions of dollars of royalties were paid in licensing?" There is another test as to the validity or the importance of licensing. How many times did people not do something and spend money and effort to come around and invent around something? How many times did they enter into cross-license agreements which brought into mind a cross-fertilization? There are a lot of tests. The very fact of a patent being out there, even if there is a question as to its ultimate validity and that sort of thing, is still in the public interest because it encourages people to talk about things, to think about these things. Once the patent has been granted you have these technological compendiums, composiums and colloquiums, and all the rest of the stuff we want to talk about. People are talking about it and the public benefits. The other aspect I have relative to litigation that I think is in line somewhat with some of the comments that have been made, and I'd like to put this as a question to the only gentleman in this room who has the background to answer it in that way, because he has been on both sides of the fence, and as a District Court judge for a number of years, not only from his own standpoint but the opportunity of, in the lunchroom of the Southern District and the other places, his fellow judges and that sort of thing, to address the subject. We say there has to be control. We don't want too much control, we don't want to be, as Tom said, when somebody gets sued, let's not limit their discovery to such a short period of time that they can't properly defend themselves. Let's have some reasonable aspect in it, let's not have arbitrary efficiency based on ignorance of what is involved. We have rules in the Federal Rules of Civil Procedure, we have Rule 16, we have Rule 37, we have Rule 26, and the F-part of it and the other things. There is the power under Rule 1 of that United States District Judge, to run his court in the way he wants it to be run and to do these things. The rules are there, the power to make people do the things properly, the ability for the court to exercise its discretion on both counsel, as to the way a case is declared exceptional. The Federal Circuit has made it quite clear, you're not just looking to willful and wanton infringements and acts that took place before the litigation started,

you're looking to what took place during the litigation. Now, there is a problem that the courts have, and properly so, that they don't want to ride too rigidly on lawyers. Lawyers should be inventive, lawyers should be able to exercise to the best of their ability, their charge to go forward with their client's rights and handle it in the best possible way. Sometimes we tread, maybe in areas we possibly shouldn't tread, and we're on the borderline. You can't write a statute and you can't write a rule that says when you get over that thing. The courts have to be willing to enforce 37, willing to enforce Rule 11, willing to enforce these other things and to exercise an educated discretion in particular cases and operate with that. Bill, could you comment? I don't think we need more rules, I don't think we need more statutes. I think we have a structure there and we've got to figure out how do we make it work.

JUDGE CONNER: Well, I don't want to sound defeatist. I really think that it isn't going to work even though all of the power is there under Rule 37, Rule 16, and Rule 11. If a judge is so disposed he can control the case to a fare-the-well. He can say jump and have the lawyers ask how high, without questioning why. It really isn't going to happen, quite frankly. I'm reluctant to tell you that, but it isn't for a lot of reasons. Number one, the judges are overloaded. In our court the average judge gets 30 civil cases per month and it's going to get worse before it gets better. We have five vacancies, or will have as of April 1 when I take senior status. We've had some of those vacancies for more than three years. So the judges are simply overworked. Obviously, you can't try one and one-half cases every working day. Those are just the civil cases, that doesn't include criminal cases of which we get two or three per month and which take priority by statute. Obviously, we can't try one and one-half civil cases per day, we rely on the fact that 90% of them get settled. If they didn't, we'd be absolutely drowning in cases. There are a majority of judges who take charge in the sense that they call the cases in for periodic status reports. If they didn't, nothing would ever happen. The first thing that I learned after I went on the bench was how little attorneys will do to get ready for trial if you ignore them. They'll bring a lawsuit and it will sit there, not just for months, but for years, with absolutely nothing happening beyond the service of the summons and complaint. A year later, a set of interrogatories may go out, or a request for production of documents, and it's a year before that gets answered. Unless the judge is calling the attorneys in and setting deadlines for completion of discovery, an incredibly small amount of progress is made toward getting the case

ready for trial. It was my first rude awakening to the realities of judicial life, attorneys are overloaded also, and they pay attention to the cases in which the judges are pushing the cases for trial. I've decided if I wanted to get my case load down, the only way I could get it down was to call the attorneys in and set deadlines and keep pushing so they'd be working on my cases instead of on the cases for some other judge. It worked, and it's the only thing that will work. In many courts the judges simply are so overloaded that they haven't got time to take charge the way the rules permit them to do. You've got a couple of other problems. One is that judges frankly admit that they don't know anything about patent law and they know even less about the technology. If you come before a judge in a case on biotechnology or pharmaceuticals, or advanced electronic circuitry, solid state physics in a patent infringement case, you've got three serious problems. One is he is overworked, two he knows nothing about patent law, and he knows even less about the technology, and he's not going to pay attention to a case which is ultimately going to reveal only his ignorance. He'd rather spend time trying diversity cases where he is very familiar with the law with respect to vehicular accidents and the doctrine of comparative negligence and so on. I have a solution, if it were ever adopted, but this is really out of order and I won't get into it now.

MR. BLAIR: Bill came in with some copies of a proposal he has. We are making copies, so each of you can have one, and that's the first item that we are going to take up after lunch.

MR. WHITNEY: Can I just note that in line with Bill's comments, we had a plateau for about ten years before the formation of the Court of Appeals for the Federal Circuit, of a number of cases being filed in the intellectual property area, and the number of cases that went to trial. We had about 135, plus or minus and about 15 or 20 appeals in a year. We had something like 270 on an average, plus or minus, District Court decisions. I believe, and I can't quote the numbers because I haven't done the research on it lately, maybe Don has. It is my definite understanding that those numbers are damned low compared to the world of today in 1986 and 1987. You're getting more patent infringement cases filed than have ever been done in the history of this country, and you're getting more of them where they are attempting to go to trial.

MR. MASSENGILL: I'd like to speak from the client's point of view with regard to settling cases. I think the courts can contribute a lot more than they are now contributing to settle cases. This might be a point to discuss this afternoon with regard to a master. The problem that

I have found in trying to settle cases is when you have a pretrial conference. It's obvious that the judge, because of his huge backlog, doesn't know much about the case. Usually he hasn't gotten into it at all, and really can't put pressure on the parties to settle the case, other than just encourage them to try to settle. I know one case that didn't work that way. We went before Judge Conner so long ago that I'm sure he doesn't even remember the case, it was 15 years ago. The trial opened up and within two days the case was settled. Allied received a 17.5% royalty, which was a high royalty at the time, and it wasn't in pharmaceuticals. Apparently, Judge Conner understood the issues and he was telling the other side, "Well, you're looking at a possible injunction", and he was telling us, "You may lose this patent." I probably shouldn't be telling this story, but it worked. He settled the case for us. Unfortunately the defendants filed a later suit to invalidate the patent and still practice and it went to the Second Circuit Court of Appeals twice before we finally won the case. Anyway, in the first instance it did get settled, I think it was a fair settlement, but there was some pressure to settle because the judge understood something about the case. In some cases in the district court in this country, you go in for a pre-trial conference and the judge hasn't really studied the case very much because of the huge backlogs, and then the private bar doesn't always help either. They argue, "My client is entitled to his day in court, he shouldn't have to go through the brow beating and pressure to settle. We have the right to our day in court." So cases go to trial and you spend hundreds of thousands of dollars and sometimes into the millions, because there is not enough knowledge about the case in the early stages for the court to get the parties to understand the possible consequences of their case.

MR. WEGNER: I think that everything that's being said about litigation is very constructive, but we are losing sight of what Jim Wright focused on, the business certainty aspect. Professor Kitch, about 20 years ago, and later Professor Chisum, in some unpublished communication, both talked about the "mining claim" theory of patent law. In other words, it shouldn't really matter how meritorious an invention may be, or how much advancement of the state of the art is made; it's rather just like the miner back in the old west who would say, "I need this territory around the South Fork, up 50 yards and so on. This is my mining claim. Here, I want to devote my time efforts to mine this territory." With a patent, we have, really, an intellectual property mining claim. I've got this patent, now I want to get ten million dollars from bankers to invest money in this area of technology and

I need some certainty. What Judge Newman has pointed out about her change in attitude about the five year period for incontestability is also a very real problem. Now, I go back again to oppositions. If you have a strong nine-month, European style opposition, you can get substantial incontestability for your patent. You can't do it through reexamination, that's a failed process. You may need administrative law judges or some other body to handle the opposition. I agree with Mr. Rines that you can't devote the "nth" dollar to patents in the Patent Office. Let's let the public take care of itself, let's have some kind of an opposition and if it's done with an administrative law judge or some equivalent making the decision, then we'll have substantial incontestability after that procedure is over. We could also dump § 112 in there. I agree completely with what Tom Arnold has said, but leave it in the opposition process. Let's force the public to use this procedure and get it all done and then after nine months we're done, set, and then we can make our investments. We can go to the bankers and say, "We've got a reasonable certainty."

MR. BLAIR: I'm going to let one more comment be made. I've deliberately let this subject run on because I think it's been worthwhile. I realize everybody has not been talking about incontestability, which is fine. I think some of the other comments are well worthwhile to get in. What I plan to do now is move to some of the other items and we will get into a lot more about litigation immediately after lunch. John, you had a comment?

MR. TRAMONTINE: I think that if there is one way to increase legal fees and the cost of litigation, just give us another judicial or administrative process to do, whether we call it reexamination or whether we call it opposition. The more forums we can get to, the more times we try the issue, your fees go up. The way to cut fees is to simplify the proceedings, get rid of your interferences and stop reexamination, particularly when you are in litigation. Simplify it, don't give us five different forums to work with.

SUPER PATENTS

MR. BLAIR: Now I'd like to move on to the second subject, the so-called superpatents, but you can call it whatever you like. Is it worthwhile when you have an invention you feel will be important to your client or to your industry, to pay a significant fee and also file a statement within some period of time that the applicant has made a thorough prior art and validity search? This thorough search would hopefully turn up a lot more art than we normally have time for in our preliminary pre-filing searches.

The results of this search would be filed within a certain period of time, the applicant would make comments on this search. This would be submitted to the Patent Office and the Patent Office, because of the extra money they would receive, would spend more time and maybe have two examiners look at it rather than the one examiner. The additional search and examination might give the patent a stronger presumption of validity. Obviously, this would only be used with patents that we felt had some significance. I agree 100% that you can't always tell which is an important patent at the time that you file it. Some you can, and some you know may be worth filing and may be worth getting a patent on but they are not going to be of major significance. Does this idea have any merit? You aren't taking the examination completely away from the Patent Office, but you're letting them spend more time on ones that might be good, realizing that their examination is never going to be perfect by any means. Is that an idea worth fooling with? Chico?

MR. GHOLZ: I don't think bucking up the ex parte part of the prosecution is going to do much good. I have the strong impression from talking with folks who have left the Patent Office recently that there are a lot of the examiners who don't use the 15 or 16 hours that they get now. They spend time studying for law school, they spend time reading, they don't use the whole 15 hours that they've got already. You pay them more dollars and give them supposedly 30 hours per application instead of 15 hours for application, I don't think you are going to get a substantially better ex parte prosecution. The only thing that is really going to get better qualities is making it inter partes, and for once in my life I agree with Hal. I like what would be in effect a three level system. The ex parte prosecution knocks out some of them, and knocks out the combination spoon and drinking straw applications, and maybe a few others. Then if you have an optional opposition of the kind that Hal was talking about, it won't apply to all cases because so many of them you don't know what's important at that point in time, but it will apply to some of them. That will further refine the process and then if you have litigation as the ultimate fire for doing the final review, you have three different levels and it is somewhat self-correcting. The amount of money that the public or representatives of the public spends is going to be a function of how important the case is. If the case is only worth a hundred thousand dollars, then you do a reexamination or the equivalent, you do a quick and dirty job.

MR. BLAIR: Can the small company afford that opposition at that time before they have made their money?

MR. GHOLZ: The small companies can afford reexamination. Sometimes we get instructions from clients saying, "For God's sake, do something, but don't spend more than $5,000." If you get instructions like that, what you can do is file a reexamination. It's not much, but it's cheap. If they can afford a little more than that, maybe we can do something like Harold's opposition, and if it's really important, then you spend the big bucks. You shouldn't be spending the big bucks unless the case is, in fact, important.

JUDGE NEWMAN: The more I see of litigation, the more inclined I am to look for other solutions. This conversation reminds me of the Carter Commission work. We were talking about different worlds. There were those of us who came from a corporate patent background or a patent litigation background, and there were the entrepreneurs and the inventors. We forget that there are 100,000 or so U.S. patents that issue each year and are told that some 60 or more percent of those patents are used. I'm not sure what that means, and I think that's part of the problem, but it's clear that any of those patents, many of those inventions, and innovations are relied on and developed without resource to litigation. In the cases where the entrepreneurial decision or the degree of confidence with which that decision can be made, depends too heavily on what's going to happen as a result of litigation ten years down the road, is just to say that that decision will not be made. Something else will be done with those investment resources. That can't be in the national interest. It was that concern that led to the various changes that were made in the patent system and the judicial structure, as well as the private sector could influence it, a few years ago. We need to review those concerns as we suggest new remedies and consider what kind of impact they will have. I was, at one time, a vigorous opponent of an opposition system, just as I was in favor of the increased certainty that you would get with some sort of limited contestability. I am reconsidering and rethinking, not so much because of the European experience with oppositions, but because of mistakes one might learn to avoid from the European experience. The goal must be to achieve a sufficient degree of certainty early enough in the life of the technology you're dealing with, to encourage innovation so that the nation can get maximum value out of it. That's what I think we need to concentrate on, and that cannot include the time it takes to litigate through the federal judicial system. The other side of it is, however, that if you have a certain degree of certainty as to the outcome of the litigation. That may be factored into the decisions that are made at the beginning of the innovation

process. That's where we hoped the Federal Circuit would have a value. I encourage us here to think about how we can strengthen this degree of certainty at the earliest possible stage in the life of a patent.

MR. WITTE: I don't agree with it, with the superpatent. To me, if an applicant wants a better patent, it's pretty much within his or her control to make sure that all of the examination is relatively high quality. If the examiner misapplies the art, then the applicant should make sure the record is good. I think to have a superpatent, but without having an extra fee for it or having to double up examiners, it's within the applicant's control to do it. I have to say that I'm also against oppositions. I agree with John Tramontine that it would just add another litigation level and additional delay, and would be like the Dann amendments, and I think that we've learned our lesson from that. There have been some comments on reexamination. To my point of view, I think it's working. It was never intended to be an opposition and it was never intended to be anything great, but I think it has done its job and I personally have had good experience with it. I think it should continue as a minor aid to the system.

MR. SHAPIRO: I am not in favor of superpatents, because they are not likely to have significantly better quality than ordinary patents. Speaking as a former patent examiner and as a patent practitioner for many years, I believe that there is a limit as to what can reasonably be expected from the patent prosecution process, and that substantial improvement in the quality of patents cannot be expected.

I think that the patent statutes should be amended to create a climate that is more favorable to inventors and to make it more difficult to attack the validity of patents.

Congress appears to be aware of the fact that so-called free trade is a fiction that does not necessarily serve our national interests and may be willing at this time to strengthen the rights of inventors and patent holders. I suggest eliminating some of the penalties of 35 U.S.C. § 102, such as the bar to a patent under § 102(b) on the basis of a mere offer to sell, or the prior art bar under § 102(g). I also think that a determination of obviousness or nonobviousness under § 103 should be made less dependent upon the legal fiction of omniscience of the hypothetical person of ordinary skill, and thus more realistic.

Concerning an earlier commment as to the hundreds of different standards of patentability today in the Patent Office, the reason for this is that we have hundreds of different examiners with at least partial signatory authority, unlike earlier times when examiner's actions were subject to the approval of no more than 70 division chiefs. To re-

store this type of situation, the Patent Office would have to be completely reorganized, which is not likely.

As for expediting patent infringement actions in the courts, the heavy docket of civil litigation in many jurisdictions and the large number of criminal cases that take precedence would seem to preclude any improvement. It would certainly be desirable to bring a case to trial quickly, as in the Eastern District of Virginia or the International Trade Commission, which, of course, is governed by different rules, but I do not know how you can force Federal District Court judges to deal with patent cases more expeditiously if they are not already inclined to do so.

MR. BLAIR: We are going to break for lunch because the food is here. Also, we have copies of Judge Conner's suggestions which we will make available to you. It isn't a very long piece of paper, and I ask each of you to look at it before we start at about ten minutes to one. We can get up and walk around a little bit, and the food people will come in.

(End of First Section)

COMMENTARY

In re Certain Products with Gremlins Character Depictions, 337-TA-201, U.S.I.T.C. Publication 1815, ——— I.T.R.D. ———, ——— U.S.P.Q. ——— (I.T.C. 1986), aff'd on other grounds, *Warner Brothers Inc. v. I.T.C.,* 787 F.2d 562 (Fed. Cir. 1986)

A complainant who successfully proves the elements of 19 U.S.C. § 1337(a) ("section 337"), i.e., (1) unfair acts, (2) importation, (3) existence of a "domestic industry," (4) injury to the domestic industry," and (5) an efficiently and economically operated "domestic industry," is able to invoke the International Trade Commission's ("ITC") jurisdiction, is able to have its intellectual property rights adjudicated by the ITC normally within 12 months, and may be able to have an in rem exclusion order issued by the ITC against all infringing products. Defining "domestic industry" is essential to three of the five elements of a section 337 action and consequently is fundamental in determining the jurisdiction and purpose of the ITC.

Traditionally, the ITC, an administrative agency, had defined "domestic industry" to include the facilities of the complainant and the complainant's licensees dedicated to the exploitation of the property right at issue. The "domestic industry" requirement had become easier to fulfill, and the ITC's jurisdiction had expanded accordingly throughout the 1980's as evidenced by decisions which found a "domestic industry" to exist in the domestic installation and repair of imported stoves, *In re Airtight Cast Iron Stoves,* 337-TA-69, 215 U.S.P.Q. 963 (I.T.C. 1980), the domestic mold production, quality control, and packaging of imported cube puzzles, *In re Certain Cube Puzzles,* 337-TA-112, 219 U.S.P.Q. 322 (I.T.C. 1982), and the domestic research, development, distribution and sales of imported computers, *In re Certain Personal Computers,* 337-TA-140, 224 U.S.P.Q. 270 (I.T.C. 1984).

However, *In re Certain Products with Gremlins Character Depictions,* 337-TA-201, U.S.I.T.C. Publication 1815, ——— I.T.R.D. ———, ——— U.S.P.Q. ——— (I.T.C. 1986) appears to mark an end to the ITC's jurisdictional expansion and illustrates the importance of a current debate about the proper definition of "domestic industry." Warner Brothers, Inc., ("Warner") owner of copyright in the "Gremlins" character, filed in July 1984 a complaint with the ITC alleging unfair acts and methods of competition in the unauthorized importation and sale of products with

"Gremlins" character depictions. After an investigation, the administrative law judge issued an initial decision that: (1) Warner's copyrights were infringed; (2) there were domestic industries, including one consisting of Warner's licensing program for Gremlin copyrights; (3) the domestic industry was efficiently and economically operated; and (4) respondents' unfair practices had the tendency to substantially injure the domestic licensing industry, but no other domestic industry. In a 4-1 ruling, the ITC, reversed the finding that Warner's licensing program was a "domestic industry" as required by section 337.

In rejecting Warner's assertion that its licensing program, i.e., marketing, financial and legal activities, constituted a "domestic industry," the majority in *Gremlins*, relying on the legislative history and prior ITC decisions for support, imposed a "production-related activities" requirement as an element of the definition of "domestic industry." The legislative history cited by the majority dealt primarily with patented items and Congress's concern about the exportation of production activities in high technology. By distinguishing the previous decisions which expanded the ITC's jurisdiction, the majority apparently includes within "production-related activities" installation, repair, quality control, packaging, research and development, distribution and sales, while excluding the servicing of the intellectual property right itself, i.e., licensing. Reflecting its belief that the purpose of the ITC is to provide protection for domestic production and manufacturing, the majority stated "Production-related activities distinguish a domestic industry from an importer or inventor," U.S.I.T.C. Publication 1815 at 6, and that "[the ITC has] consistently defined the industry in section 337 cases to be the domestic production of the products covered by the intellectual property rights in question." U.S.I.T.C. Publication 1815 at 5.

Then Vice Chairwoman Liebeler dissented, noting that section 337 "does not require a minimum relative or absolute size of productive activities, and says nothing about the character of the productive activity that takes place in this country." U.S.I.T.C. Publication 1815 at 6. Liebeler strongly objected to the imposition of the "production-related activities" requirement as an element of the definition of "domestic industry" and argued that Warner's domestic licensing activities constituted a "domestic industry" protected under section 337. Relying on the previous decisions which expanded the ITC's jurisdiction and on economic rationale, Liebeler stated that a more appropriate question to ask is, "does it [the domestic activity] add to the value of the product?" U.S.I.T.C. Publication 1815 at 4. Totally disapproving the majority's elevation of production activities over pure servicing activities, Liebeler pointed out

"the service sector accounts for over two-thirds of the domestic GNP and its share continues to grow," U.S.I.T.C. Publication 1815 at 5, and that, "The economic rationale for protecting intellectual property rights is not dependent on the nature and extent of complainant's domestic activities." U.S.I.T.C. Publication 1815 at 8. Liebeler's opinion clearly reflects her belief that the purpose of the ITC should be to protect all domestic "property rights from unfair acts occurring in connection with imports." U.S.I.T.C. Publication 1815 at 3.

Gremlins highlights the importance of defining "domestic industry" under section 337. The recent elevation of Liebeler to Chairwoman may further protract the debate within the ITC over the definition. In any event, Congress in the course of its current deliberations over an amendment to section 337 should address the present day economic concerns noted by Liebeler, i.e., the increasing importance of the service sector, and resolve the fundamental question concerning the purpose of the ITC.

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FRANKLIN PIERCE LAW CENTER PATENT SYSTEM MAJOR PROBLEMS CONFERENCE TUESDAY, MARCH 31, 1987

SECOND SESSION*

MR. BLAIR: Someone mentioned before the idea of having a special master who might preside at things like depositions and other items preliminary to the trial. Another idea was to have a special master actually preside over a trial. Judge Conner's proposal is a modification, a variation of that.

Another idea relating to a special master is to have a master who would ask questions on his own initiative and would exert a lot more control if that person were competent in the area involved. This would be in contrast with our traditional Anglo-Saxon method of each side presenting their party's position to the judge and the judge listening and asking only a few questions. This idea was suggested by some people who have acted as special masters. There's been a lot of discussion on various ways of alternative dispute resolution. One of the disadvantages of alternative dispute resolution is that people are very reluctant to get involved in something like that if it turns out to be a very important case. One reason for this thinking is that if a client should lose, the Board of Directors will ask the head of the client's organization, the president or whatever, "How come you lost? You went into this cockamamy system, you didn't go to court." If you go to court and you lost, well, it's because that damn judge didn't understand anything, and that's a perfectly legitimate reason.

So one thing I think we should discuss as part of this idea of discussing the use of special masters, should it be completely voluntary or should you make it mandatory if either party or the judge suggested it. With that, I'd like to get some comments from some of you on the concept of using either a special master as proposed in Judge Conner's proposal, selected from a panel of people who were regarded as qualified and available and who would be willing to act as a special master. Who wants to start out?

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*See 28 IDEA 61 for the First Section.

MR. FISHER: Homer, could I ask a question first?

MR. BLAIR: Yes.

MR. FISHER: I wondered what — I'd like to ask the Judge what he sees as the advantages over his proposal versus arbitration in the American Arbitration Association, now that we can arbitrate validity and we have patent lawyers who are qualified to be American Arbitration Association arbitrators and so on? There are some differences and I'd like various thoughts pro and con on that.

JUDGE CONNER: In this setup you would get only experienced patent attorneys; moreover, you wouldn't have any oral hearings or any oral arguments. It would be done entirely in documentary form, including affidavits. There wouldn't be any travel involved to go to an oral argument or to go to a trial. You would have a panel of people available, presumably having the time to give your matter first attention. They wouldn't be doing this on a part-time basis, they would become full-time judges after retirement. Someone who had put in a full career in practicing patent law and had reached the age where he would like to taper off a little but doesn't want to quit all together, but can't afford to work part-time and carry a full office overhead. It would allow him to say, "I'm going to retire from the practice of patent law and have my name placed on the roster of available judges to decide patent cases under this arbitration procedure." So you'd get a judge who had the time to devote full attention to your case and as soon as you were ready to submit the materials to him, he would be ready to decide it. It would save an enormous amount of time and I think a substantial amount of money as well, even though you had to pay for the time of the judge.

MR. BLAIR: Do we have any volunteers from the audience who want to be on that panel right now as retirees?

MR. WISE: Judge, don't you feel that you are losing the value of demeanor evidence?

JUDGE CONNER: Yes, you're losing that, but there are not many cases in which it really becomes critical, in patent cases, I mean, where a demeanor evidence is all that critical.

MR. WISE: Don't you question witnesses from the bench?

JUDGE CONNER: The attorneys think I do it too much.

MR. WISE: I think you're giving up a big advantage, a big plus.

JUDGE CONNER: Well, where the affidavits were in conflict as to a critical fact, then the judge could say, "I want to hear oral testimony on this one point." In most cases you wouldn't have to do it because you're not going to have a direct contradiction between affidavits sub-

mitted by one side and affidavits submitted by the other. Usually the affidavits are as to different facts, they are not giving different versions of the same fact.

MR. WILLIAN: Judge, do you typically find in the patent cases that come before you, a dispute between the experts?

JUDGE CONNER: Well, I don't allow patent experts to testify.

MR. WILLIAN: I'm talking about technical experts.

JUDGE CONNER: Technical experts, yes.

MR. WILLIAN: Almost invariably?

JUDGE CONNER: Yes, you do.

MR. WILLIAN: So that would almost always require you to have some kind of limited hearing to resolve that kind of a dispute.

JUDGE CONNER: Where you had an affidavit from Expert A saying, such and such and an affidavit from Expert B, saying just the opposite, you may want to hear them orally. Bear in mind, however, that you're going to have a judge who is technically qualified. If you've got a chemical case, you will tend to pick a judge who has had experience with chemical matters. He may not have to see the experts testify to know which one is worthy of belief and which one isn't.

MR. WILLIAN: Is it also your thinking that you would minimize or severely restrict the amount of advocacy that normally goes on in a case that's tried?

JUDGE CONNER: No, I don't think so, because there's still plenty of room for written advocacy, and also advocacy in terms of selecting the materials you are going to submit to the judge. The plaintiff is going to want to come in, or the patent owner is going to want to come in with evidence of the so-called secondary type, as to trial and failure of others. The skill of the attorney will still be a very great factor in determining the outcome of the case, because the skilled attorney is going to come in with the right evidence to prove those secondary factors, such as trial and failure of others and long felt need, commercial success and so on.

MR. WILLIAN: Notwithstanding that statement in the Orthokinetics case [Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 1 U.S.P.Q. 2d 1081 (Fed. Cir. 1986)] about a plaintiff really shouldn't put that kind of evidence in on his case in chief, you don't necessarily adhere to that?

JUDGE CONNER: I vehemently disagree and any plaintiff who wants to rely on that may do so at his peril. I would say, "Put your best foot forward, seize the high ground and let them try to attack you." So come in with your best evidence on validity, even though you've got a pre-

sumption of validity, get the judge's mind by doing a selling job in your case in chief.

MR. DEGRANDI: Under your proposed procedure here, do you still anticipate discovery being taken by the parties, and if so, would you oversee that?

JUDGE CONNER: I wouldn't normally anticipate it. It may not be that you would want to get into this kind of resolution where you think the other side is concealing evidence of invalidity, for example, and you've got to get in there and get discovery to prove prior use or derivation or something of that kind, and you want the discovery. You will want this kind of resolution, I think, where you're willing to forego discovery.

MR. DEGRANDI: Of course, the plaintiff is always looking for the smoking gun in the defendant's file that says we spent five million dollars trying to solve this problem and we ended up copying the invention.

JUDGE CONNER: Well, this could be modified to permit discovery, there is no reason it couldn't be. Once you get into discovery, we're going to be right back into the same situation we are in now, because discovery takes a major portion of the total expense now and it's going to do it now if you allow unlimited discovery here.

MR. WILLIAN: I think there's a lot of merit to your suggestion that this could be used to control the discovery. I know that Homer, in his outline, had indicated that. I think that's one of the really bugaboos. I had a district court judge at one time say, "Well, on discovery motions to compel, if the moving party wins, I make the defendant deliver, or the other side, deliver the documents to the moving party. If I deny the motion, I make the moving party go to the other side's place to look at the documents." In other words, no matter how it comes out, you've got to cough up the documents.

MR. BLAIR: Someone said a special master has been used occasionally to supervise depositions. If you have someone who is an expert and competent in his field, he might be able to control the deposition a lot more and a lot better than the judge who doesn't have the time or the inclination, even though the judge has the power. Now, my impression is that judges today certainly have the power to appoint a special master to do a lot of these things. It isn't done very often. I'd be interested in Judge Conner's comment as to what would happen if one side or the other requested the judge to appoint a special master. Would most judges be willing to do that or would they say they don't want to?

JUDGE CONNER: I think if the parties agreed, certainly a judge would be delighted to appoint a special master to lay off some of the work on somebody else. I think unless both parties agree, I think few judges will appoint a special master.

MR. WILLIAN: I would imagine that it's not too easy to get both parties to agree, that's why I don't think you have large numbers of arbitrations, because both parties have to agree that they want to go to arbitration and I think most of the time it's hard to get both parties to agree on anything, whether it's special master arbitration, mini-trials or whatever.

JUDGE CONNER: I can't see much advantage, really, in bringing a lawsuit, going through the full and expensive discovery and asking for a special master who has to be paid. If you're going to do that, you're taking the time that it would take to try a lawsuit, almost, and adding to the cost of what a regular federal trial would be. The only advantage is that you don't have to wait until the judge has time to try the case, and you also may get a special master who not only knows something about patent law, but also something about the technology involved.

MR. BLAIR: If you had a special master that knew about patent law and the technology involved, and that special master was in charge of the depositions, things might move along much faster. Tom Arnold, do you have a comment?

MR. ARNOLD: Well, I have both served in that role and, of course, litigated cases before courts and litigated cases in which we did stipulate a special master to hear many motions and so forth. I suggest that I will try the case before any special master at 20% of the cost, on the average, of trying the same case before federal judges. This results from a number of things, including the time of response. If I've got a special master contracted to give me a priority on his attention, we get a motion ruled on and we get on with things. We get the case disposed of in eight months, instead of four years, or eight years, or whatever the number of years is. As I've indicated, the meter continues to run as long as the case is pending to a very substantial degree, and I really do think you will save money paying a special master if you can get the special master's attention to ride herd on the case and stay with you. I really feel that very strongly. At least if the master is given the authority in the order to conduct the proceedings and control discovery as he sees fit, you can do things like: the master, as an experienced trial lawyer, writing the first round of written discovery efforts; asking the parties to prioritize their depositions; let's take

these two depositions on each side and the master then knows enough to cut out all of that other discovery. He's gotten acquainted with the case, he knows the issues and he knows whether or not you need the discovery of all the foreign prosecution documents or whatever else. He can intelligently cut off the discovery, whereas our federal judges can rarely rule intelligently on discovery because they don't know enough about the case when they must rule. Now, that may be exaggerated a little bit, but not just a whole lot. As a practical matter, they do not have time to study the motions for discovery sufficiently to rule intelligently about whether they cut off discovery or whether they don't. This master who rides with the case can say, "No, we're not going to take Joe's deposition. Yes, possibly he might know something, but the cost effectiveness of taking Joe's deposition just isn't there. Is there anybody else you want to depose?" I think you can save a pot full of money, and I'm talking about a majority of the money. You can save even after paying a master, if the master will take control of the case and ride with you.

MR. BLAIR: I think one of the problems that district court judges have is that they feel very uncomfortable with patent cases. They can certainly learn the law, but they feel uncomfortable with the technology. As you said, you have been involved as a master and sometimes you have been involved as a lawyer when masters have been used. In any of those cases were they not agreed to by both the parties, or did both the parties say, "This is the way we want to try it?"

MR. ARNOLD: Agreed to by both parties in each instance. I feel that kind of has to be. Of course, you are exactly correct, it's awful hard to get both parties to agree to that.

MR. BLAIR: That's been my experience when I was a corporate patent counsel talking to the corporate patent counsel on the other side, who obviously had the wrong view of the situation and didn't understand that I was right on all these matters. Somehow he seemed to feel that my ideas were not even in the same ball park as his ideas. We would sometimes agree that today was Tuesday, but that would be about all.

Obviously our patent was valid or his patent was invalid, or whatever. I think that's a problem we have. If both parties are willing to agree to various ways of settling the matter, it can be settled.

I suspect that if I were a corporate patent counsel and there was 50 million bucks involved, I would be very nervous about going into a special arrangement. If we lost and we paid the 50 million bucks, my president would say, "How come you agreed to this thing? How come you didn't go through a full trial?" I think I'd have trouble ex-

plaining to him that maybe I didn't think the judge really understood all this stuff and I thought the master would. Maybe if the master understood, that's why we lost.

MR. WHITNEY: I suggest that you have a very important level above the corporate president, namely your board and your stockholders. You're talking about a potential payout that would exceed a level that the board or its stockholders decide that this is a level that the board should be involved in deciding. I mean, I don't know whether it's right or wrong, for example, the threshold at IBM is ten million dollars, and apocryphal or not, in most other places it's a little bit less. When you're talking about the potential payout in today's world of litigation, you've got a real problem. To heck with the president, you've got that board and your stockholders and when you aren't agreeing to the formalistic proceedings that are going out, there's a reluctance to do it. On the other side of the coin there is also the fact that with the simple things, and I say this from the standpoint of being on many panels and chairing arbitration panels and doing things like that, I believe in alternative dispute resolution if you can get people to agree to it. I think that as a practical matter, the real simple things ought to be handled in the first place, not by bringing somebody in from the outside, but can be handled by the respective corporate patent counsel, in many instances, to resolve things if they will actually try to sit down and talk to each other. When you come to the big things you don't get that, so you have what I think has proven to be, in the last few years since we've had the changes in the law and we have all this publicity on ADR and everything else, you're still getting a damn small segment or slice of cases where people will go for this. I just wonder who, realistically, is going to go for Judge Conner's proposal or any of these other possibilities. There's a whole lot of things that are available to us today under the law, but people aren't going there. When it comes down to it, we talk about the attorneys and the attorneys getting competitive and that sort of thing in litigation. I respectfully submit that there is another party, and you find it very interesting that when you start out and you are considering litigation, the client is very concerned about what the costs are going to be. Top management wants to know what the costs are going to be and you have that. Then you come up, and the moment you file that complaint and the thing starts, something mystical starts happening with the client. An awful lot of clients get very litigious and they get very strong in their views. The moment a motion gets lost on one side, the other management is saying, "Beat those bloody people over the head over there." I submit it's

a very real, practical problem in litigation, and one of the things that keeps litigation going on and keeps it often as expensive as it is.

MR. BLAIR: I think you're 100% right. Therefore, is it worthwhile to consider one party or the judge could make it mandatory, keeping in mind that the judge is still involved?

MS. WESTPHAL: What about making it mandatory at some threshold level in order to dispose of smaller cases?

MR. BLAIR: Make it mandatory below that level or above that level?

MS. WESTPHAL: All cases below that level. It's done in several other court systems.

MR. FISHER: It's done where she and I practice law in our state courts. You have mandatory arbitration, if the amount in controversy doesn't exceed X, which is $20,000 or $25,000? At the very least, that's a question, but beyond that question, I'm more intrigued by having a special master or whatever at the discovery stage. I have had experiences like Tom Arnold, and I agree with everything that Tom said, with one exception; I don't think you need a patent attorney to do it. In fact, I've had very mixed experiences with patent attorneys being the judge. I've seen patent attorneys who couldn't see the forest for the trees and I've seen some who were very good. In fact, in a case I had that was in Judge Conner's court, we had a retired patent attorney, John Pearne, resolve discovery disputes and I thought he was terrific. It requires that the judge not be willing to review de novo, every decision the person makes, or else you are constantly having an appellate process right in the trial process. The magistrate, as Tom says, gives the time to it, is available, gives you decisions right on the spot. The best special master we ever had was a professor, a professor of evidence, who knew nothing about patent law, but he was absolutely terrific. It was a multidistrict case, so we almost needed one, but he got all the counsel together in a huge room this size, with millions of dollars worth of counsel sitting around the table, and he had each one orally argue the issues before him and he gave his decisions right on the spot. He followed them up by a written opinion within a day or two. We got, in a half a year, we got three years worth of discovery done. At $200.00 an hour, we spent a lot less than we would have spent otherwise, but I think there's a problem of making it mandatory.

MR. BLAIR: What would you say as a lawyer representing clients, if it was made mandatory?

MR. DUNNER: What would I say if it was made mandatory?

MR. BLAIR: Yes, would you be in favor of that or against that?

MR. DUNNER: Do you mean assuming that it could be made mandatory?

MR. BLAIR: Assuming it could be made mandatory.

MR. DUNNER: For the discovery process I'd love it. Whether I'd love it for the full trial process, which in effect is a mandatory arbitration, I don't know. I think I wouldn't love it if I knew that the judge would always be a patent lawyer. My own preference, even though I was one of the supporters of the Court of Appeals for the Federal Circuit, my own preference, unless I know that I'm getting a high quality judge, and I don't want to blast Judge Conner sitting next to me, but unless I know that the judge is high quality, I would rather have a generalist judge with a good viscera, who has got a lot of good common sense to apply his views across the board. As to discovery, I would love a mandatory assignment.

MR. BLAIR: How about if there were some sort of a panel from which you had some power of selecting, or at least vetoing, certain people on that panel, and you could have both patent lawyers and non-patent lawyers?

MR. DUNNER: The problem, by way of example, this proposal permits you to do that, but if you can't agree you end up having it imposed on you. At some point the process would break down unless somebody imposed it on me. If he imposed it on me, I might be faced with the same problem. It's intriguing, but I'm not sure I would like that.

MR. BLAIR: I think that on a voluntary basis, people on each side of the conflict can do all kinds of things if they want to. As George Whitney points out, not too many do, and as a result, the complex and expensive litigation is still there. Whether mandatory is a good idea or not, who can say? I think a voluntary special master situation will not be widely used at present. If the use of special masters became more widespread and more judges tried to encourage this system to be used by the people before them, maybe more would be interested in trying it. At present, I don't think large numbers will.

MR. RINES: I'd like to make three observations. I have been a special master in four cases, none of them strictly dealing with patents, all in the common jurisdiction of the Commonwealth of Massachusetts. Patents have been indirectly involved, but it's been more trade secret and technology types of things. Therefore, the lawyers that were trying these cases were not patent lawyers, although we have very skilled patent trial lawyers. They were excellent general trial lawyers. The big problem I had was having them complain to the court that I was preventing them from presenting all the evidence that they wanted

to, because as a master I was attempting to limit both discovery and the trial. I was appointed for the purpose of the trial, too. Maybe it's because I'm not skilled, but I can see Bill saying to somebody in the Federal Court, "All right, counselor, I've heard enough about that. I want you to move on to something else." I'd like to see the master try to do that with skilled counsel on both sides.

So I do think that a question of empowering the master to be fully equivalent to a judge is an essential thing if you're going to, indeed, proceed along that line. Secondly, you may recall that at MIT we held a meeting some years ago on alternative mechanisms for dispute resolution. We got the Justice Department there and that was a meeting at which we persuaded them to oppose the proposition that patent validity might indeed be arbitrated. Following that, we sent out a questionnaire, mainly to large corporate counsel, and asked, "Would you accept arbitration and in what kinds of cases?" If I remember correctly, something like 80% said that in cases involving no more than a quarter of a million or one-half million dollars, arbitration would be fine. They wanted to be in court when larger amounts were involved.

The last question I'd like to raise is, you've been talking about the issue of a mandatory proceeding. Bill and I were talking a little bit about this. I'm unaware of anything in Article I, Section 8 of the Constitution that ties Congress' hands as to how it secures to inventors the exclusive rights to their discoveries. Remember, our CCPA was at one time an Article I Court, a legislative court, which did not have all the powers of an Article III Court. I just throw out for consideration, not meaning to dissolve the Court of Appeals for the Federal Circuit in patent matters, but whether Congress could not restrict the patent grant to a mandatory type of proceeding such as Judge Conner is proposing.

MR. TRAMONTINE: Picking up on the last comment, there is a serious problem there with trial by jury that applies to patent infringement actions and to deprive that right, I believe would violate the Constitution. [The Seventh Amendment, preserving the right to jury trial in suits at common law, was adopted in 1791. Patents were established in 1623 by the English Statute of Monopolies which provided (§ 2) that the force and validity of patents were to be determined "according to the common laws of this realm." The U.S. patent statute enacted in 1790 (one year before the Seventh Amendment) provided (§ 4) that damages "shall be assessed by a jury." The patent statutes did not provide for injunctive relief until 1819. These statutes provided that damages could be recovered in an "action on the case" until 1952, when

that phrase in the statutes was replaced by "civil action" (Section 281) to reflect the merger of law and equity. An action to recover damages for patent infringement is clearly a suit at common law for purposes of the Seventh Amendment. *Parsons v. Bedford,* 28 U.S. (3 Pet.) 433, 466-7 (1830).]

On the matter of special masters for supervising discovery, I have had the opposite experience. I found that where you appoint somebody to rule on discovery disputes, you get lots of discovery disputes, much more than you would have otherwise. The second thing that happens is the master likes to set time periods and when discovery is going to be completed. The last two months before that date is like feeding time for sharks, everybody is going full tilt. What happens next is he extends it. Here we go again. It's much more expensive than if the judge, who we are not going to bother with discovery disputes because he doesn't like it, says, "Here's nine months, complete your discovery, there will be no extensions." Within that framework people operate effectively.

MR. WILLIAN: There's still shark-feeding time.

MR. TRAMONTINE: It happens, but only once. At the end.

MR. BLAIR: Does anybody else have any comment on a special master?

MR. FISHER: Homer, I think I have comments that are more in the nature of questions. It seems to me the magistrates fit in with this discussion, they haven't been mentioned and I'd like to hear from people on their thoughts about magistrates as contrasted with special masters. To fill in the point that Marjorie and I touched on. Arbitration in Ohio, for example, is mandatory, but I think lawfully so, because the losing party has some options. You pay for the cost of the arbitrator and you go have the normal trial if you don't like the result. With it held down to $20,000, there aren't many lawsuits tried before the state judges for amounts in controversy under $20,000. I'll guarantee you that the arbitration is close enough and people take it. It would seem to me that there's room for something like that with any of these proposals.

MR. ARNOLD: This is an entirely different suggestion, but another thought that I have is that we do tend to lose a year of time when we appeal cases, and we do tend to have the Court of Appeals see the case through sometimes totally different eyes than the trial court, because of the way the evidence is presented and argued in the Court of Appeals and so forth. We have a number of patent cases that are worth in the millions of dollars. There are a bunch of them that are out here now that people in this room are involved in with more than

100 million dollars at stake. I would like to see a provision wherein if there is more than X-million, ten, 20, 30, or whatever, that we try the case once and we try it right and we don't have any appeals. We have a three judge court try the case. We don't have any appeal to cost us time and we don't have any appeal to cost us the change and the view of the evidence that inevitably occurs between the trial court that heard the evidence and heard the experts arguing about the believability of certain things, and the appellate court which gets frequently a totally different picture of the evidence than the trial court got. This is an entirely different idea that's on the other end of the spectrum, it's the real big case that you might want to do that for, but I would like to see that.

MR. GHOLZ: Your Point 3B talks about the use of expert special masters, or majors, as you call it in the materials, for the trial. I think that we really need one step beyond that. We need a specialized patent trial judiciary. There was a good deal of talk about that at the time that the Federal Circuit came into being. I recognize that there is a very strong division of opinion on this in the patent bar and that there are a lot of people that disagree with me on this.

We have had some experience with trying patent cases in the former Court of Claims. They have had a history, they no longer do it this way, unfortunately, but they used to have specialized patent trial judges, not enough of them so that you had any particular hope of getting a patent trial judge that had technical expertise in the particular issues before him, but at least someone who was technically oriented and wasn't scared by the thought of doing a technical case, even a technical case in a field outside his competence, and someone who was very familiar with patent law. Jim Davis and Judge Coliani used to run that Court very tightly and I thought very well. I recognize that that's a matter of opinion. That system, I thought, worked exceedingly well. That was only in cases against the government, but there have been suggestions from time to time that the Court of International Trade be given jurisdiction in patent cases. It's an existing court, it's got a gorgeous courthouse up in New York City, it has a lot of judges who apparently, to the extent that one can tell from the outside, are not overburdened, who are not overworked the way much of the other judges are. They are accustomed to applying statutory law, they're accustomed to having their appeals taken to the Federal Circuit, and they already have national jurisdiction. They go around the country and try cases in any courthouse around the country where the matter comes up. It seems at least possible to me to make that the Court

of Patents and International Trade, or something like that, giving them jurisdiction to have jury trials, which they don't currently, and eventually getting people with patent experience on the Court. I recognize they don't have that at the moment. That would probably provide the kinds of solutions that we are all looking for. We really need judges who are more familiar with patent law and technology than we are getting. I don't think special masters are the answer. They have to be voluntary, and there are a whole lot of problems with the special master process, which would be taken care of by having a specialized court.

MR. BLAIR: You're right that in the past it has been a very controversial subject. I'd be interested in hearing some comments now whether things have changed or if things are still the same as they have been in the past.

MR. WILLIAN: I think the quickest way to kill a patent is going to be to do that. I've felt that way before the CAFC. Right now, the CAFC's composition is such that the patent system is very viable; change the composition and it could become very unviable very quickly. I think that's the same way with the trial court. I think it would be even a quicker process with the trial court, because they have direct interface at the trial level. I'm unalterably opposed to that concept.

MR. DUNNER: I agree completely with Clyde. I was very much involved in the effort to get a Federal Circuit Court of Appeals, and the one thing we found is that the only thing that made that concept viable was that it was not to be considered a specialized patent court. There was much hostility to the concept of the specialized patent court. It took the imagination of Professor Meador and his colleagues to come up with the idea that this court would have multifaceted jurisdiction and would not be restricted to patent cases. Thus, the judges would develop a broad range of experience. I don't think a specialized patent court has the proverbial snowball's chance in you-know-where of being adopted. I think the hostility to this idea would be overwhelming. I don't think that it can be given any serious hope of surviving, even assuming it were a good proposal.

MR. ARNOLD: Chico, I'll give you another response. There is experience around of the type that Clyde was talking about, about the court becoming very biased in one direction. For example, the Court of Claims, before which I practiced my first two years in the patent game, 1941-51, heard a billion dollars worth of claims over two years without deciding a single one for the patentee, not even for one nickel's worth. We had similar periods of time in Canada where the patents were all one

way and none the otherway, and periods of time in England when we had one judge hearing things. I think that there is an experience rating out there that gives pause to this idea of having all patent cases focused too exclusively in a very small group of people. An idea to play with for what it's worth.

MR. FISHER: Homer, to supplement what Tom said. As of 1955, it could be said that no patent claimant against the United States Government in the Court of Claims had ever had his patent sustained, found valid, made a recovery, and lived to collect it. There were, at that point in time, I believe the hull of the amphibious airplane had been found valid for a dead patentee, and there may have been one other case.

MR. WILLIAN: The auto-gyro case. That was a lifetime.

MR. FISHER: That's what I mean by "lived to collect it." There were some, very few, but they were very, very protracted, long and drawn out cases and the inventors, in each case, had died.

MR. WILLIAN: The Court of Claims had a lot of problems. I suggest to you that partly came from always the same defendant, which you would not have in the situation I envision.

MR. FISHER: Your point may be well made.

MR. WEGNER: I can't disagree with anything that Tom or Clyde or Don has said. At the same time, we are overlooking what Mr. Obermayer has pointed out, the small inventor, or the small businessman; what are we going to do for him? As to the constitutional objections that Mr. Tramontine raised, I think in reexamination we solved that problem, as seen in *Patlex v. Mossinghoff*, I believe it is. There are answers to the constitutional objections. I think that's the direction we should be going, toward mandatory programs like Judge Conner has proposed.

JUDGE CONNER: With respect to the constitutional question, I don't see a problem. Article I, Section 8, says that the Congress may promote the progress of science and useful arts by securing for limited times to inventors the exclusive use of their discoveries, but it doesn't say anywhere that they can sue in a Federal Court and get a jury trial. It doesn't say even that they can sue in a Federal Court. That's a creature of statute in Title XXXV, and in Title XXVII. I don't see any constitutional reason why Congress could not enact, if it decided it was wise to do so, a statute which says that, "You'll get your right of exclusion for a limited period, provided, A: You get a patent, and provided, B: You go through this procedure that we're specifying in lieu of the patent infringement suit in the Federal Court that we previously permitted." I don't think that in any way violates anyone's constitu-

tional rights, but certainly I didn't envision making it mandatory. I think that it is the one thing that I've heard today that is do-able immediately; everything else requires a constitutional amendment or a statutory change or change in the rules of the Patent Office, or even more improbable, upgrading of ability on the part of examiners and judges. This is something you can do right now, simply by agreement of the parties.

MR. ALSTADT: Homer, can I just ask one quick question? It seems to be the time to ask it.

MR. BLAIR: Certainly.

MR. ALSTADT: What do you believe is the basic attitude within the court structure of this country regarding ethical, moral and useful proprieties of intellectual property monopoly? Is it something they tolerate, something they understand? Is a good share of our society still bent towards the concept that competition always serves the public? Is there really a finite, ethical commitment to intellectual property monopolate? Is that something that is inherently solid, or are some of the problems that the whole system has got to tolerate it. That's my question.

MR. BLAIR: The question is from Don Alstadt, who is Chairman of the Board and Chief Executive Officer of Lord Corporation and also Chairman of the Board of Overseers of Franklin Pierce Law Center, who is a businessman, industrialist-type, and that's the kind of question which is worth a couple of answers. Do you want to start out, Tom?

MR. FISHER: A patent is not, is not, and never has been a valid monopoly. A monopoly by definition is the extraction of something from the public domain and monopolizing. A patent in history, granted in England by the King for salt in the United Kingdom, indeed was a monopoly, but a grant of the right to exclude others from using an invention newly created by the inventor is the antithesis of the monopoly, but rather is the bringing to the public in exchange for this grant, the knowledge, the ability, to practice the invention once it's expired.

MR. ALSTADT: Excellent distinction. Do they buy the latter concept or do they confuse it with the first one?

MR. FISHER: There's no question that there has been, and if I go back 30 years, 20 years, there was tremendous confusion. I think what I've seen, and I'd be delighted to hear from others, I believe in the last five to ten years the, "pendulum has swung," patents are in vogue at the minute in Congress. The way to get something to happen is to get a delegation of small businessmen down there championing a program, because small business is back being popular, and well it ought to be,

because that's what creates the jobs. A cornerstone of small business, a cornerstone of start-ups, a cornerstone of the entrepreneurial adventure that's real again, that lives and breathes and happens because of the recognition of the stuff of which inventions are made and because of the support for those people. There were, as of the time of our APLA meeting in Boston, which is 1985 or 1984. At that time it was reported that there were some 11 billion dollars in the hands of venture capitalists out there waiting for seed investment, investment start-ups. That number is probably more like 30 billion today, and those folks and the folks promulgating legislation and various systems to assist in start-up, I think, see the advantage of a patent to permit a Telson, in our area, with the hand-held computers, Apple Computer, whatever.

MR. ALSTADT: I hear your distinction and I praise it and I believe you're right. My question is still — What percentage of the American population and the representatives from Washington, and even I would say a good share of the business community, believes in the useful social validity of the concepts that you so eloquently expressed? I have five friends, or five acquaintances, members of the House, and I would say that your statement would fall on them like auto mechanics would on a third grader. They wouldn't understand it and after you had done it, they wouldn't believe it, and one of the reasons is that they have been brainwashed by both liberal and conservatives alike, Milton Friedman is one of them, that competition always serves the public. So I thoroughly agree with your distinction, but my question is — How much of a battle are you waging because of a cloud of nonsupport from our society in general? That's my question, and I don't know the answer.

MR. BLAIR: One comment on that. In the patent litigation field, I think any lawyer that used the term "monopoly" before a district court today, would, if the district court didn't slap him down, certainly be slapped down by the CAFC and Judge Markey, who goes out of his way in a number of opinions to point out that patents are not a monopoly. Judge Markey made a number of statements on patents and the antitrust laws. However, I certainly would agree that I don't think all the economists of the world would go along with that. I'm not convinced that everyone in the Department of Justice would agree even though there have been some changes. I am also not convinced that many people who haven't been exposed to the patent system are aware of this distinction. Hal Wegner, do you have a comment?

MR. WEGNER: I think we have to get beyond mere labels of "exclusive right" versus "monopoly" and so on. From my own experience, in the course I teach at Georgetown in the graduate program, I think it's still a very serious concern. Relating this to what we're talking about today and to Mr. Wright's and Mr. Obermayer's concerns, I think we have to have an equitable, a fair shake for the public, and we have to have clear definitions of what is an infringement and what is not. A lot of the problem, to be sure, is the patent attorney who has taken advantage of old anti-patent courts that let them make very facile opinions of noninfringement. They have to do more work. But, we still need better guidance in the area of noninfringement. We have to take care of the problem of the big company, with the big war chest, against the small company. If we don't deal with such issues, if we don't make the patent system fair and open to everybody, we can forget all the talk about labels and all the good corrective instruction that the Federal Circuit has given in talking about patents as not being monopoly. We have to do more in this area.

MR. ALSTADT: Let me just go one step further, forget patents, forget the initial stages of a products market life cycle, forget that. Let's go to the other end. I think that a strong case can be made for the fact that we are still overestimating the value of competition of the society as a whole. When we put such fabulous wealth equity into outmoded technology, this is not serving the public. When you've got multiple airline structures around this country gobbling up wealth, equity and investment, I can predict what's going to happen. I make the claim that this overwhelming preoccupation in this country with competition always serving the public, in much of the planet lifecycle is just nonsense. Peter Drucker believes this, Milton Friedman does. I think you've got a very basic, ethical, moral, economic understanding, that is inadequate in this country, and the patent system is only one of the things that's suffering. Does anybody like what's happening with their phone system? I think that's a very basic question in our society as to when competition serves Joe Doakes, and when it doesn't. I suspect it doesn't serve him in a lot more places than our legislators and our government will face up to and realize.

MR. WHITNEY: Somewhat in answer to the question is to bring up a concern of mine. I think I am very concerned from what I read in the papers, and what I hear expressed by members of Congress, and also members of the patent bar and the intellectual bar. We have gone past, I submit, the stage that you refer to in your question and we have too many people in Congress and too many people in the patent bar say-

ing, "Let's establish another exclusive, be it limited, area of three years for this, or five years for this. Let's have some petit patents, let's have this kind of thing, that kind of thing." I submit that we have a far healthier patent system today than maybe we have had before. Let's make it work and let's keep a balance in the idea of the free marketplace and competition. Let's have rigid tests for patentability under our current system and not bring up a whole plot of other systems, getting into quasi-copyright systems, getting into all these other things that we're doing. Congress today seems to be, instead of lost with the antitrust or free competition view of it is saying, "Now, in our fight to regain our position in the world," and they're all excited about that, "Let's set up some more little exclusivities. Let's set up some more rules and things like that." I think that's very dangerous and I oppose it.

MR. WITTE: One illustration, I think, of a grassroots reaction in favor of patents, is what you see with surrogate juries. When you try a patent case and you have a jury, it's common now to have surrogate juries to see what the strengths and weaknesses of your cases are. This is a way to look through one-way mirrors and see what they talk about. These juries tend to be very pro-patent, because they have been raised from young people to resent copying. What they see is the infringer, assuming the patent is valid, they see the infringer as a copier. They don't like that, and they see something good in a patent because it punishes or prevents or deters copying. My view is that that's a halfway decent illustration of a grassroots notion that you can get from empirical evidence that favors patents.

MR. ALSTADT: I'll just quit by saying that I think that it's a major problem in this country, the amount of growth equity that's being invested in duplicate facilities that practice old technology or duplicate facilities that practice new technology, where the supply and demand relationship doesn't justify it. Apart from the patent system, and apart from any other legal attitudes, we can't go on and just put money and money into old technology under the guise of bringing competition, because competition sometimes doesn't serve the public whatsoever, and the steel industry is a classic example of that, and we are going to have more and more of it. From a pure economic standpoint, there is a place where money should be put in new technology and not duplicated into existing or antiquated technology. I just don't think society is facing up to that.

MR. HENNESSEY: One of the things that has impressed me in this discussion is that when lawyers talk about alternatives to litigation,

it is of the sort: "Oh, yes, there's that other less preferable, less attractive, or second class kind of dispute resolution." Sometimes we lawyers present that view — even if unconsciously or subconsciously — to our clients. Rather than persuading them on not just the legitimacy of the kind of thing that Judge Conner is proposing, but its clear cut preferability, we leave it up to the client to make decisions which are sometimes not as well informed as they could be.

MR. WISE: I look at the attitude of the public toward the patent system as sort of an inverse bell curve. I'll explain that in a moment. I believe that the "love" or reverence toward patents is inversely proportional to the degree of sophistication of the person being questioned at the lower end of the bell curve. At the higher end of the bell curve, it's the same but in the middle, I believe it's just the opposite. We assembled here are perhaps more sophisticated in patent law because that's our profession, we've spent our life doing it, we believe in the system. We love it and revere it. Now, since I retired I have been doing an awful lot with home workshop inventors. I am now a patent spec writer for the first time in 25 years, and I love it. Little people come off the street, and those are the people, I submit, who believe in the system far more than those in the middle of the bell curve, the equity venture capitalist, the callous individual with the ten million bucks to spread around. It's the little man who loves the patent and it's the patent attorney and judge who loves the patent.

MR. HARSH: I'd like to make a comment about your question and the awareness of patents. The company I work for, management was hardly aware of patents, and my office used to be on the far end of the campus in the engineering building. Six years ago we started spending roughly a million dollars a year on some litigation. I'm right next to the executive suite now and the respect for patents has gone way up. Every time I see an appropriation request it's got patents in it, in big, capital letters.

MR. ALSTADT: Sir, our secretary and patent attorney and I have had similar experiences.

MR. WILLIAN: I think the turn about for patents in favor is primarily an economic one and not an ethical one. Ethics are sometimes quoted as a reason for upholding patents, but I think it's economic. About five years ago I was walking through the airport with my wife, going to a lecture at a licensing seminar, and I saw something in the trash container in a *New York Times* that caught my eye, and I'm over rummaging down through it to get a hold of it and my wife said "You look like a bum." Anyway, I pull it out and it's got an article there that

says, "Technology, Our National Treasure," that's the way I remember it. This guy was saying that American technology results in royalty payments of something like ten billion dollars a year from overseas to the United States, he says this doesn't include equity positions that are based on technology, and what a wonderful national treasure. There wasn't a word in there about ten years prior to that it looked like the whole thing was going to go down the tube when we said that trade secrets are no longer viable, patents were held in distain, they were monopolies. That, I think, was a reflection of the change in national attitude that patents and technology and trade secrets not only protect us against our American competitors but competitors from all over the world. It's that realization, coupled with a forum that believes in it, that has caused, I think, a tremendous change, and not necessarily an ethical one, it's an economic one.

MR. BLAIR: To get back to the question of how do we determine somehow, at hopefully a fairly early stage, that whatever right the person has in the patent is a valid right, or an invalid right, as the case may be, so that economic decisions can be made based on that right. If you make an economic decision assuming that you have a valid patent right and after you have spent some years it turns out that you haven't got a valid patent right, you might not have made that economic decision in the first place, or vice versa; if you didn't have a valid right and you knew earlier, you might take some other action.

MR. WEGNER: I agree with Clyde that it should be an economic consideration and not an ethical one. Isn't it curious how in recent years morality has been thrown into the patent world. I'm referring now not to an original idea. Several people, Jack Goldstein and Don Chisum both simultaneously, came up with this. Professor Chisum has an article in the January *JPOS,* I believe, talking about morality in patents, dealing with inequitable conduct cases. We also deal with this in willful infringement cases. I agree with Clyde that we should have patents treated on an economic basis, and we should take the ethics and morality out of it. This is really not totally responsive to what you've said, but I think it's important to bring it up since it's not on the regular agenda of this conference.

MR. FISHER: Homer, in supplementing this thing in economics. The results of a study were published in the *JPOS* in about 1954, which showed that a graph of the validity rate in the courts of patents and a historic graph of the economic conditions of the country, were coincident. The invalidity rate hit its peak in the depths of the depression in the 30's, for example. Now, since then it's maybe been kicked a lit-

tle out of phase for a lot of reasons and I'm not going to get into it now. There are a lot of reasons to hypothesize why the invalidity rate goes up when business is bad, you start suing because you're hurting. I would encourage you folks to chase down that old article and update it and see where we are and see if you can find reasons why, if that historic coincidence in the graph is no longer the case, it has changed. A big chunk of it is the thing that Hal is touching on, it's the infusion of morality in the patent decision. There's a great old guy that used to work for BNA, he would come to the BNA Advisory Patent Board meetings. He told a story of back in the 30's when he was practicing patent law in New York. He represented a client sued on a patent related to transit buses. He did some investigating and got word that maybe the transit bus system in Washington, D.C. had something similar. He went down and talked to their head service guy and the guy said, "Oh yeah", and told him of an article that had been published in the trade journal. A couple of days later this fellow called the plaintiff's counsel from the bowels of the New York Public Library and said, "Come on down here, I think we've got something you ought to see." The fellow came down and saw a magazine publication which was a 102. The next day he received a call from the plaintiff's lawyer's office and was told, "Look, here is a paid up, non-exclusive, license for your client under this patent. It's granted to you on one condition, I've got your word as a lawyer that what we saw in the bowels of the New York Public Library yesterday will remain our secret." He took the license, his client was out scot-free and the patent was litigated and sustained against others. Now, can you imagine that in today's standards? That's how the patent system used to work.

JUDGE RICH: I would just like to add one statement to your validity rate discussion, and that is that there is no such thing. You're talking about a percentage of patent validity only in litigated cases, I believe, and very, very few patents ever get into court.

MR. FISHER: Those are the good ones.

JUDGE RICH: Isn't it the fact that patents that are litigated are generally those that have some doubt about their validity?

MR. FISHER: I should add a codicil and correct my statement. I'm talking about, as Judge Markey has taught me, the invalidity rate: that is the number of patents found invalid as distinguished from those found not to be.

JUDGE RICH: Now that I have come out of my post-luncheon stupor, I want to throw out one other thought about patents and monopolies. A long, long time ago I got into this subject and I discovered that the

word monopoly is derived from two Greek words, monos (alone) and polo (sell), which gave rise to the Greek word monopolion meaning to have the sole selling of something. If that isn't what a patent grants, it doesn't grant anything. I know very well why you said what you did to the questioner about morality, about patents not being a monopoly, but that's something that came in about the middle of my 57 year long career in this field. We all used to think of them as a kind of monopoly. They grew out of the Statute of Monopolies in England in 1623, which said that monopolies are abolished except monopolies over new inventions within the realm, and if a patent doesn't give you sole selling of something, I don't think it gives you anything. To put it in another form, the power that makes the patent system tick is a kind of monopoly power. Along about the time that Irving Kayton became a professor, the courts were running very anti-patent and the antitrust division was up to its customary behavior. The idea was thrown out that we've got to stop talking about patents as a monopoly if we expect to get anywhere. People, or even kids, learned in school or in their civics classes that monopoly is bad and then they learned that patents are monopolies and they connected the two ideas together. Then they became federal judges and carried out this same theory. Patents have got to be given a restrictive interpretation. I'm sure that Professor William C. Robinson of Yale who wrote the great, three-volume patent text in 1890, said in effect that "If you don't understand that a patent is a monopoly, you don't understand patents at all." (See Chapter II) I can't leave here without leaving that counter thought in the minds of the group. (See G. Rich, "The Relation Between Patents Practices and the Antimonopoly Laws," XXIV Jour. Pat. Off. Soc. 85, 90-91 (1942))

MR. WHITNEY: Homer, an assignment was given to the *IDEA* Board, or group, whatever it is, a short while ago. I throw out another one that follows up on what Clyde mentioned a few moments ago and what your chairman did. That is, I wrote a paper which I published in the APLA and the NCPLA back in 1980 or 1981 on the economic value of patents, trademarks and copyrights. I used as my base for it the statistics from the Internal Revenue Service and the Department of Treasury, their analysis of the breakdown of the 1967 Corporate Tax Returns. I submit that nothing has been followed up on that since. I have had some very interesting statistics that were effective at that time when Baldridge came in as Secretary of Commerce and some others right at the 80/81 point, and Congress paid some attention to them as to the economic value of patents. I've been trying to get some

group to follow up with that and I think someone might want to, and the statistics are available. Usually they are about three years behind, but even if we got the 1984 statistics from corporate returns which are broken down into licensing royalties from patents, trademarks and copyrights, admittedly under royalties there is also a provision from what you get in lumber, oil and some other things. They actually also have it broken down in patents, trademarks and copyrights, and then going into the area on foreign rights and foreign royalties. There are some very interesting statistics that could be there and ought to be brought before the public that would address the question of the economic value of this system we're talking about.

MR. BLAIR: I note Bob Shaw who is in charge of *IDEA*, among other things, making a few notes on that.

MR. SHAW: I was thinking as George was talking about it, there's the other factor that probably doesn't appear in there and that's what benefits accrue to the individual company and that will just show up on a P&L Statement and not show up as royalties.

MR. WHITNEY: It's also one of the greatest values which was driven at me on a number of occasions when I came out with that, was through cross licensing which doesn't show up in any of those statistics. There might be some interesting way of assessing the value of the patent system in some way through cross licensing.

MR. BLAIR: I've been very interested in the discussion and I deliberately let it go on into some other areas. I'd like now to hit a few of the things that are on the agenda and maybe "hit" is the word.

COPYPATENTS

MR. BLAIR: I'd like to go back and look on page two and just have a brief discussion on "copypatents", which I know a fair number of you might not be too enthused about. Copypatents would be used for the inventions that are not the big inventions, yet which still take up significant amounts of the Patent and Trademark Office time, assuming we can get them to do some good work. The theory would be limited in scope to exact copies and close variations.

Copypatents have the requirement of copyrights that you have to have access and copying. Copypatents would require novelty similar to patents under 35 U.S.C., but not on unobviousness, similar to patents under 35 U.S.C. They would not last as long on either patents or copyrights, would have lower fees than patents. Copypatents would be a way that would be able to get a patent which might give the needed protection on a particular item rather than getting a so-called

"defensive patent." Yet, a copypatent would not require the same amount of Patent and Trademark Office resources as the really basic and important invention of an examination. A copypatent may still be patentable but not worth it from an economic sense. Is anybody enthused about that particular concept or some variation?

MR. FIELD: I've been intrigued by that idea for quite some time. It affords an opportunity to bring up a point related to the earlier monopoly decision. The principal characteristic of a patent is that one person gets *everything* while everyone else gets *nothing* for its duration. This is what interferences are all about and why they are so hotly contested.

In contrast, interferences aren't needed for copyrights. What I create is *mine*. What is independently created by another is *his*-notwithstanding the fact that it may be the same as what I created.

I've wondered for about seven years now [See *Brief Survey*. . . in 26 *IDEA* 57, at 89 (1985)] whether we don't have some room in the intellectual property system, outside of the traditional copyright subject matter, for something based on equity and ethics: not a block against the whole world, but only against free riders.

Along the same lines, I've wondered how many "strong" patents have been invalidated in litigation against an independent originator and how many "weak" patents have been sustained against slavish imitators. It would be difficult for judges not to learn that way. To the extent they do, we already have a de facto "copypatent" system. It is unfortunate that there is no de jure accommodation of such an idea.

JUDGE RICH: Well, I am for the copyright principle type of protection for one specific sort of so-called invention. That is ornamental designs for useful objects, which is a little project that I became involved with in 1954 which is still under way and unresolved. Only last Friday Senator DeConcini held hearings again on the new bill which is substantially the bill the committee I chaired in 1954 wrote for the protection of ornamental designs, which they have are now calling to "industrial designs." Just for your information I was somewhat shocked at the testimony of the proponents of this bill who were people who — Well, the whole hearing went off on what are they going to do about copies of automobile fenders. The other people, who used to oppose this bill because they thought it would interfere with their making automobiles, now are for it because they think it will interfere with their competitors in foreign countries making copies of their fenders for replacement parts. On the other side, if you are talking about this proposition of "copypatents", I am opposed to them because it seems to me

that one essential aspect of our whole patent system for inventions other than ornamental designs, is that if they're not patentable there is freedom to copy, Sears-Compco, and why shouldn't it be that way?

MR. FIELD: As far as I've been able to determine Congress can nevertheless change the law. [See *Brief Survey*. . . in 26 *IDEA* 57, at 89 (1985)]

MR. DUNNER: Why do we need it, aside from the industrial design area?

MR. FIELD: Beyond what I said earlier, Van Santen has suggested [See Legislative Proposal. . . in 6 Pepperdine L. Rev. 297 (1979)] that it may be useful to keep a large number of marginal applications out of the PTO. Many people wanting a patent, for whatever reason, will push and push until the Examiner says: "Okay, you've narrowed the claims to the point that they can only be infringed while standing on your left foot while holding your right foot in your left hand, under a full moon, on the fifth Saturday of an odd numbered month. So I will allow it."

We really don't need that kind of patent. If "copypatents" or the like could get that stuff out of the patent system, maybe what remains will be worth having.

MR. BLAIR: I've heard also said that on occasion some unnamed corporations have been known to try to get all kinds of detail patents to cover different details of some piece of technology, the theory being that while maybe you can invalidate one or two basic patents, you'd have a hell of a time if there are 100 patents involved with all this technology where you really only have a small number of good inventions, the other ones might qualify under the patent law, but really aren't of major significance. There's nothing illegal about doing that, but some people think that's not a good idea and it clutters up the patent system too much.

MR. WEGNER: Two quick points. First the industrial design protection adds an effective area of protection which doesn't really now exist, and may help American industry very much. So I very strongly support this. My concern with Professor Field's "copypatent" is not so much cluttering up the shoes with patents and so on, but making life very difficult for third parties. One can envision a whole host of copypatents being granted and making it much more difficult for the public to determine what they can and cannot practice. I see no socially redeeming value for such a system.

MR. ARNOLD: I would like to inject one other small comment there. The nature of proof being such as it is as evidenced in court, you pro-

vide us with incentive not to look at the prior art because we don't want to make a record that we may have derived from it. So instead of finding out what we can do, we deliberately stick our head in the sand. It seems to me that there is an incentive in this direction, because if I find out about that patent, somebody is going to be charging me with having copied it. If I didn't know about the patent, nobody can charge me with having copied it. I don't know exactly how that would play out in the real world, but I give it to you to play with and see what you think about it.

MR. JORDA: Is this similar to the petty patent and utility model? If it is, I'd like to make a comment. Is there a difference or is it just the semantic choice?

MR. BLAIR: I think one of the differences is the concept of showing copying and access as opposed to the petty patent which doesn't usually have that characteristic.

MR. JORDA: At any rate, if it's at least akin to the model or petty patent, then I'd like to quote to you a statement made by a Japanese with reference to the utility model system in Japan where they apparently have second thoughts. The gentleman is Saotome, many of you know him, he is a man of substance. "Nobody denies that the Utility Model Law has made a great contribution to the development of the Japanese industry since it was established and put in force in 1905. However, the social structure in Japan and industrial conditions have drastically changed since then. . . Certainly, it would be difficult to abolish such a system as it has planted its roots deeply in Japanese soil and still confers benefits on the people. Yet, this system which has been asserted by its related industries to be useless and is being utilized only from habit, should not be left as is forever." So they seem to be having second thoughts in countries where they have a very, very well established utility model system.

MR. WHITNEY: Just remember whenever you talk about a copyright type protection, and you're talking about access and copying, the Second Circuit, in particular, which is very strong on copyrights, has a substantial body of case law on if there is a striking similarity, there is a presumption of access. There is another set of cases that go even further than that, that if there is a striking similarity, if there is the slightest possibility that there could have been copying, you will presume copying. When you couple that with the fact that copyrights are a far more powerful weapon than patents, and we tend to look at them as our little sisters that don't have much strength and just think in terms of the attorneys fees, costs, the damages that come out in copy-

right cases, the fact that even through all the years when the patents were looked at as being the antithesis of free competition in antitrust system, the very judges who bought all those arguments of the antitrust division back through a few generations and years ago, also enforced copyrights and the tendency is to do that, and it scares the hell out of me as to what can happen with that type of a system.

MR. BLAIR: In the past frequently the person who had copyrights was a "creator" and a person who had patents was a "monopolist." I think now we are changing a little so that people who have patents are "innovators" and the people that are infringing patents are regarded as "copiers." It depends on the emotional words of the moment.

MR. FISHER: First, a caveat. In my assault this morning on the Patent Office, it wasn't against all examiners nor all examination. My gripe about the Patent Office in its current structure is it's nonuniformity in the quality and its lack of ability with its current structure to supervise and deal with the few bad apples there are. With respect to petty patents and copypatents, I wanted to note that in the year that Tom McWilliams was chairman of the Patent Section, we met in Washington about 1974, I think, the section did pass a resolution favoring something very akin to what are called copypatents here. A major argument for them at that time was the very thing that Tom Field brought out, the concept that this gives the creator of what today is a marginal patent, the re-patented wheel Tom was talking about this morning, a place to go for a kind of protection, which hopefully helps the image of the utility patent. While I was chairman of that committee and wrote that resolution, I don't know that I'd vote for it now. I don't know that I'd vote for it now because I am not at all sure in our present mood that it is needed and I've got the concerns George is talking about and other concerns that fit in with the objections people have made here today.

JUDGE NEWMAN: How easily we forget. Five to ten years ago when many of us, me included, were strongly interested in the concept of petty patents or copypatents, that would be granted for novelty, and enforced upon evidence of copying and identity. This wasn't because we thought that there was a gap in the kinds of intellectural property that needed protection, but because of all of the other things in intellectual property that were happening at that time, things that led to the Carter Commission study and ultimately to the formation of the Federal Circuit. We thought that the idea of easier proof, by the evidence of a presumption of access and copying, as the copyright law, would remove patents from the judicial attitudes that many of

us thought were harming the nation. That has now been implemented, in the computer chip law, although for more complex reasons. We might at the moment be lulled into complacency of thinking that things have changed rather than gone underground. In terms of the national attitudes, I think we all recognize that we may be deluding ourselves. It's appropriate to rethink, in the present climate, whether there is a need to design some other kind of protection. Are there kinds of technology that in the national interest or the entrepreneurial interest aren't being covered by utility patents but that nevertheless, if given protection against copying, will provide the innovation incentives that the system deals with. I think that's always a useful endeavor. But I think the rules have changed from when we last looked at petty patents and copypatents and short term patents.

MR. BLAIR: We'll have one more comment by Chico Gholz, and then we are going to take a 15 minute break.

MR. GHOLZ: It's surprising and a little shocking to me how often our Japanese origin cases claim the benefit of Japanese petty patent applications. The cases that they can't get through the Japanese Patent Office and get a Japanese patent, so they file for petty patents over there, they file as regular patent applications in this country, and we have little trouble getting them patents. Somebody mentioned that you paint the wheel purple, and now it's patentable. We've got petty patents already. We've got good patents, and we've got petty patents.

MR. DUNNER: We'll quote that back to you next time.

MR. BLAIR: We'll take a fifteen minute break.

(BREAK)

CONTINUATION OF AFTERNOON SESSION

MR. BLAIR: I'm going to ask Bob Rines to make a few comments, and then I want to start on page five at the bottom on Category C. After we'll go to one of the subjects in which many of you have interest... First to File.

MR. RINES: Thank you, Homer. I have permission to echo something that Judge Newman touched on that touched me a little bit. I have long been opposed to the need for both industrial designs and some kind of a copy or petty patent, despite the fact that in the simplicity of our legal system compared to other disciplines (we must all agree it's very simplistic) everything is shoved into this one procrustean bed of invention while trying to weigh by the same standards a can opener and a holographic laser. What are our choices when something is happening today that I think we should all be alerted to. Tom spoke of

the economic factors, the tracking of the validity of patents with our economic life and so forth.

We never came out and said it, but we ought to. We all know that Judge Learned Hand confessed that in the recent past the courts were "throwing out patents because of the orders," I think that was his exact language, "received from the Supreme Court." I've had it, particularly in the Eighth Circuit — right in front of my wife — The Court saying, "I'm sorry, I have to do this, this is orders from the Court of Appeals. Let them decide you have a patent." I've had it in the First Circuit.

Now, there was this era of hostility, of following "orders," and what did we do. The Japanese, Germans, Italians and others have been able to use our patents in many fields with immunity. Now we see coming the other alternative, if we don't seriously look, I think, at industrial designs and petty patents, that the conscience is beginning to bother the federal judiciary and the state judiciary, present company excepted, of course. They are beginning to stretch and extend laws to do things to prevent copying, whereas in actual fact in our country and in all countries of the world, you are free to copy unless there is some law that says you can't. So we witness the trade dress, which was popular a little while ago; we witness today litigation on "look and feel" in computer software and other crazy kinds of ideas that federal judges all over this country are doing in their effort to somehow relate as a tort — that there's something wrong in copying somebody else's product, when there isn't anything wrong with it, unless there is some law based on a new public policy setting up something designed to prevent that. We have always historically said that even in the case of patents there must be something at a certain level, or you're free to copy it; and there's nothing wrong in copying it if it isn't at that level. We've said in the case of copyrights, an original work even with a modicum of novelty, you can reinvent it; you just can't copy this fellow's work.

But look what's happening in the copyright field today the way they are actually getting to the point of talking about ideas — substitutes for patents — "look and feel" in computer hardware and software now.

If that's our alternative, this country is going to be in a mess. I think it behooves us as a matter of public policy again, to decide that if we don't want the Japanese to be copying petty things of ours, then let's have a petty system of some sort and let's not try to stretch things that are not designed for that purpose as our court's are trying to do today, because somehow their conscience now feels it's bad to copy.

That's not the case, unless we say it is with something that is different from a patent and different from a copyright.

MR. BLAIR: I'd like now to go on to this concept of judicial reformation of patent claims and whether that's a concept that should be pursued. The idea is, if you had a patent which the claims were held to be invalid and yet the court thought there was an invention but didn't feel that the claims were properly written, an excellent example of that is *Kaiser v. McLouth Steel Corp.,* 150 U.S.P.Q. 239 (E.D. Mich. S. DN 1966). The court in that case said that it was a pioneer invention, there was no really good prior art and the patent was invalid, even though there had been claims that the court thought were valid during part of the prosecution in the Patent Office. The examiner rejected those claims and the attorney and the examiner reached agreement on some other claims that the court held were invalid. Is that a situation where the court should be able to reform the claims? Of course, if you did that you would have to have some provisions for intervening rights for people who took the position that they acted on those claims as if they were invalid, or they designed around the claims in their earlier form. Is that an idea that's worth pursuing?

MR. GHOLZ: No, not unless we have patent judges. If you have patent judges that know what the patent system is all about, maybe, although I'd still have to think about that.

MR. BLAIR: If you hurry before April first, we've got one. (Judge Conner took senior status on April 1).

MR. GHOLZ: No, I'm talking about a core of them that try patent cases, the point that I pushed before. There is something like this in Germany. We had someone telling us a war story from Germany where something like this had happened. There is a special patent tribunal there. Hal is shaking his head. The story that we hear is that it's a specialized patent tribunal. Maybe they have enough expertise to do it. I don't think the average U.S. District Court Judge does. If they started doing re-examination and rewriting the claims, it would be lunacy.

MR. TRAMONTINE: I guess I have the same answer but for a different reason. My reason is that it is already in our jurisprudence at this time. It's part of the equity jurisdiction of the courts. If you look at *United States v. Adams,* the water activated battery case, they said the water electrolyte was an essential part of the invention. Anybody reading that patent would understand the invention was directed to a water activated battery. The water electrolyte wasn't in the broad claims but the court read it in to sustain the validity of the patent.

If you read *Linde v. Graver Tank* you will see great language on metes and bounds, but you'll find that language in the dissent. The courts, in effect, do equity on the basis of what is the essential contribution made here by the inventor and they act accordingly to protect that invention.

MR. WEGNER: The American system gives the patentee more opportunities than some of the foreign systems. We have historically had a multiple claim system. I say "no" to this proposition, answering "all of the above," plus, do we want to create a forum shopping opportunity to go to the court instead of reissue and re-examination? I just don't think this is a proper solution.

MR. FISHER: Homer, I'm not sure that I comprehend what is proposed here beyond current law. Is this not a variant of the Doctrine of Equivalents, which at one time we did some research on and couldn't find a claim where it had been applied more than once. That's no longer the case. Anybody that studies the Pringle Patent, and studies the suit in that case and then finds what the judge found to be infringed, will know that the judge totally rewrote the claim. With *Kaiser v. McLouth Steel Corp.*, I know what the judge said in his opinion, but that was the district court. Had he done what we're talking about here and sustained the patent on the record, there would have been no less than a dozen bases for the Court of Appeals to reverse. I think it would have happened. There have been a lot of problems with that patent and many of them tie into the next topic you're talking about, first-to-file, because the patent arose out of some European developments. It was sort of dribble-disclosed through a series of disclosures and the basic problem that the attorney and examiner had as a backdrop to what happened was the adequacy of the disclosure. Anybody who has seen an oxygen lance in process and the violence of the reaction and then talks about the gentleness of or whatever the language was in the patent, will wonder what in the hell that judge had seen.

MR. BLAIR: I agree that they didn't realize that was their important patent when they were getting it out of the Patent Office.

MR. FISHER: Coupled with the issues behind the language. If you've ever seen the damn process, you wonder how in the hell anybody could have dreamed up that language to describe what goes on.

MR. WHITNEY: My comment is supplementing what Tom said. It has always intrigued me that the exact words that are in the patent claim were the words that were suggested and demanded by the examiner of the attorneys to change the words that were in the claim, that the court otherwise seemed to think described the invention.

MR. BLAIR: Does anybody else have any comment on this subject before we go on to first-to-file?

JUDGE NEWMAN: One of the things that I would like to suggest to this group for some future conference is to put our collective minds to the equity jurisdiction that is now being exercised. I'm thinking about the cases on the Doctrine of Equivalents. We might consider, for instance, alternatives such as patents of addition. I think we would all be more comfortable if there were alternative ways of moving through the Patent Office with equivalents as may arise more than two years after a patent has been granted, when we can't reissue with expanded claims, and where re-examination won't do because the disclosure is inadequate to support expanded claims to cover equivalents. The only system that I know of in any nation has been the system of patents of addition. It would be interesting to study the question of finding some way of moving through the administrative process rather than the judicial process when the question arises of either infringement by equivalents or of protecting one's modifications of your own processes as you develop them, modifications that might be unpatentable based on present law.

MR. OBERMAYER: Perhaps the judges should have the right to remand a case back to the Patent Office for consideration of certain claims. Normally, that's done in a context of new art, but there is no reason it can't be done when a judge feels that possible error may be committed because of drafting problems, etc.

MR. BLAIR: That's an interesting and creative idea for somebody involved in litigation where a patent may have a problem.

MR. DUNNER: The problem is it invokes an intervening right problem. If the court is merely interpreting the claims, you don't have intervening rights, if you go back to re-examination, you do. That's not an acceptable solution.

MR. MAURER: It's the same as a re-issue problem at that point.

MR. WHITNEY: Isn't the Federal Circuit also telling us that a court should not unnecessarily interpret a claim as being invalid in view of the prior art and relative to the infringement that's there?

MR. WISE: One question to the CAFC judges here. What do you do when you are in the position, as in the *Kaiser v. McLouth Steel Corp.* case, when you want to find an invention and the claims are not technically valid? There is invention disclosed but not claimed. What do you folks really do?

JUDGE RICH: You're talking about appeals from the Patent Office or litigation, or what?

MR. WISE: Appeals from the Patent Office, or in litigation if you find claims invalid?

JUDGE RICH: What do we do? I think we just struggle with them.

MR. WISE: Judge Newman, what do you say?

JUDGE NEWMAN: Judge Rich is absolutely right, we agonize over them. If you're talking about appeals from the Patent Office, we can always send it back or you can start again. If there's really no way of interpreting the claims to cover what seems to be a plain infringement, there is no way of imposing on the public a judicial interpretation that can't be fairly read into it the claims. We don't get very many of those cases, they don't come as far as the appellate court. Inherent in what I was saying about patents of addition and the opportunities for administrative review, is that there needs to be a way to cope with that kind of situation. There's no reason why the words of the patent have to be carved in stone the moment they leave the Patent Office, even within two years you can't do anything about expanding your specification, only changing your claims if you're lucky. There ought to be some way of allowing people to correct their own mistakes or their lawyer's mistakes or whatever else, so that the question that you posed would not be a hard case where the innocent suffers. That is to be avoided in any judicial action, not just in patent cases. We have some flexibility in patent cases, because the Supreme Court has exhorted us to do justice and use our equitable jurisdiction. But that isn't always easy on the people who are inventing around and doing exactly that which the patent system is supposed to encourage them to do, to build on the knowledge that's been disclosed and find other ways of doing it. Perhaps they don't deserve to have an appellate court telling them it's equivalent either. That's why I've encouraged us to think of some administrative way, in the first instance, of coping with it. Technology is getting more and more complex. Even for those of us with a technical background, we are certainly not experts in all areas of technology. There ought to be some way of bringing to bear the expertise of the Patent Office. Although we are concerned about the technical and legal expertise of the examiners, they are charged with knowledge of technology and the rest of the art. There ought to be a chance of thrashing out technological questions, other than putting them in the hands of the judges.

JUDGE RICH: Well, to add a few words to what Polly has just said, I would like to distinguish between appeals from the Patent Office and appeals from district courts in litigated patents. We are much tougher on interpreting claims from the Patent Office than we are claims from

the court. We apply a rule, as I remember it, that claims on appeal from the Patent Office will be given the broadest reasonable interpretation. If the claims read on the prior art, fail to distinguish clearly or don't define the invention or whatever, all we do is to say whether the rejection is justified or not justified. The reason for this is that claims can be amended before the patent issues. We either affirm or reverse and we view every decision of ours from the Patent Office as a remand, because when it gets back to the Patent Office they can do what they like. Even if we reverse a rejection, we know perfectly well that when it gets back to the Patent Office, the Office can give a new rejection if it wants to. Of course, they generally don't. On the other hand, on appeals from the district courts we act just like any other Court of Appeals would have acted before 1982. The rule is to so construe claims as to save them — if possible. We have the Doctrine of Equivalents, we have the Reverse Doctrine of Equivalents, we have equity powers and we treat it that way. My personal feeling is that maybe we have gone a little too far maybe in applying the Doctrine of Equivalents all the time. I think that's a Doctrine that should be applied in very exceptional cases, as I think Graver was. (*Graver Tank & Mfg. Co. v. Linde Air Products Cp.*, 339 U.S. 605 (1949)). The invention was blatantly copied with only the slightest variation in order to use the invention without using the claimed invention. I might frankly confess that when Graver came out I was still practicing patent law in New York, and I thought it was a bad decision. That brings up the other point I wanted to mention, that what we are also faced with trying to do is to remember what claims are for. Claims are to enable potential infringers to find out whether they are infringing or not. If the court is going to screw them all around and expand them into something they don't say, where does the potential infringer come off. The competitor wants to know what he can copy and what he can't copy. I keep emphasizing the fact that we've got to remember what claims are for and balance this with the application, and not on a free-for-all basis, of the Doctrine of Equivalents.

JUDGE NEWMAN: As a corollary to that, people shouldn't have to wait until we get to it to know whether or not something is equivalent. There should be a better way. I think this is something that has come into focus only recently, perhaps because there has been an emphasis on the equity jurisdiction. Not just of the appellate court, but we see it also in the district courts, with the renewed emphasis on jury trials in patent cases. People who feel that they have a good case as a matter of equity may feel that there's a better opportunity of persuading

a jury of that. There have been more jury trials in patent cases in the last few years as I understand the count.

MR. TRAMONTINE: What I have found is that the past practice of having patent counsel sit and read claims is foolhardy. What we have to do now, is bring in your technical people, have them read the patents and say, "Now, what was that man's invention?" They'll tell you and then you ask them. Are we using it?" We forget that the patent and its claims are addressed to someone skilled in the art and that's not lawyers and not judges.

MR. FISHER: I just wanted to note that if we go too far in this we've adopted the former French system. I read at one point in time a study which indicated the amount of royalties paid in France as a percentage of the gross national product was the highest in the world by a wide margin, because they didn't know what the hell was patented. Have you ever asked the opinion of a French counsel? You could go for three out of five and I swear that you'd get five different opinions.

FIRST-TO-FILE

MR. BLAIR: I'd like to move on to first-to-file, whether that's good, bad or indifferent. First-to-file, rather than the first-to-invent system that we have. I think it's not as useful to take first-to-file as a concept by itself. In addition to the agenda we sent out papers by Hal Wegner and Bob Armitage, each of which have different parts of a package, if you want to call it that, with different aspects that each one of them emphasize. Now, some people feel that first-to-file would be in favor of the large corporations and against small business. I note Hal Wegner recommends it as a system which, in his version, would safeguard small business and give them a competitive advantage for both domestic and international filing if his "internal priority application" system were used.

Some also have pointed out that our first-to-invent system isn't really a first-to-invent system. We've all known of situations where the first inventor did not win an interference because he couldn't prove that he was the first inventor. Maybe he knew he was the first, but he didn't have the appropriate witnesses. I've been involved in a couple of situations which I was fairly relaxed about it because the patents involved in the conflict were not patents that my company had. In at least two of those situations, who the first inventor was did not make any difference because we were still infringing the patent that came out of it, or allegedly infringing. You could say that our present system is not perfect by a long shot in getting a real first-to-invent.

One other comment I'd make in starting. Most Americans that file patent applications in other countries live as if the U.S. had a first-to-file system anyhow. In most corporations you try to have a system where there are no publications of the invention before you file the patent application, usually the U.S. You hope you don't have any public disclosures or putting things in trade shows, etcetera, before you filed in the U.S., realizing in some countries you can get away with something and in other countries you cannot.

In practice, in the companies I've worked in, we have lived as if the U.S. were a first-to-file country because we were forced to live that way by the rest of the world. We've had to operate as if we were going to file in foreign countries where many times we may ultimately decide not to. I didn't want to foreclose that option before I made my final decision later on. With no further additional comments, I'd like to hear some comments from you folks on some of the material that was passed out here, Don Dunner's article, Hal Wegner's proposal and Bob Armitage's proposal.

MR. WHITNEY: A point of information?

MR. BLAIR: Okay.

MR. WHITNEY: What is small business? I remember very well, and I think Don was there when we had a meeting of the Board of the American Patent Law Association, as it was then called, when I was president or when Don was, I forget which. We were arguing this point and we had a representative from possibly the National Small Business Association or some such place, telling us that the people he was concerned with and viewed as small business, spent over $100,000 a year in intellectual property activities. I can think of a hell of a lot of clients at my firm and a lot of others that don't spend anywhere near that kind of money.

MR. BLAIR: Ordinarily, I think we end up with this definition that the government keeps using to define "small business." After working for corporations I have a little problem with those definitions. Many times we would have a small division of a fairly large corporation. In one instance the division had annual sales of three million dollars. They were part of a corporation that was much larger, but in their field and with their competitors, they had to act as a small business.

Before we start, I'd like to have Hal Wegner tell us about the comment he heard from Don Quigg last week in Geneva.

MR. WEGNER: Last week was the third session of the Committee of Experts on Patent Harmonization. In a very carefully worded statement the Commissioner said that the U.S. Patent Office favors first-

to-file, but he had two important caveats. He said it was a part of a package that would include a grace period, no exclusions from patentability such as product protection, at least the 20 year term, not the 15 or 10 year terms that some countries have, and although not stated in the open meeting, he clearly included broad claim interpretation, as we have in the U.S. and Europe. The other caveat was that he needed to get the support of the patent bar, that he did not have power by himself to introduce this legislation. The other aspect of the package in terms of what the U.S. would give, Mr. Maasel, who was speaking for the U.S. Government delegation, said we would "sacrifice *Hilmer* on the altar of harmonization."

MR. DUNNER: I won't repeat what's in my paper, but I would like to just mention a couple of historical points that many people here may not know. I was asked to present a paper on whether we should abolish the interference system. I did so at an AIPLA meeting and I guess there were about 200 people in the room. At the end of the presentation the chair of the meeting, who was Bill Thompson from Caterpillar, took a straw vote of the reaction of the people in the room. I was utterly amazed that there may have been two or three people who weren't in favor of abolishing the interference system. "We've come a long way, baby," is the expression that you can use, because I remember when Polly Newman was chairman of Committee 108, of the ABA-PTC section. She was avante garde at the time proposing to have a first-to-file system and even then, though the vote was opposed to it, and that was six, seven or eight years ago, it was nevertheless something like 92 to 70 or 90 to 75, it was very close. I think over the years there has been an evolution and the thinking has been away from the old interference system for all the obvious reasons, it was not cost effective. Judge Rich was quoted in the *BNA Journal,* to the same effect. Even Don Quigg, the PTO Commissioner, who long has liked interference systems at least in part because he was Patent Counsel for Phillips Petroleum that won the polypropylene interference, seems to be turning around. I won't say this is an idea whose time has come; I will save that for my debate with George Whitney in New York. Basically, I think the sentiment is very strongly in favor of doing away with the interference system. All the old reasons in favor of it, I just don't think hold water.

MR. GHOLZ: I was one of the three who voted against Don on that. I think you have to draw a sharp distinction between doing away with the interference system and going to first-to-file. I am in favor of going to first-to-file, but I am not in favor of doing away with the inter-

ference system. We do an awful lot of interferences in my firm, and what we are seeing is that many of them involve two foreigners. Many of them involve who is entitled to which filing date. The Japanese in particular are fond of combining when they get to the U.S. two, three, four, a dozen applications with different filing dates. If two companies are working in the same field, they often have a spread of interlocking filing dates. The question is, who is entitled to which date for which counts. Also, under the new interference rules, a lot of the heavily litigated interferences are really patentability disputes. One person, or one side, can see that it is going to lose on the dates and then the issue becomes can they knock out the invention entirely so even if they don't get a patent, at least their competitors don't. These things are working very well. The new interference rules are working, in my opinion, extremely well. There is a lot besides derivations which even Don can see still have to be handled in an interference-like context. There are a lot of disputes that are very well handled in the interference context.

Doing away with the ability to prove invention dates before filing dates would certainly knock out a number of interferences. My guess, based on our practice, which may or may not be typical, is that it would only knock out substantially less than half, perhaps a quarter of the interferences. Most of the interferences we work on don't turn on that kind of issue anyway.

Interference law is highly developed. There is a small core of patent-type judges known as the interference examiners who are really good, know what they're doing, and can handle these disputes expeditiously, and, even though we occasionally lose, by and large very accurately. I think that the kind of people that handle the interference disputes in the Patent Office are a paradigm for the kind of people I'd like to see handling patent disputes in litigation. I'm not in favor of doing away with interferences, but I still am in favor of going to first-to-file.

MR. DEGRANDI: I can see why a lot of corporate patent attorneys would like to get rid of interferences, because they have been very, very costly in the past and the results are not always predictable. I don't think that they have given the new interference rules the chance to really show whether or not the costs can come down. I think Chico is right. The rules as they have been revised probably will decrease the costs of interference, and I know you're going to get the decision a lot quicker under two years, or a maximum of two years. Whereas before it used to drag on for five, six or seven years. I don't think that the private sector has really concentrated on what it means if we go to the first-

to-file system. I hear that small business is in favor of first-to-file. For example, if a small businessman came to me today, and I'm in private practice, and says "This is my invention, I've had a search done or I don't want a search to be done, I want you to file on this." I say, "Fine, I'm going away on a two week vacation tomorrow, and when I get back I'll get around to writing your application." I come back and there's two weeks worth of work piled up on my desk so I have another two weeks before I get around to preparing and filing his application. He executes the case and we file it in the Patent and Trademark Office. Eighteen months later we find out that a patent has already issued to somebody that filed a week before I filed the application for the small businessman. I can see a malpractice suit brought against me. I had the disclosure, it was sitting on my desk. I went on vacation, I came back and I didn't take up his case right away, and therefore he did not get the patent, even though he might have been the first inventor. He did not get the patent. What do we do? Hal Wegner has suggested that we have this internal priority application system, which means that when the inventor comes to my office today, I drop everything and I prepare a very short application for the invention as it was disclosed to me, and I get it on file in the Patent and Trademark Office before midnight tonight. Otherwise, if I delay a day, or two days, or three days, I run the risk, and I realize this is not a very large risk, but it is a risk, that someone else is going to beat me to the Patent and Trademark Office by a day. And that's all you need is to get beaten by a day. If you didn't expeditiously prepare and file an application the day that disclosure came to you, or at least filed a preliminary application, and the man did not get his patent because of something that you failed to do, he may have grounds for malpractice. I don't think a lot of members of the private bar have thought about it, and the rest of the bar should also think about it. If this is going to be a malpractice problem, the premiums on your insurance are going to skyrocket even higher than they are today.

MR. WEGNER: I appreciate Joe's candor on this. He has focused upon the one problem I have had privately expressed to me by many attorneys. I think it's very worthwhile to focus on this one point. The idea of the preliminary application should be that has the substance of the invention with the enabling disclosure, but stripped of formalities like inventorship nomination, a large fee. It should be something that can be dumped in the Patent Office when it is received by the attorney. Now, under the present system if it's not an enabling disclosure you don't have a basis for priority later. If it's not enabling,

if disclosure came to you not in an enabling form, you'd have some difficulties proving a date of invention as a junior party. The other thing you have built in, and now I'm speaking from an American public policy standpoint, if you win an interference as a junior party, you would be subject to a malpractice suit by the American inventor for forfeiture of foreign rights in Japan and Europe. Let's think about it. When you win an interference as a junior party, you have proven that there's a patentable invention. You made the invention first and proved it because you won the interference in the United States. You were second-to-file and your priority date therefore was junior in Japan and Europe. As an American public policy matter, I think this is terrible. Europeans and Japanese routinely get earlier filing dates and Americans are routinely losing out where there's a close competition. A German can file a *Gebrauchsmuster* (utility model) for 50 deutsche mark, about $20.00 or $25.00, and get his internal priority in Germany today. So every incentive should be made to encourage early filing. One of the benefits of the internal priority application is, you file it quickly and then you have time to reflect on it. You should have one year to reflect on it. In hindsight, can't we all do better a year later? So, after one year of this application sitting, maybe there will also be two or three more applications. We would be paying $20.00 or $25.00 for each of these priority applications. They sit there for one year and we can combine them together. After that first year, then in hindsight we can reflect, "Did we do a good job?" Then we have a chance to fix it before the Paris Convention year is up and before we file a worldwide case. I share your concern, Joe, very much. It's a concern we should all have. The way to deal with the problem is to face it squarely. Maybe today we're not having foreign malpractice suits, but that's just around the corner.

MR. BLAIR: Maybe we should be more sophisticated about foreign practice people and start suing more lawyers because their clients are losing in first-to-file countries.

MR. FISHER: Let's start first with what goes around, comes around. In the days of the Johnson Commission there was a proposal very similar to what Hal has just voiced. The concept they talked about then on the Commission was that an inventor could write it on a brown bag and file it and get a date. We've got that now, as long as you're meeting the disclosure enablement requirements, as Hal just said you should. You write that same thing Hal's talking about, you put a tag on the end of the invention as shown and described and you file it as a patent application. The distinction between Hal's proposal and the

present law is there is no time limit on filing the CIP. The CIP has the original filing date if the enabling disclosure was there, and if it wasn't it doesn't. That's the law. What he's proposing doesn't basically change the law except to put a time limit on that point. I'd like to take several things up, all of which are interrelated. We are looking at PCT-II. We are looking at a proposal which would bring into the U.S. Patent Office, cases based on foreign applications filed 30 months earlier or something on that order. We have had a push throughout most if not all of the Reagan Administration, for what was 18 in 1987, but is now slipped back to 18 in 1989. The scenario — George Jones files in New Zealand on a patent application on something created there. Seventeen hours later I filed in Cleveland for Harry Smith. Eighteen months later, Harry has his patent. One year after that my New Zealand friend comes into the U.S. Patent Office. On a first-to-file system my client has had a patent for a year that suddenly is suspect, but they both have the same filing date, and I picked the seventeen hours because that's the time difference. Are we going to file internationally on Greenwich Mean Time? How are we going to pick a priority? If he filed 18 hours earlier, he perhaps had the date before I did and 30 months later he gets into the Patent Office, my client is going to be like three years from when he filed and a year and one-half from issue when he finds out he didn't have a patent at all, if we throw out interferences except in derivation, which seems to be the proposal. I suggest to you that the problem with interference is something that ought to be dealt with, and I'm with these folks saying that maybe the new rules have done it. To go back again 20 years to the Johnson Administration and the aftermath, there was the Cleveland Plan, which I'm sure Tom remembers, which was basically the Canadian Conflict System turned into American law. You would get rid of the principle complaint the foreigners justifiably have and admit evidence from anywhere in the world, not just acts in the United States, which has to be the cornerstone of their gripes and objections to our systems. You would do it by affidavit. You would, in the Patent Office, get a quick and dirty approximation of justice, cutting the cost in the Patent Office appreciably. If you didn't like the result, you'd then go to court, you can get rid of all this bit where we can in nice and refined ways say, "Each inventor is a presumed liar because he's got to have all this corroboration." Why is an inventor different from any other litigant? Why can't his demeanor be judged by the trier of fact and decide whether this fellow who testifies what he did on such and such a date, is or isn't telling the truth. The year I got out of law

school I did some claim adjusting. I was telling the folks at breakfast there were certain neighborhoods where I never saw a claim where the claimant didn't have at least one clergy person as a witness, an eyewitness, to the accident. You can't believe how many clergymen there are in certain sections, but always corroborated, you see, by a clergyman. Let me address two things about real life and why justice, I think, mandates the first-to-invent system. A properly administered, first-to-invent system. There is in Kent, Ohio a university known for some things that it shouldn't be famous for, called Kent State University, which has as a facet of its operation a Liquid Crystal Institute. Any of you got digital display watches? The basic patent in U.S. and Canada was invented by Furguson, a former member of the faculty at Kent, one of the original technical people at the Liquid Crystal Institute. In the rest of the world, Hoffman-LaRoche owns the basic patent. Mr. Furguson won the interference in the U.S., his attorney wasn't threatened by a suit, Hal, and never could be. Furguson didn't have the money to file sooner, in a five cornered lawsuit we negotiated a settlement. The royalty stream to Kent State has been sufficiently significant that they've now got six or eight technical people full-time. The income to Kent State from the liquid crystals is in the seven figures, we anticipate it will soon be eight. They are the lead institution in liquid crystal technology in the world, and without the interference system, the Liquid Crystal Institute wouldn't exist. Scenario number next: Those of us who are in private practice at what some call the rust bowl, others want to call the water bowl, some want to call it polymer valley. We've frequently got entrepreneurial creative types coming into the office and they've got a concept. A little more than just a concept, maybe a little bit of test work, maybe a crude prototype. Maybe that's only the beginning stuff of which inventions are made. "Tom, I just quit my job, I'm going to start this business. I've got $50,000 I've saved." The Greatbach story, into the Inventors Hall of Fame, winter of 1986. He quit his job and built a pacemaker in his basement or his garage. He devoted his entire resources except the money set aside as a trust fund to run the house, to developing his invention. Now, if my advice to him has to change from what it is now, saying "Greatbach, George, whoever you are, you've got a choice. In the real world you cannot divulge or you're going to lose your European rights, you can't divulge before you file. In the real world, if you pay me or my firm to prepare and file a patent application and pay these God-awful high Patent Office fees, funding their development of automation instead of examination, that's money out of the till that

could go to your development process." Now, if you're willing to say "My fall back position is North America, the U.S. and Canada, then don't hire me to do anything now. Keep records, get witnesses, all the traditional advice. Don't get the meter running on your patent budget clock because once you file in the U.S., the world budget has started. I can stall it a while by filing through the Patent Cooperation Treaty and various other methods, but you're started on the expenditure to protect the invention that you haven't even finished." I don't care if it's one in 1,000, to protect the ability of that guy to get his business going, to get patents, to create jobs; that's where they're created, with the real little people, the system is worth it. I don't see why we should throw that aside in the interest of harmonization. Hell, the Germans harmonized and they got rid of the grace period. They're going to get it back because it was right. I don't think we ought to throw out a just system that jeopardizes the thing that I think has really made this system work and made this country great. That's the proposal before us.

MR. OBERMAYER: I'd like to second what Tom said. As a small business person I certainly do not support the first-to-file approach. First, I think it will have a negative effect on the quality of patents, and second, it will increase the cost of prosecution in the Patent Office. In my company we do not file a patent application until we have done sufficient laboratory work to support our claims and appreciate the scope and reproductibility of our work. We want to put together a patent specification that has quality and will withstand the scrutiny of time. Under a first-to-file rule we would put together a patent specification as quickly as possible, maybe with one example, and hope that what we put on paper can be verified with more experimentation. This premature action would start us on the road to continuations in part, refilings, corrections and foreign filings. Instead of spending our limited financial resources on laboratory work to improve the invention, we would be spending more on the legal aspects of obtaining poorer quality patents. It just represents an approach which is going to lead to more costs and poorer quality of patents, in my view.

MR. DUNNER: I didn't deal with the merits before, but now that I've got targets I'd like to shoot at them. I think you're all wet, all of you who oppose the first-to-file system, and I'd like to tell you why. First of all, we like to achieve perfection in this world, but we never will, and we can't have a system that is keyed to one person, without looking at the big picture. The big picture just doesn't justify the very complicated, the very expensive system we now have, for the interest of

the polypropylene's and the Kent State's. It may be that Kent State has a wonderful, liquid crystal laboratory. If we took all the money that is wasted on interferences and gave one-one hundredth of it to Kent State, it could have two of the laboratories it now has. Now, the fact of that matter is that the statistics demonstrate that the junior party wins, which is presumably a possibility that the interference that you are protecting is supposed to protect, less than one fifth of one percent of all the cases that are filed. In my paper I have some statistics. The statistics are that interferences are terminated in less than one fifth of one percent all the applications that are filed, and of the cases that are awarded to the junior party, it's less than one fifth of that one fifth, so it's about one twenty-fifth of one percent, if that. The fact is, that an interference which is contested certainly under the current rules, even under the revised recent rules, that is, any kind of an interference that involves taking of depositions, is going to cost megabucks. If you think it's going to cost you $10,000, Art, multiply that by a factor of ten or 20 and you'll be a little more accurate. Interferences are like mini-litigations, they are very expensive. That is true if you have a two party interference or a ten party interference, they are very expensive. True, some can be decided on the basis of motions, but it's a trap for the unwary. Motions practice is the slickest, most difficult practice providing the most difficult kind of obstacle course for litigants. The small inventor is the party most likely to be able to least afford that kind of an interference. Now, I don't think that malpractice rates are going to go up as a result of the first-to-file system. You can scream "The sky is falling" about lots of things, and I consider it that kind of argument. There are plenty of opportunities for people to sue us for malpractice, there are dates to be missed and this is not going to add meaningfully to the big picture. I think the big question is that given the big picture, given the cost of the Patent Office, given the cost to the litigant, given the likelihood that it's not going to change anything, can we possibly justify this very complicated, crazy system to benefit only a few people. I think the public is the big loser and we are the big losers and I think on balance we have much more to gain by going to a first-to-file system, than maintaining this lunacy that we all now have.

MR. ROBBINS: Generally, I am kind of on the fence about this proposal of first-to-file, and I think I'm on the fence because I don't completely understand what's involved. I'd like to pose a hypothetical situation and see if the proponents of first-to-file can answer it. Let's take the simple case where a U.S. applicant files an application. A second in-

ventor files an application on the identical invention, better disclosure but the same claim. The patent issues to the first inventor. Assume that there is then a proceeding, and in this proceeding it is demonstrated that the best mode was not disclosed, or some other defect existed in that first filed application that is now an issued patent. What happens now to the second applicant, the second inventor? Does the second inventor get a patent or not?

MR. DUNNER: Even under the current system, winning an interference doesn't guarantee you are going to get your patent. If your case is defective for any reason under the current rules, you may win your interference, and the second inventor will not get a patent and you may not get a patent either. So the end result may be that no patent will issue in your situation. That's under current practice and I presume it would be the same under the new practice.

MR. ROBBINS: Maybe I didn't make my question clear. The first applicant has a defective application, that's proved after his patent is issued, but while the second application is still pending. What happens to the second application of the second inventor under the first-to-file system?

MR. DUNNER: It would not issue. You would have one invalid patent and one application that didn't issue.

MR. ROBBINS: Let's take the case where the first inventor files a non-enabling disclosure which somehow gets through the Patent Office.

MR. DUNNER: Same thing.

MR. WEGNER: There are two different concepts you're dealing with, Frank, and I'm glad you brought them up. Article 4B of the Paris Convention in the 1934 London Revision requires a patent-defeating effect for what is claimed in the patent, as from its filing date or priority date. In the first situation where there was a concealed best mode, the guy got a patent that was invalid, but the patent-defeating effect must be there under any legislation if we're going to conform to Article 4B of the Paris Convention. This is a matter independent from first-to-file. The second question, if there's no enablement, you have a LeGrice situation, and whether the patent is valid or not will depend upon the principles of LeGrice. Then the public does not receive an enabling disclosure from either inventor.

MR. MASSENGILL: I'd like to stress two points about interferences that Don didn't make. I agree with what he said and he said it so well. The two points I'd like to discuss are *abuse* and *uncertainty*. Both of those have flagrant examples of what can happen in interference practice. Abuse of the patent system is apparent in connection with a pat-

ent that was held valid and infringed just recently. It was filed in 1957 and issued in 1978, but should have already expired by 1978. The damages and future royalties in that patent will probably amount to well over 100 million dollars. With regard to uncertainty, and these are real cases, business people are waiting for interference decisions before making commitments to invest millions of dollars in manufacturing plants.

MR. ARNOLD: Roy preempted a good bit of what I was going to say. I studied this very closely as Tom Fisher has intimated, back during the McLellan bill days in response to the Johnson Administration study and I was of the mind that we should hang in with the principle of fair play and the principle of the first-to-invent system. I've spent 25 years, or whatever it's been since then, living with these things and I can match Tom antecdote for antecdote, as Roy has already started to do, about the great catastrophe of the delayed decision and the long interference, and the great catastrophe of all kinds of things that are wrong with having the interference system. If we're going to decide this thing on antecdotes, well, we ought to get together with our antecdotes and we'll have a great time. On balance, however, we can accomplish 98%, we can accomplish 99.98% of the socially desirable results of the first-to-invent system by the utilization of the various things that are available to us in terms of preliminary filing and other things. I just feel that the expense not only in money but particularly the expense in the time and the delay in reaching a final decision on who gets the patent, cannot be justified. We should have the first-to-file concept and learn to live with that, as we are, to the extent of such a tremendous percent of our activities that are dominated by foreign orientation. That's one person's viewpoint.

MR. RINES: I've been trying to approach this not knowing whether I'm emotional, whether it's the way I've been brought up, or what it might be. I have to confess I have a bias.

Judge Rich, on the CCPA, some years ago held me to be the first inventor on some radar inventions I made as an Army officer in the field during the war which caused me to be the junior party, and I'm very grateful for that. I have had a lifetime of patent practice that has involved quite a bit of interference practice. I have to agree with Don Dunner and Tom Arnold it's a lousy system that we've invented for interferences. But is that the limit of our inventive capacity? That system? Are we going to throw the baby away with the bath water? Wonderful idea, just because we've got a crippled baby.

The question I raise, however, is, what are we talking about? Less than one percent of all patents are involved in this and we're spending all our time concerned about this. I would say that there are certain things in America that I still feel pretty strong about. They are not economic, as a matter of fact, and they are terribly inefficient; they are characteristic of the burden of democracies. Yet, that's why my forebears came here and that's why people before them spilled their blood. We aren't like and don't think like Europe; we came away from there. We may, for example, give the argument somewhat analgous to the senior party nearly always winning in interferences, that 98 or 99% of the prosecutors in some parts of this country convict the criminals. We have a doctrine of due process; look at how expensive it is. Since we know what the results are going to be, what do you need due process for? Look how costly it is.

If the system of first-to-invent were even intellectually improper, I'd be the first to say, "Let's reexamine it." I do charge that first-to-file is nothing but claim jumping. Maybe you guys are geniuses, but I don't often know how to claim a patent in the first instance, or sometimes the first go around or the second go around. I don't always fully know what the client has done. We talk about "inventions" filed, in an application or disclosure; that's baloney. It's how we visualize the claim. It could very well be that you and I, Frank, have exactly the same disclosure and two entirely different claims. What kind of nonsense are we talking about? An intellectually sound system such as the interference of some sort, or something akin to it, really deals with the subject matter of claims and attempting to describe invention, not mere descriptions or disclosure filings. This is a very difficult situation with all kinds of nuances. Unless you want to intellectually defeat what we have built up in this country, with regard to the difference between generic claims and species claims and claiming inventive ideas from different viewpoints and things of this sort. Go look at Europe, look at that mess of nonsense in the European Patent Office. Go look at what we have to do today when we get a clue that somebody has claim-jumped us over there — trying unofficially to call to the attention of the European examiner some prior art so things won't happen. How does the European examiner or the American examiner in a first-to-file system know that somebody else may file within the next twelve months or eleven months or so, with an earlier conversion date than the case at hand. Have you really thought this out? I have tried to read Hal's proposals. They have some of the elements of some of the things that I think are good interference practice.

The question that I do raise is the same thing we have here in New Hampshire. Somebody says, "No nuclear energy because it isn't 100% safe." So throw everything out, because maybe the way we're looking at it right now isn't quite the right way to look at it.

I'd like to suggest that it isn't just a small number of companies, Tom, swapping war stories. I have to talk about my experience. There'd be no EG&G today without the interference practice. Professor Edgerton would have had an invention, but never had a patent. There might have been no General Radio, now Genrad, without interferences for the basic radio and crystal oscillator patents of Professor Pierce's and other things of this sort — situations that I have been associated with. As stated before, I personally would not have been recognized as the inventor of imaging radar.

The practicality of the way we do invention and innovation requires us to get out in the marketplace and try something before we perfect it. That's why we have the one year rule. You're talking about Europe now coming and saying that they're going to have a grace period for six months. They're boobs, because that is opening the invitation, if you're going to have a claim-jumping system, to serious problems. I have to say you're talking about the problems of New Zealand, where, when I finally recognize what the invention is and I add the new claims, the patent application has to take the date of the new claims, not when I filed it. How are you going to handle that situation? Who is the first-to-file if we don't formulate the claims the right time the first time we file? This mishmash of so-called examiners they have in Europe, from all over Europe with all different standards is nothing to be emulated. I'll get any patent through a British examiner in the EPO. I'll get any patent through a Frenchman there. Sometimes we'll have some trouble with the Germans. Hey, this is no Utopia we are going to join. Despite the fact that it might be very nice for our government to be able to harmonize, there are certain things that I'm willing to fight for that I believe should not be harmonized. If it's a poor interference system, and I agree it is poor, even the new system isn't streamlined enough, there's nothing that says it can't be made simple. For example, does the Patent Office have to have rules of evidence of the courts? It could be like any other administrative agency. Tom's point — you don't need corroborating witnesses. We can do all kinds of things to streamline. Have we put any of that energy into these kinds of improvements and safeguards before concluding we should dump this idea of first-to-invent? I confess, it's emotional, but it's also experiential with me. I think what you are proposing is intel-

lectually barren and out of time, as is much of the law, with the realities of the way innovation and entrepreneurship develops and needs nurturing.

MR. WEGNER: I think it's very useful to have all these comments because they lay some of the issues very frankly on the table. If I may, I'd like to respond to Tom Fisher and President Rines. First of all, consider the New Zealand application, and how do you know about it? Well, everyone should have in his office the PCT *Official Gazette.* One of the modernizations that we provide is to have each Patent Office publish the information nationally. You don't have to go to New Zealand, you can go to Geneva right now, and you should have that journal in your office right now. Secondly, with the Liquid Crystal Institute situation, if we had the German system in place right now, you'd pay a $20.00 check, or a 50 deutsche mark check and a twenty-two cent stamp and file the disclosure with the Patent Office. The Liquid Crystal Institute would have had worldwide rights. Third, it may be nice to say, "I'm going to work in my garage and I don't want to pay for the financing of the patent." If you want to get the invention financed and you don't have a patent, *that* may jeopardize matters. Now, let's talk about the history of the United States. I grew up in the first inventor system, I'm predisposed to be in favor of it. I do not want to harmonize for the sake of harmonization. As a matter of fact, if you read some of my papers in the past, I am in favor of unilateral changes, and I do not want to create a "European" system. But if something works well in Europe, we shouldn't close our eyes to it. The first U.S. patent law of 1790 I don't believe had an interference system. It was only later that we added that system.

Now, you're right, I can't formulate optimum claims, when you get right down to it, in the very first instance. But Article 4H of the Paris Convention says you don't *need* claims for a priority date. In the Internal Priority Application, the best way is to make such a system not require claims, just the enabling disclosure. Then you have a year to figure out what you're doing. I certainly would be the first to agree with you that you can't formulate claims right away, and in no internal priority system should you have a requirement for claims. I realize it is an emotional issue, and, that I have an advantage in that I started practice only in 1965. I think philosophically the problems can be reconciled. What we're doing in the new system is this. If I'm a small inventor, and here are my drawings and my laboratory workbooks — BANG — $20.00 and get my priority filing date. That's my proof. Isn't that a lot better than trying win by bringing out two witnesses? Try-

ing to win as junior party and then opposing counsel says, "He's a liar." How, if I am a small inventor, can I find a George Whitney to be my attorney, or a Don Dunner, or pay the $200.00 an hour rates we're talking about? If I'm lucky enough to find them they're going to tell me, "My God, Wegner, you didn't keep laboratory records. You've got to settle, otherwise, give me a $200,000 war chest and two years and then maybe I'll give you a 20% chance of getting a patent." That's no way to run a railroad or a small business.

MR. OBERMAYER: My company has never actually been in an interference in the normal course of events. We would have been, but we have been able to avoid them. When it appeared we would get in an interference, I contacted an executive of other companies and we found we could work things out. We could find out informally from our respective records who was the first one to develop the invention. In fact, in one case we resolved the potential interference by putting together a joint venture where we both worked together toward a better product. I don't know how frequently this happens. I'm not sure whether this is the rule or the exception. We have been able to negotiate with the other party and come to a resolution without going through an interference.

On the question of proof of conception, keeping good, verifiable records is the key. Within my organization we find the formal Patent Disclosure procedure of the Patent Office to be a convenient way of establishing proof of the conception and reduction to practice dates. Although it should not be confused with a patent application, our forms combined with the use of the formal disclosure process get inventors thinking about the requirements of patenting. I believe the filing fee is only $10.00, and it does the job of establishing the date quite adequately.

MR. GHOLZ: I'd like to respond to two people, Mr. Massengill and then Dr. Obermayer, on whether interferences delay resolution of disputes and whether they hold up businessmen in getting their investments. Again, the problem that I have seen again and again, and we all speak from our own personal experience, is the business with interleaving priority dates. That is a problem that has to be handled somehow. It can be handled ex parte or it can be handled inter partes. If you don't have interferences to handle that kind of a thing, each individual examiner decides what dates you're entitled to and I submit that will not work at all well. That's the way the Japanese do it. It doesn't work well there and I think it wouldn't work well in this country either. We need the inter partes form to resolve that kind of dispute. It works

relatively quickly under the new rules. Interferences really do move along, almost as fast as ITC procedures. Not quite that fast, but they move very rapidly.

The invention disclosure documents that you're using, Dr. Obermayer, I don't think that they are at all useful. I do not recommend them to clients. It will give you a date for conception, but if you think you've got anything remotely resembling a patent application, you are sadly misinformed. It's one step better than mailing yourself a letter. I guess it's worth something. Maybe it's worth the ten bucks you pay for it, that's about what it's worth. Please don't rely on those.

MR. JORDA: I'd like to mention a couple of additional reasons why we should consider switching to a first-to-file system. They are not as weighty as the reasons mentioned in Don Dunner's article. I subscribe to those, and those should be thrown into the scales, too. One has to do with a new way of keeping records. The old laboratory practice of keeping records, that's gone out the window. The data are now generated by computers, and there's no way they can conform to the old rules relative to recordkeeping. It's just not possible to witness all the mountains of computer generated data to properly corroborate data, that's not possible. The Patent Office doesn't have a case yet and they don't know how they are going to handle it. This is going to create tremendous complications and it's going to be years before it's sorted out, it's going to be a mess. It could be short-circuited by switching to a first-to-file system. In all other areas computer generated data are perfectly acceptable, for banking records, et cetera. In the patent field, because of the special rule of corroboration, because they don't believe the inventor, we are going to have an awful mess and this could be short-circuited. Another reason is this. A number of corporate patent counsel and corporate research directors perceive us to have a significant and competitive advantage vis a vis foreign parties, because of § 104, and the fact that foreign inventors and foreign applicants can't rely on anything but their priority dates or filing dates. I submit that this is a delusion and that we are kidding ourselves. First of all, the statistics have shown that foreign junior parties win as few interferences as domestic junior parties, or foreign senior parties win as often as domestic senior parties in general. Statistics have proven that. Secondly, foreign inventors now have a perfect way of neutralizing § 104, by importing inventions from foreign countries to this country. And by importing a conception letter or invention disclosure they have something that is tantamount to a conception in this country. If they import a sample compound or a prototype of a

gizmo, and when it's received here and understood, it's completely tantamount to reduction to practice in this country. We have a massive importation procedure ourselves and other companies do, too. There are situations where foreign inventors would inexorably lose. For instance, if the domestic party conceives before a foreign party's priority application but reduces to practice afterwards, there is no way the foreign party can prevail. However, if they have an importation of a conception letter or an invention disclosure before the conception by the domestic party, there's no way they can lose. This happens more and more. We had a case published recently in the *USPQ* with the same situation. The case is *Chan v. Kunz,* 231 USPQ 462. In other words, the advantage that domestic companies perceive to have versus foreign companies, just doesn't exist. These are two reasons I would like to throw in. I'm not going to respond to many of the arguments made, but just to two. With respect to the fact that the new procedure gives us decreased cost, this is not so, not in our experience. Before, we were able to handle interferences in-house. Because it's such a compact procedure now we can no longer handle them in-house, we have to go on the outside. This may be good news to outside attorneys and I see they all nod. Before the new interference rules we had at one point 40 pending interferences so we had a massive interference practice, but it was all just patent prosecution. Now it is *inter partes* in the nature of litigation and is much more costly than before. As far as the malpractice situation is concerned, I believe this is a red herring. Delays can be minimized, records can be kept and the incidence as to the reasons for any delays is so small. I don't think it is a very worthy argument.

MR. FISHER: Karl, you haven't been in private practice lately. Can you find me a patent draftsman so I can avoid those.

MR. TRAMONTINE: Great thoughts occur to me while sitting here: extend the first-to-file to litigation. Whoever files the complaint first, whether it's for patent infringement or declaratory judgement wins in the first-to-file system. On a more serious note, what I'm afraid is when you talk about going to a first-to-file system, we should also be talking about changing the term of our patents, to run from a priority date. Let me say why. Section 102(b), the one year bar from first publication is already gone. Section 119, that said you had to file in the United States within one year after first publication, that's also gone. It's now three and a half years, PCT II has done that. After your first publication, let's say it's in the United States, you wait almost a year, file an international application designating it to the U.S. and

then you have 30 more months to file in the U.S., as I understand it. Now, Section 104 is going to be gone and next, Hilmer is going to be sacrificed. What happened to our policy of encouraging prompt filing in the United States so U.S. patents issue at a reasonable date. Here, we're dealing with Mr. Massengill's problem. Let's get the patent out. We need something to encourage people to file the U.S. applications and not wait three and one-half years.

MR. FISHER: Here are the proponents of first-to-file saying they want it, at least some of them, because interferences are bad. We're not just throwing the baby out with the bath water, we're throwing out the whole damn bathtub. We will keep interferences, we will keep the worst kind of interferences, the derivations, because we still had that residue, the race to the courthouse is something we abolished in all phases of U.S. law over a century ago. He's right, we didn't have interference when the patent system started. We realized that the race to the courthouse was in our scheme of things, wrong. We gave people a little time for recording the deed to their houses instead of the race to the courthouse for the recording. We have a grace period for recording assignments of patents, which is a manifestation of the same thing, and we have an interference practice which I think we all agree is a damned mess that ought to be reformed. Step one has almost happened administratively in reformation. As far as I'm aware, the Patent Office, as a practical matter, doesn't set up interferences anymore, that's step one. Issue to the first-to-file, leave to the junior party the right to provoke an interference if he will. Coming to John's point on this PCT stuff, what I was talking about in my New Zealand hypothetical is really a different issue. I hear all these concepts being kicked around where people are not looking at the interleaving effect. What I'm talking about on the PCT is that a year after my guy's domestic patent application ripens into a U.S. patent, the New Zealander has a choice as to whether he will abrogate that patent by filing here or not. I can monitor the PCT publications all I want, and he may have reserved his right to file in the U.S., but he doesn't have to. If he doesn't my guy's patent is okay. If he does, it just went down the tubes. You talk about not making an investment because of uncertainty, if there is a foreigner that filed in the same case you can never be certain in less than three years. You never know if he's going to come in and take it away from you. Under the current law you've got some ability to predict whether you're first-to-invent.

MR. MASSENGILL: At least when you find out first-to-file then you'll know with certainty. First-to-invent decisions dragged on in the pres-

ent system for at least ten or fifteen years. There are a lot of lawyers willing to do just that; in fact, they make their livelihood at it.

MR. FISHER: There's been abuses, there's no question of that. Can't we deal with the abuses without abolishing it?

MR. ARNOLD: We haven't found a way yet.

MR. FISHER: We haven't really tried.

MR. ARNOLD: Some of us have. Some of us have spent at least dozens of hours trying to address that very statute here. I tell you true, I have logged months of time trying to draw the statute that would clean up the interference practice back in 1965, and 1966. I couldn't find one that I thought was worth a damn.

MR. BLAIR: I'm going to terminate the discussion in four minutes and have a few comments and we'll get out of here at 4:30. I will give Hal Wegner two minutes to comment and there will be one comment for one minute by one other person, whoever gets their hand up.

MR. WEGNER: Just 20 seconds on PCT reality. You can't wait 30 months, I mean, 30 months is the deadline for entering the national stage in the United States based upon the effective filing date. In 18 months, Tom, you know through publication of the application what exists. Only an idiot would fail to perfect a filing date if he knew there was a pending junior case. You are going to have publications for the most part at 18 months. I would be an absolute fool if I were a senior applicant and then I didn't perfect a filing to the national stage when I saw a junior party claiming the same invention. I think that's a reasonable assumption to make if you're the junior party, that somebody having a senior published case with the same claim is going to perfect his national stage. I think that's a red herring.

MR. FISHER: He can afford it in those.

MR. SHAW: I just have a couple of questions to maybe direct toward Hal. When you file this brown bag type application, you say you're the first-to-file, I say, first-to-file what? Since the claims define the invention you're not even suggesting any claims.

MR. WEGNER: That's a good point.

MR. SHAW: Just a couple more that I'll just add on to it. The other is, what do you plan to do about a Section 131 affidavit and that type of thing? I suppose that they go out if we adopt the first-to-file, do they not?

MR. WEGNER: On the brown bag application, as we call it, what I envision is, you get drawings and some disclosure from the inventor and you file it. Now, you don't claim anything at that time. Under Article 4H of the Paris Convention, you don't need a claim, and for internal

priority, our law would certainly not have a requirement for a claim. We want to get these disclosures on file. Then in one year you determine what claims you want to draft and you would then file a continuation in part or some other case, based upon that first case. You wouldn't have any claims in the first case. The idea is not to waste your time and not to charge money to the client to get those initial documents on file. So you wouldn't have any claims in the first case and Rule 131 would go out.

Three white lies keep the "first inventor" system alive: Filing in the first year after commercialization is free from risk; slow to file is all right; and universities and small inventors need the old system.

Penalty free-filing after commercialization is Lie Number One: American patent rights for Germany, France, England, Italy and elsewhere are forfeited. Even at home, the tendency to file just before the first anniversary of commercialization leads to inadvertent statutory bars due to isolated sale offers of slightly earlier and different versions of the commercialized product.

Penalty-free slow filing is Lie Number Two: The American junior party loses automatically in Europe and Japan, and at home has a one in five chance of winning, *if* he can bankroll a ten to 200 thousand dollar or more interference and *if* his backers can await a two or more years uncertainty at one-in-five odds.

Lie Number Three is the cruelest hoax of all, that we must keep the old system on account of the universities or small inventors. Some even say that the university's conception date permits a professor to hold up on experimental work until there is outside funding! Tom Fisher eloquently speaks of Kent State's Liquid Crystal Institute, funded by a junior party Kent State invention. Not mentioned was the first-to-file Swiss competitor's generosity in *settling* the controversy and tossing in foreign rights *won* by the Swiss. More tragic are the cases of American biotechnology professors who have held up their U.S. filings until after they have shared their scientific breakthroughs with their colleagues around the world. This is exemplified by Wister's 1979 Japanese monoclonal antibody patent application: Wister's U.S. priority application was filed just *one day* after the invention was published in *Nature* magazine.

A Wister or a Kent State is far better off with a "first-to-file" system, with proper use of an inexpensive "Internal Priority Application," with earliest, inexpensive priority dates and a one year period in which to perfect the filing. No more first-inventor junior-party interferences. An end to many needless forfeitures of valuable European and Japanese patent rights.

MR. BLAIR: I think the party is over.

COMMENTARY

In re Goodman: Not the PTO's Most Shining Hour

The opinion for *In re Goodman,* 3 U.S.P.Q. 2d 1866, reads like a fantasy, but apparent shortsightedness precludes entertainment. Subsequent to the issuance of a first Office Action and the filing of a response thereto, the PTO issued a final rejection. Applicant appealed the final rejection to the Board of Patent Appeals and Interferences (Board). After issuance of an Examiner's Answer, Applicant filed a reply brief and received a supplemental Examiner's Answer. The Board affirmed the rejection and adhered to its affirmance on reconsideration. Applicant then appealed to the CAFC.

The PTO requested remand from the CAFC to consider whether the application should be regarded as abandoned for failure to file a proper response to the first Office Action. On obtaining remand, the PTO issued an order to show cause why the application should not be held abandoned.

Outside of the fact that the PTO devised a way to collect a $560.00 revival fee, what actually happened here? Applicant was clearly challenging to the PTO regulations with regard to microorganism deposit requirements. The presumed basis for a rejection under 35 U.S.C. § 112, first paragraph, was stated as follows:

> It is not apparent that the invention can be practiced without the deposited microorganism.

It does not appear from the opinion that the Examiner explained in any way how the lack of a microorganism deposit failed to satisfy the disclosure requirements of the first paragraph of 35 U.S.C. § 112.

Language cited from Applicant's response to the first Office Action reads as follows:

> Are Applicants' statements at page 1 of the specification concerning the provisions of the deposit adequate to comply with all aspects of adequacy of disclosure under 35 U.S.C. § 112, or will these have to be spelled out in an independent affidavit?
>
> Applicants do not intend to change the conditions of their deposit to conform to the PTO's current deposit requirements that the deposit be made ultimately available on issuance of the patent. Applicants intend to contest this requirement if it is maintained.

It appears ultimately clear from the cited language that Applicant was taking the position that the written description provided by the appli-

cation completely satisfied all requirements of 35 U.S.C. § 112, and the PTO failed to point out any requirement of that section that was not satisfied by the disclosure. What more is required to advance the prosecution to a clear issue? There is no amount of reasoning, argument or exposition that Applicant could possibly have presented in his response to obtain a reversal of the initial holding at the Examiner level. Anything further that the Applicant might have presented in response to the first Office Action would be no more than an exercise in futility. Not even the PTO should force an Applicant to endure futile exercise under pain of a holding of abandonment.

As recognized by the opinion, there is considerable leeway given to each Examiner with regard to evaluating the sufficiency of any response. The Examiner charged with the prosecution of the application apparently regarded the response sufficient to satisfy minimum requirements. As each Examiner acts as an agent of the Commissioner, his action in making such a determination is regarded, in every respect, as that of the Commissioner. Although the response[1] may not have stated such in so many words, it is ultimately clear therefrom that the Applicant was directly challenging whether the current microorganism deposit requirements actually come within the purview of the first paragraph of 35 U.S.C. 112.

After the alleged abandonment of the application, an appeal was taken to the Board. Although there is no indication in the opinion itself, apparently the PTO accepted the normal appeal fee and the further fee required for presenting a brief on appeal. There is also no indication that such fees were returned to Applicant even though the application was held to have been abandoned prior to that time.

On appeal, further agents of the Commissioner, acting in his name and on his behalf, reviewed the prosecution in detail and rendered a decision. In response to a request for reconsideration, the Board had an additional opportunity to review the record. As members of the Board are charged with being experts in the law, the failure of such experts to regard the application as having been abandoned for failure to present a proper response to the first Office Action is adequate reason to believe that no member of the Board considered the response in question to have been inadequate under law.

It is no less than amazing that Applicant was expected to understand (from the Examiner's first Office Action) why his description failed to

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[1] Nothing in this commentary should be regarded as condoning any deficiency that might exist in Applicant's response to the first Office Action.

meet the requirements of the statutory provision relied upon when the Commissioner was unable to understand the relatively clear intent of Applicants' response to challenge the statutory basis for current microorganism deposit requirements.

The opinion delineates three approaches[2] that Applicant might have taken in responding to the first Office Action. It is clear that there was at least one further approach available to the Applicant: he could have challenged the basis in the statutory provision relied upon for the PTO's practice regarding microorganism deposit requirements. In fact, that appears to be exactly what Applicant did.

One may wonder about the cost to both the PTO and to Applicant of the exercise indulged in by the request for remand and subsequent activities of both parties. The cost to the PTO must have been far greater than the fee collected for reviving[3] the application. The cost to Applicant was undoubtedly considerably more. As one of the basic goals of the PTO is to promote progress, one cannot help but wonder how the entire exercise indulged in can be regarded as furthering that end.

Irwin M. Aisenberg

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[2] What the opinion overlooks completely is the readily-apparent alternative approach that the Commissioner may have taken; if the response to the first Office Action were inadequate, the Examiner could have pointed out any deficiency to the Applicant and given him a set period of time within which to overcome such deficiency. Surely, that is precisely what would have happened if the Examiner (Commissioner) regarded the response inadequate at the time it was presented. In any event, the PTO had the last clear chance to avoid the "farce" that actually developed.

[3] The revival of this application under 37 CFR § 1.137(b) makes clear that the one year provision of that rule is not an absolute requirement and can be waived.

Recent Decisions in Trademark Counterfeiting

The following issues relating to counterfeiting have been decided by the courts in decisions published in the recent past:

- The Trademark Counterfeiting Act, 18 U.S.C. § 2320, is not unconstitutionally vague. *United States v. McEvoy,* 820 F.2d 1170, 3 U.S.P.Q. 2d 1399 (11th Cir. 1987).
- Sales of counterfeit goods after entry of an injunction justifies treble damages and an award of attorney fees based upon contempt of court. *Ford Motor Co. v. Kuan Tong Industrial Co.,* 3 U.S.P.Q. 2d 1061 (N.D. Ca. 1987).
- In a case decided under the California Business and Professions Code, the apparent fact that immediate and irreparable harm will result to the plaintiff before a number of "John Doe" defendants can be identified and given notice justifies the issuance of a temporary restraining order and an order for seizure of counterfeit merchandise. *National Football League Properties, Inc. v. DeVito,* 2 U.S.P.Q. 2d 1775 (Cal. Super. Ct. 1987).

Discussion of Decisions

United States v. McEvoy, 820 F.2d 1170, 3 U.S.P.Q.2d 1399 (11th Cir. 1987)

Appellant McEvoy and others (referred to collectively as "McEvoy") were indicted on various counts in violation of the Trademark Counterfeiting Act of 1984. A jury found defendants guilty on all counts and the defendants appealed on three grounds. First, appellants stated that there was insufficient evidence to sustain a conviction. Second, appellant argued that the failure to give a jury instruction listing the factors to be considered for determining likelihood of confusion was reversible error. Finally, appellants contended that the Trademark Counterfeiting Act of 1984 was unconstitutionally vague.

The court concluded that the evidence, when viewed in the light most favorable to the government, was sufficient for a reasonable jury to find defendants guilty beyond a reasonable doubt. The court focused on the appellants' concessions that the watches siezed by the government bore imitation trademarks which were virtually identical to the relevant registered trademarks. Government experts also testified that consumers frequently confused such replica watches. Finally, one of the defense witnesses was unable to discern whether a watch shown her on the stand was one of the replicas or an authentic watch.

The Court rejected appellants' arguments with regard to the jury instruction because defendants' counsel had been allowed to fully argue the factors relating to likelihood of confusion in closing arguments. Hence, the district court's instruction, which closely tracked the statute and did not specifically list the factors to be considered, was found to be appropriate because the treatment of closing arguments did not hamper defendants' ability to present their defense.

The Court of Appeals for the Eleventh Circuit also rejected appellants' argument that the Trademark Counterfeiting Act was unconstitutional. In doing so, the Court stated that the plain meaning of the statute cannot be seriously disputed. The Court also focused on the fact that the act had been applied consistently numerous times and that the possibility of unconstitutionality was never raised by any court. The Court further remarked that "[i]t is telling that the trial record reveals that appellants were very much aware that their actions in selling the watches violated the law."

Appellants also argued that the statute unconstitutionally shifted the burden of proof to defendant. The court rejected this argument, stating that the statute requires the government to prove every element of the offense beyond a reasonable doubt.

Ford Motor Co. v. Kuan Tong Industrial Co., 3 U.S.P.Q.2d 1061 (N.D. Ca. 1987)

In this action, a temporary restraining order and a preliminary injunction had been entered against numerous defendants concerning the sale of products using simulated and counterfeit Ford trademarks. In connection with an investigation arising under the criminal provisions of the Trademark Counterfeiting Act of 1984, the FBI found documents suggesting that products had been sold after effective injunctive relief had been granted.

The defendants were found to be in contempt, and they attempted to minimize sanctions by arguing that the sales were made by a person having no knowledge of an injunction having been issued. The court found the defendants' testimony not to be credible, or to constitute the requisite extenuating or mitigating circumstances. The court therefore found Ford to be entitled to an award of treble damages, an award of its reasonable attorney fees, and an award of its actual costs relating to the motion for contempt.

National Footbal League Properties Inc. v. DeVito,
2 U.S.P.Q.2d 1775 (Cal. Super. Ct. 1987)

Prior to the 1987 Super Bowl, NFL Properties brought an action against five named defendants and four hundred "John Does" relating to the manufacture and sale of products bearing NFL trademarks in connection with the Super Bowl. The suit was based primarily upon certain sections of the California Business and Professions Code, rather than upon the Trademark Counterfeiting Act of 1984. Based upon the relevant code provisions, the court awarded plaintiff a temporary restraining order and an order for seizure of counterfeit merchandise. The temporary restraining order was later converted to a preliminary injunction against 109 defendants named as "Doe" defendants and against the five originally named defendants.

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Recent Decisions in Trademark Licensing

The following issues relating to trademark licensing have been decided by the courts in decisions published in the past three months:

— Licensee is estopped from challenging trademark after termination of a license on facts that occurred during the course of the licensing arrangement. *Chrysler Motors Corporation v. Alloy Automotive Company, Inc.*, 661 F. Supp. 191 (N.D. Ill. 1987).

— Licensing of mark for collateral products may prevent use of similar mark by another in the market for those collateral products. *CPC Internationl Inc. v. Skippy Inc.*, 3 U.S.P.Q.2d 1456 (TTAB 1987).

— A former licensee's use (within the formerly licensed territory) of advertising that did not disclose that the services/products were no longer associated with licensor's trademark is an infringement of licensor's trademark. *Frisch's Restaurant, Inc. v. Elby's Big Boy of Steubenville, Inc.*, 661 F. Supp. 971 (S.D. Ohio 1987).

— Proof of abandonment, in the form of evidence of insufficient quality control by a licensor, carries a heavy burden and is not met where some control, even with acknowledged defects, exists. *Nestle Co. v. Nash-Finch Co.*, 4 U.S.P.Q.2d 1085 (TTAB 1987).

Discussion of Decisions

Chrysler Motors Corporation v. Alloy Automotive Company, Inc., 661 F. Supp. 191 (N.D. Ill. 1987)

Plaintiff Chrysler brought a Lanham Act action against its former licensee Alloy. Alloy attacked the validity of the "Chrysler" mark as an affirmative defense. Alloy claimed that Chrysler had abandoned its marks by failing to control or monitor quality while Alloy was a licensee. Chrysler moved to strike the defense based on the doctrine of licensee estoppel.

The court held that even after a license arrangement terminates, a former licensee is still estopped from challenging its former licensor's trademark based upon facts which arose during the course of the license. If facts indicating invalidity arise after the license has been cancelled, the former licensee stands in the shoes of any third party and may challenge the validity of the mark on the basis of such facts.

The court acknowledged the language in the long-standing Seventh Circuit decision of *Donald F. Duncan, Inc. v. Royal Tops Mfg. Co.*, 343 F.2d 655 (7th Cir. 1965) to the effect that the licensee estoppel expires

with the license, but declined to accept it. The court opined that to follow the *Duncan* dicta would essentially do away with the licensee estoppel doctrine, since most disputes of this nature arise after the license has ended.

CPC International Inc. v. Skippy Inc.
3 U.S.P.Q.2d 1456 (TTAB 1987)

Applicant Skippy, Inc. sought to register the marks SKIPPY and "SKIPPY and design" for promoting the sale of goods and/or services of others by rendering assistance in devising advertising and merchandising programs.

CPC International, Inc. opposed both applications on the grounds, among others, that opposer and its predecessors had used the mark SKIPPY in connection with food products for many decades; that opposer was the owner of a registration for SKIPPY for peanut butter; that opposer's use, and that of its licensees, and the promotion of the mark, had been so extensive that the SKIPPY mark had come to be associated with opposer for a wide variety of goods and services; and that the services listed in applicant's applications were so broad as to encompass the sale or promotion of peanut butter or other food products. Opposer had licensed the use of its SKIPPY mark for use on a variety of products, e.g. clothing, plastic drinking cups, and greeting cards.

The applicant was founded by Percy Crosby, a cartoonist who had a popular cartoon strip in the 1930's. The cartoon ceased syndication in 1945 and in the same year, Crosby's registration of SKIPPY for "cartoons depicting a humorous juvenile character" expired for lack of renewal. The mark was registered again, for a cartoon title, in 1980. The current owner of the applicant is the daughter of Percy Crosby.

Prior to 1980, the applicant had made only limited attempts to license the SKIPPY mark, and was unsuccessful in doing so in the period preceeding the filing of the applications in question.

The applicant took no discovery in the proceeding, introduced no evidence, and failed to file a brief. The Trademark Trial and Appeal Board, after a hearing attended by both parties, denied registration to Skippy, Inc. for the marks SKIPPY and "SKIPPY and design" on the grounds of likelihood of confusion between the marks of the applicant and opposer.

While the dearth of evidence in support of the applicant's position can't be ignored, the effects of the licensing activities of both parties were considered by the Board. On the applicant's side, it was noted that applicant was trying to offer "licensing packages" to potential clients that

included peanut butter manufacturers. On the other side, the Board gave weight to the fact that the opposer had engaged in licensing of its peanut butter trademark for collateral products, and this circumstance enhanced the likelihood of confusion.

The effect of collateral products licensing activity is being seen in more and more cases. Such activity may expand the penumbra of protection for a trademark or, at the same time, open new areas of exposure for trespassing on someone else's rights.

Frisch's Restaurant, Inc. v. Elby's Big Boy of Steubenville, Inc., 661 F. Supp. 971 (S.D. Ohio 1987)

Frisch's Restaurant, Inc. (hereinafter referred to as "Frisch") sued its former sublicensee Elby's Big Boy of Steubenville, Inc. (hereafter referred to as "Elby's") over the use of the mark "Big Boy" for restaurants and hamburgers. Elby's had cancelled the sublicense it held in the state of Ohio in 1971, but still held a license to use the mark "Big Boy" in other areas of the country, including West Virginia, until 1984.

Between 1971 and 1984 Elby's advertised its "Big Boy" restaurants in the Ohio-border area of West Virginia in regional media, listing its restaurants in Ohio without an explanation that the Ohio "ELBY'S" restaurants were not associated with the "Big Boy" mark or restaurants. Frisch alleged that Elby's West Virginia advertising, which reached into the Ohio market without a disclaimer, infringed the Frisch's "Big Boy" mark in Ohio.

The court held that Elby's use of the Big Boy trademark in advertising reaching the Eastern Ohio market, after the license terminated, without a disclosure that the Ohio ELBY's restaurants were not Big Boy restaurants, constituted trademark infringement and a violation of § 43(a). Since Elby's had discontinued all use of the "Big Boy" marks in 1984, the request for injunctive relief was moot and the court's attention turned to damages.

The finding of trademark infringement and of a § 43(a) violation, however, did not automatically entitle the plaintiff to an accounting and an award of defendants' profits. According to the court, the code specifically provides that infringement remedies, which include recovery of defendant's profits, are "subject to the principles of equity" and further provides that "such sum . . . shall constitute compensation and not a penalty." The court concluded that an accounting would be appropriate in three situations: (1) if the plaintiff sustained damage from the in-

fringement, (2) if the infringer is unjustly enriched, or (3) if necessary to deter a willful infringer.

Here, plaintiff conceded that it sustained no actual damage from the infringement by way of lost sales or profits. Plaintiff had no restaurants within the coverage of the offending advertisements and was not a competitor of the defendant in that market area. There was no evidence of financial gain on the part of the defendant; thus the court found that the defendant was not unjustly enriched. Finally, the court held that the conduct of the defendant was not that of a willful infringer. Therefore, only injunctive relief was appropriate, plus an award of the costs of the action.

Nestle Co., Inc. v. Nash-Finch Co.
4 U.S.P.Q.2d 1085 (TTAB 1987)

Nestle Company, Inc. ("Nestle") opposed the application of Nash-Finch Company ("Nash") to register DELI QUIK for various delicatessen products. The opposition was based upon Nestle's prior use and registration of the marks NESTLE QUIK and QUIK for powdered, sweetened cocoa, and related products. The opposition was based upon claims of likelihood of confusion, and abandonment through acts of omission of Nash.

Nash was a wholesale food distributor to supermarkets and grocery stores, servicing some three hundred ninety affiliated stores and, additionally, owning and operating some ninety supermarkets, grocery stores, or warehouse-type markets. Many of these affiliated and company owned stores included delicatessen departments, from which Nash's DELI QUIK delicatessen products were sold. While the Board noted that no formal written license agreement dealing with the DELI QUIK mark existed between Nash and its affiliated stores, a licensor/licensee relationship was found in connection with the affiliated stores' use of various trademarks of Nash, including the mark DELI QUIK.

Nestle asserted abandonment as a result of Nash's conduct in failing to sufficiently control the nature and quality of the goods sold under the DELI QUIK mark, alleging, among other things, the following:

(a) Recipe books were incompletely distributed to affiliated stores and use of the recipes was not mandatory;

(b) Affiliated stores were encouraged to develop their own recipes and to sell products without prior approval from Nash under the DELI QUIK mark;

(c) Participation in Nash's delicatessen training program was not mandatory;

(d) There was no requirement that ingredients for the goods had to be purchased from Nash, nor was there an approved list of ingredient supliers; and

(e) Inspections by Nash of affiliated stores using the DELI QUIK mark were incomplete and insufficient to insure control over the quality of the products sold.

Nestle contended that this resulted in a naked license situation.

Nash did provide deli training manuals, and training programs for deli managers and assistant managers (which were mandatory only for company store personnel). Nash also distributed recipe books for its DELI QUIK products and a sandwich program manual providing specifications in connection with a variety of the sandwiches. Further, regular merchandising bulletins were sent to the stores. Nash encouraged (although it did not require) affiliated stores to purchase all materials from Nash, and over eighty percent of the raw materials used in DELI QUIK products were, in fact, purchased from Nash. Finally, Nash's zone managers did regularly inspect company and affiliated stores to observe operations and to handle problems. Nash also employed a deli merchandiser — an inspector — who visited the delicatessen departments of the stores on a regular basis and oversaw operation of those departments.

While the Board acknowledged the defects in Nash's quality control activities, as a whole, those activities were regarded as adequate to protect the public and to insure the quality of the goods sold. More to the point, the acknowledged defects in the licensing arrangement were insufficient to justify an inference of abandonment.

The Board went on to find no likelihood of confusion as between the uses of the respective marks, and thus dismissed the opposition.

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A Modest Proposal for Resurrection of the Dead

Introduction

Not *HOMO-* chemicals. My proposal concerns chemicals (particularly those used as pharmaceuticals, pesticides and food additives) which have been effectively killed, mostly by my confreres, the science fiction writers (referred to by the uninformed as chemical patent lawyers).

The chemicals in question have a number of common economic characteristics which distinguish them from the general run of chemicals. While they cost no more to invent than industrial chemicals like new polymers or new surfactants, they are decidedly more costly to get to market: they are, quite properly, subject to regulation by governmental agencies which require proof of safety and efficacy; and, again quite properly, they are not subject to review by class, but as individuals. The cost of getting any single material approved for sale, and getting it to market, runs into tens of millions of dollars — I am told the figure for any pharmaceutical is of the order of 80 million dollars or more. No commercial venture can possibly recoup its costs unless it has patent or equivalent protection on the product, so that patentable novelty is essential for any product which is to be seriously investigated.

Scenario for Birth and Death

So Dr. X, in the laboratory of XYZ Corporation, is synthesizing pesticides or pharmaceuticals. He submits them to the corporation's biologists, who report that of one hundred submissions, ten show promise for future screening. The ten then go to the library, where it is found that six of the ten are disclosed in the literature as useful in the intended field, although they never have been used commercially. And it is not unusual for the most promising to be old. No matter how promising, the old compounds are dead on arrival. In my own experience, I have seen quite a few very promising looking candidates which died in this fashion. So the remaining four are screened, and by good luck one is found to have real potential. This goes to the patent lawyers, who naturally say — "Fine. But the disclosure of this one compound will get us a patent on the one compound. For adequate protection, we need to know what homologs, analogs and isomers will work." Good advice, as any chemical patent man will tell you. So it's back to the chemists, who make a few, and between them and the biologists, they hammer out an area which is to be covered in the patent application.

This is where patent lawyers become science fiction writers. Speed is essential: competitors abound, and for most of the world, the first person into the patent office gets the patent. So the added work is never really in depth, and is often more or less fudged, particularly by inter-

polations between homologs, less frequently by modest extrapolation. The patent application as filed is almost always based on some solid experimental data, with often semi-to extremely fictional embroidery of educated guesswork or superficial laboratory work.

Even when there is no fictional element in the patent application, the inclusion of a number of compounds gives rise to premature death for most of the compounds disclosed. Of those disclosed, the scientists and business people involved must choose the most likely candidate(s), having in mind cost-effectiveness and probable safety. The development cost is per compound; you can't afford a broadcast approach.

So the patent issues, or is published (most countries publish patent applications within 18 months of filing); all of the compounds disclosed are now potentially dead to future investigating. And some time down the road toward commercialization, boom! A competitor goes to market with a more cost-effective compound; the compound(s) selected for development shows some nasty side effect, such as being carcinogenic or teratogenic or something. Whatever. Work is stopped on the compound; if the patent term remaining is insufficiently long to switch to one of the other compounds covered by the patent, we have a bunch of dead chemicals. Every compound mentioned in the patent or publication is on the "no work" list — dead.

The Problem

The real problem with the scenario is that the group of dead compounds may contain some that could make important contributions to society. I am confident that most patent lawyers specializing in chemical work know of at least one case in which only a small accident of timing saved an important member of this class of compounds from a premature death on arrival. Cost-effectiveness can change; a homolog of a compound which failed after it was chosen for development may become much less expensive to make than the dropped compound, because of the appearance on the market of a cheap intermediate, or the discovery of a new synthesis route. And the side-effects will differ from compound to compound. With time running on a patent, it is often too late to switch horses when side-effects or new competition kill off the compound chosen for development.

We have in our hands a body of information which teaches potential utility for a large number of materials which have never been adequately tested. Can we make any use of this information?

A Modest Proposal for Resurrection of the Dead

If these dead compounds are to be considered for use, we need a sys-

tem giving protection to people who undertake their economic development. The patent system already recognizes the patentability of near homologs, and similar relatives, of known compounds, provided some new property is discovered; but lack of novelty in both structure and purpose is an absolute bar to patentability. So the patent system is out.

I suggest that the regulatory commissions which monitor development in the pharmaceutical, pesticide and food additive fields be given the authority to grant limited monopolies — say for ten years after approval to market — to developers of any of this host of dead compounds. Any bona fide applicant could petition for the right to start work. In the event of simultaneous submission of petitions of more than one applicant, preference could be given smaller organizations and new enterprises. In any event, the regulatory agency would limit the number of compounds under development by any one applicant, and avoid applicants whose principal interest could be to delay the development of products potentially competitive to their own proprietary materials. Rights could be given for a small closely related group of compounds or for a single compound. But no broad group rights should be available.

Any party would be granted development rights only upon its demonstrating the ability to carry out an effective development program, and would retain these rights only so long as they maintained a reasonable schedule for development, set by the regulating agency, and appropriate to the particular class of compounds and their field of use. On loss of development rights, the findings of the developer should be published. Similarly, as with patents, successful developments should also be published.

Remarks in Conclusion

I feel strongly that there are both potential life and potential life savers in this large cemetery of dead compounds, and gold as well. So I hope this proposal will bring sufficient response from scientists, entrepreneurs, and my brethren of the patent bar to refine approaches to the problem and then to push the Congress into considering appropriate legislation.

Milton Zucker
Stratford, CT

IN RE LUNDAK: THE FEDERAL CIRCUIT RELAXES THE DEPOSITING REQUIREMENTS FOR MICROBIOLOGICAL PATENT APPLICANTS

John H. Pilarski*

I. INTRODUCTION

The field of biotechnology[1] is revolutionizing man's view of the world and his place in it.[2] Researchers in biotechnology currently have the ability to create novel life forms on a microscopic basis.[3] Scientists have successfully transferred genes in higher life forms, so that the possibility of genetically engineered animals is no longer restricted to the realm

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[1] The term "biotechnology" describes modern applications of biology (principally microbiology) in industry. *See* R. Joglekar, R. Clerman, R. Ouellette & P. Cheremisinoff, Biotechnology in Industry 1 (1983).

[2] Genetic engineering (*see infra* note 173) promises a revolution more far-reaching than that wrought by the computer, one that may bring to a close the industrial revolution that has been the major shaper of our society for three hundred years. E. Sylvester & L. Klotz, The Gene Age 1-2 (1983). If we attempt to look into the future, around the corner of a new century less than twenty years away, it is impossible to exaggerate the potential of genetic engineering for good and, if misused, for evil. *Id.* at 2.

[3] A variety of processes may change the genetic composition of a cell. They include mutation (*see infra* note 79), the introduction of viruses and phages, bacterial transformation and conjugation, and recombinant DNA (*see infra* note 168). *See, generally,* J. Bailey & D. Ollis, Biochemical Engineering Fundamentals 291-322 (1977).

of science fiction.[4] Ultimately, man may have the ability to engineer man himself, which itself raises perplexing ethical and legal questions.[5]

When the biological inventor's appetite is whetted and reflects not merely scientific curiosity, but also a desire for commercial exploitation, protection is sometimes sought under the patent laws. In the United States, a patent may be granted for an invention that is new,[6] useful,[7] and not obvious.[8] In order to secure a patent, the inventor must make full and complete disclosure of how to make and use the invention,[9] and in exchange, the government grants the inventor a seventeen-year monopoly.[10]

Because of problems inherent in microbiological inventions, a written descripion will not always satisfy the complete disclosure requirement.[11] Hence, the Patent Office developed a procedure by which samples of new microorganisms are deposited in a recognized depository *on or before the date of filing* the patent application.[12] This procedure has come to be known as the "depositing requirement." Along with a written description, the depositing requirement verifies that the invention was perfected as of the filing date,[13] thus establishing priority of invention, and entitling the inventor to monopolization rights.

In *In re Lundak*,[14] however, the Court of Appeals for the Federal Circuit held that it was not necessary that a microbiological sample be deposited in a recognized depository as of the filing date. The court con-

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[4] *See* Pautler, *Patenting of Life Forms: Where Do We Go From Here?*, 18 Trial 47, 49 (April 1982). *See also* Marx, *More Progress on Gene Transfer*, 213 Science 996 (1981).

[5] *See* Kass, *Patenting Life*, 63 J. Pat. Off. Soc'y 571, 582-583 (1981) ("Genetic engineering is regarded by many as a dangerous technology. . . . The power to engineer the engineer raises questions about the meaning and limits of progress."). *But see* Smith, *The Promise of Abundant Life: Patenting a Magnificent Obsession*, 8 J. Contemp. L. 85, 88-89 (1982) ("Is it shameful to acknowledge that man has the capability to be in control of himself? The lack of control over the years has spawned a type of 'evolutionary wisdom' which, in turn, resulted in the bubonic plague, smallpox, yellow fever, typhoid, diabetes and cancer.").

[6] The requirements for novelty as a condition for patentability are outlined at 35 U.S.C. § 102 (1982).

[7] 35 U.S.C. § 101 (1982).

[8] 35 U.S.C. § 103 (1982).

[9] *See infra* notes 17-19 and accompanying text.

[10] 35 U.S.C. § 154 (1982).

[11] *See infra* note 35 and accompanying text.

[12] *See infra* note 37 and accompanying text.

[13] *See infra* notes 29-37 and accompanying text.

[14] *In re* Lundak, 773 F.2d 1216, 227 U.S.P.Q. 90 (Fed. Cir. 1985).

cluded that it is sufficient to make deposit only *upon issuance* of a patent.[15] While the new procedure adopted by the court in *Lundak* may save the microbiological inventor large sums of money in deposit costs, the decision is a significant departure from the rationale that supported the prior procedure. By striking the necessity of making deposit as of filing, the decision simultaneously eliminates the means employed by the Patent Office of verifying that a biological invention was complete on the date of filing. Such verification is essential in preventing premature patent applications and establishing priority of invention. This Note proposes an alternate means of proving that a microbiological invention was complete on the application filing date.

Parts II and III of this Note explain the background information needed to explore the reasoning of the *Lundak* court. Part II explains the enablement requirement, and the reason why microbiological deposits were deemed necessary to fulfill the terms of the patent statutes. Part III explains a separate but related issue of why a deposit made after filing might be considered to be "new matter," which would thereby preclude the granting of a patent for failure to meet the complete disclosure requirement.

The facts of *Lundak* are set forth in part IV, as is the reasoning of the court and an analysis of that opinion. Part V proposes the alternate means of proving that a microbiological invention was complete on the patent application filing date.

II. SECTION 112 AND THE ENABLING DISCLOSURE

A. Generally

One of the necessary elements of a completed application for a United States patent is a "specification" of the invention.[16] The first paragraph of 35 U.S.C. § 112[17] prescribes that the specification must contain, in full, clear, concise, and exact terms that enable any person skilled in the art to make and use it: 1) a written description of the invention; 2) the manner and process of making the invention; 3) the manner and process of using the invention; and finally, 4) the best mode contemplated

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[15] *Id.* at 1216, 227 U.S.P.Q. at 95.

[16] 35 U.S.C. § 111 (1982).

[17] The text of 35 U.S.C. § 112 (1982), first paragraph, reads as follows:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most clearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

by the inventor for carrying out the invention.[18] The first of these requirements is commonly referred to as the "description" requirement, the second and third are collectively known as the "enabling" (or "enablement") requirement, and the last is the "best mode" requirement.[19] This Note is primarily concerned with the enabling requirement.

The test for determining compliance with the enabling requirement is whether artisans of the field in which the patent pertains are required to engage in undue experimentation[20] to practice the invention because of an inadequate or incomplete description.[21] If undue experimentation is required, the specification fails to comply with the enabling requirement and the application will be denied.

The enabling disclosure is part of a bargain struck between the inventor and the U.S. government. The patent may be viewed as a contract.[22] The consideration given to the government is the full and complete disclosure of how to make and use the claimed invention.[23] Accordingly, in order for the contract to be based upon valid consideration, the disclosure by the inventor must be acceptable and complete enough to be useful.[24] In exchange, the government secures to the patentee the exclusive use and control of the invention for seventeen years.[25] The incentive to give this added measure of knowledge to the public, which promotes the progress of the "Useful Arts,"[26] is the primary justifica-

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[18] 35 U.S.C. § 112 (1982) *construed in* Uhlir, *Section 112, A Potent Patent Defense,* in 1978 Patent Law Annual 71, 71 (M. Landwehr ed. 1978).

[19] Uhlir, *Section 112, A Potent Patent Defense,* in 1978 Patent Law Annual 71, 71-72 (M. Landwehr ed. 1978).

[20] The determination of what constitutes undue experimentation in a given case requires the application of a reasonableness standard, having due regard for the nature of the invention and the state of the art. *Ex parte* Jackson, 217 U.S.P.Q. 804, 807 (P.T.O. Bd. App. 1982). The test is not merely quantitative. A considerable amount of experimentation is permissible, if it is routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the claimed invention. *Id.*

[21] W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1557, 220 U.S.P.Q. 303, 316 (Fed. Cir. 1983), *cert. denied,* 105 S. Ct. 172 (1984).

[22] Century Electric Co. v. Westinghouse, 191 F. 350, 354 (8th Cir. 1911).

[23] *In re* Argoudelis, 434 F.2d 1390, 1394, 168 U.S.P.Q. 99, 103 (C.C.P.A. 1970) (Baldwin, J., concurring).

[24] R. Choate & W. Francis, Patent Law 411 (2d ed. 1982).

[25] 35 U.S.C. § 154 (1982).

[26] U.S. Const. art. I, § 8, cl. 8 provides that "[The Congress shall have Power] To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their Respective Writings and Discoveries."

tion for the patent system.[27] Thus, the patent adds a measure of worthwhile knowledge to the public storehouse.[28]

There is the possibility that two or more inventors may compete to be the first to obtain a patent on the same product. The first person to take an idea and "reduce it to practice" is in preferred position to receive patent protection on the product and the attendant seventeen-year monopoly on the product's use. Reduction to practice may be either actual or constructive. Actual reduction to practice occurs when the inventor constructs a product or performs a process that is within the scope of the patent claims and demonstrates the capacity of the inventive idea to achieve its intended purpose.[29] Filing an application for patent, and thus disclosing the invention in compliance with the enablement provisions, constitutes a constructive reduction to practice of the invention. The date of constructive reduction may be relied on to determine priority and patentability even though the applicant never actually reduced the invention to practice.[30]

Inventorship contests are normally resolved through an interference proceeding before the Patent and Trademark Office Board of Interferences. In an interference proceeding, the presumption of prior invention attaches to the senior, or earlier, applicant,[31] provided that the earlier patent application includes the enabling disclosure and meets all other statutory requirements. Such an allowable application constitutes a constructive reduction to practice on the date of filing.[32] The date of filing is crucial because it can be rebutted only where there is proof that others actually reduced the invention to practice before that date.[33]

B. The Enabling Disclosure and Microbiological Patents

The question of constructive reduction to practice poses special problems in the area of microbiological patents. Where the inventor seeks

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[27] 434 F.2d at 1394, 168 U.S.P.Q. at 103 (Baldwin, J., concurring).

[28] *Id.*, 168 U.S.P.Q. at 103.

[29] 3 D. Chisum, Patents § 10.06 (1986).

[30] *Id.* at § 10.05[1].

[31] Minnesota Mining & Mfg. Co. v. General Electric Co., 167 F. Supp. 37, 40, 119 U.S.P.Q. 65, 67 (D.D.C. 1958).

[32] Boyce v. Anderson, 451 F.2d 818, 820, 171 U.S.P.Q. 792, 793 (9th Cir. 1971).

[33] Muther v. United Shoe Machinery Corp., 14 F.2d 808, 810 (3d Cir. 1926). The issues of conception and diligence may affect priority as well, but are outside the scope of this Note.

to patent a microorganism,[34] even a detailed written description may not necessarily allow another skilled in the art to make and use the patent.[35] Consequently, the Patent Office developed procedures that required the patent applicant to place a sample with a recognized

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[34] The Supreme Court, in Diamond v. Chakrabarty, 447 U.S. 303 (1980), held that a live, human-made microorganism is patentable subject matter. Prior to this decision, patents involving living subject matter were generally granted only for the processes which employed the life form, but not for the life form itself.

[35] Where the written description is insufficient in itself to allow another skilled artisan to duplicate or practice the invention without undue experimentation, then a deposit is required. *See supra* notes 20-21 and *infra* note 37 and accompanying text. PTO procedures require a deposit when the subject matter of a claimed invention is unknown and unavailable to the public. Manual of Patent Examining Procedure 608.01(p)(C) (5th ed. 1983 rev. 1985) [hereinafter cited as MPEP]. In the cases of *In re* Argoudelis, 434 F.2d 1390, 168 U.S.P.Q. 99 (C.C.P.A. 1970) and Feldman v. Aunstrup, 517 F.2d 1351, 186 U.S.P.Q. 108 (C.C.P.A. 1975), *cert. denied,* 424 U.S. 912, 188 U.S.P.Q. 720 (1976), the patents involved the use of a microorganism which was found in nature and not of common occurrence. Deposits were required in these instances because a screening program to find the same microorganism would have taken a long time.

The determination of whether experimentation is undue may be viewed in terms of convenience, practicality, and probability considerations. A biological procedure which covers a wide field with hit-or-miss effectiveness has been described as "shotgun." Hampar, *Patenting of Recombinant DNA Technology: The Deposit Requirement,* 67 J. Pat. & Trademark Off. Soc'y 569, 586 (1985). The probability of success of a "shotgun" procedure remains constant regardless of the number of attempts, whereas in a "nonshotgun" procedure the probability of success should increase as the operator gains experience through repetition. *Id.* Where an invention involves a per se "shotgun" procedure, the deposit requirement may be invoked without further consideration. *Id.* Where an invention involves a "nonshotgun" procedure, the additional factors of convenience and practicality must be considered before the requirement is invoked. *Id.*

There may be instances in the field of biotechnology when deposits might *not* be required. As a result of progressing technical capabilities available in the area of recombinant DNA (*see infra* note 173), it is now often possible to include sufficient information in the written disclosure to allow one skilled in the art who has access to the known or available starting materials to reproduce the invention without undue experimentation. *See generally* Meyer, *Problems and Issues in Depositing Microorganisms for Patent Purposes,* 65 J. Pat. Off. Soc'y 455, 459-460 (1983). The depositing of a sample under such circumstances should not necessarily be made. The scope of this Note is limited to situations where a deposit is necessary.

depository[36] if the claims involved microorganisms that were not known or available to the public. Prior to 1970, the Patent Office (now the Patent and Trademark Office, or PTO) required such applicants to deposit cultures in a recognized depository to which the public had free access as of the date of filing the application, citing the enabling requirement as statutory basis.[37] The enabling requirement was then examined and re-defined in *In re Argoudelis,*[38] a decision rendered by the Court of Customs and Patent Appeals (C.C.P.A.) in 1970. *Argoudelis* became the accepted standard for patent applications involving microbiological deposits.

1. IN RE ARGOUDELIS

In *Argoudelis,* four joint inventors sought a patent on a microbiological process.[39] They deposited a sample of the involved microorganism prior to the filing of a patent application in a recognized depository, the U.S. Department of Agriculture at Peoria, Illinois. In arrangements with the depository, however, the inventors stipulated that until a patent was issued, public access to the culture was conditional upon the written authorization of the inventors. Their application made reference to the deposit and its location, and included a complete taxonomic description of the microorganism.

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[36] Among the major culture collections today are the American Type Culture Collection (Rockville, Maryland), Northern Utilization Research and Development Division, USDA (Peoria, Illinois), Quartermaster Research and Development Center, U.S. Army (Natick, Massachusetts), the Institute Pasteur (Paris, France), Institute for Fermentation (Osaka, Japan), National Collection of Industrial Bacteria (Aberdeen, Scotland) and the Centraal bureau voor Schimmelcultures (Baarn, Netherlands). I. Cooper, Biotechnology and the Law, § 5.03[1] (1985 rev.).

[37] Biggart, *Patentability in the United States of Microorganisms, Processes Utilizing Microorganisms, Products Produced by Microorganisms and Microorganism Mutational and Genetic Modification Techniques,* 22 Idea 113, 122 (1981).

[38] *In re* Argoudelis, 434 F.2d 1390, 168 U.S.P.Q. 99 (C.C.P.A. 1970).

[39] The inventors claimed two new antibiotic compounds, sparsogenin and sparsogenin A, and a microbiological process for preparing them. As explained in the *Argoudelis* opinion:

> Sparsogenin is produced by the microorganism *Streptomyces sparsogenes* var. *sparsogenes.* During the fermentation for sparsogenin, sparsogenin A is concomitantly produced. Sparsogenin has a broad spectrum of antibacterial activities, moderate activity against several fungi, and it also inhibits the growth of KB human epidermoid carcinoma cells in tissue culture. Sparsogenin A inhibits the growth of Gram-positive and Gram-negative bacteria; it also inhibits the growth of KB cells in tissue culture and Walker adenocarcinoma W-256 in mice.

The Patent Office Board of Appeals (Board) rejected the application on the grounds that the enabling disclosure was defective.[40] The Board concluded that the microorganism must be available to the public at the time of filing in order to comply with the enablement requirement.[41]

The C.C.P.A. reversed the decision of the Board, and endorsed the procedure used by the *Argoudelis* inventors as a constructive reduction to practice.[42] The court held that the general public need not necessarily have access to the culture prior to the issuance of the patent.[43] In reaching its holding, the court noted that there was no good reason why an applicant who has invented a process and product involving the use of a new microorganism must surrender his starting materials to the general public before filing.[44] Indeed, an applicant in the other arts need not tell the public anything until his patent is issued.

In a concurring opinion, Judge Baldwin suggested a two-step analysis for determining compliance with the enabling disclosure requirements. First, *at the time the patent issues,* one of ordinary skill in the pertinent art of reading the disclosure must understand the concept involved and be able to make and use the invention claimed.[45] Second, because the filing date is so important in determining patent priority rights, Baldwin suggested that *at the time an application for patent is filed,* the invention claimed therein be fully completed, that is, capable of being reduced to practice.[46]

The concurring opinion defined an invention which has reached the necessary stage of completion. At the time of filing, the invention must have no technological problems which would require more than ordinary skill and reasonable time to obtain an operative, useful embodiment.[47] Baldwin explained that by including a specification disclosure the applicant usually assures that his invention has reached the necessary stage of completion.[48]

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[40] 434 F.2d at 1391-92, 168 U.S.P.Q. at 101.

[41] *Id.* at 1392, 168 U.S.P.Q. at 101.

[42] *Id.* at 1393, 168 U.S.P.Q. at 102.

[43] *Id.* at 1393, 168 U.S.P.Q. at 102.

[44] *Id.* at 1393, 168 U.S.P.Q. at 103.

[45] *In re* Argoudelis, 434 F.2d 1390, 1395, 168 U.S.P.Q. 99, 104 (C.C.P.A. 1970) (Baldwin, J., concurring).

[46] *Id.* at 1395, 168 U.S.P.Q. at 104.

[47] *Id.* at 1395, 168 U.S.P.Q. at 104.

[48] *Id.* at 1395, 168 U.S.P.Q. at 104.

2. PATENT OFFICE RESPONSE TO *ARGOUDELIS*

The Patent Office relied on the *Argoudelis* decision to establish procedural guidelines regarding enabling disclosures in its *Manual of Patent Examining Procedure.*[49] These guidelines require that: 1) the applicant make the necessary deposit in a depository affording permanence of the culture and ensure access to the PTO during pendency of the application, and availability to the public upon issuance of the patent; 2) such deposit be referred to in the body of the specification as filed and be identified by deposit number, name and address of the depository, and the taxonomic description to the extent available be included in the specification; and 3) there be an oath or declaration in which the applicant or his assigns assures that the culture is permanently available.[50]

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[49] The Manual of Patent Examining Procedure (MPEP) does not have the force of law or the force of the Patent Rules of Practice in Title 37, Code of Federal Regulations. The MPEP therefore has no binding effect on the courts, but is entitled to notice so far as it is an official interpretation of statutes or regulations with which it is not in conflict. Litton Systems, Inc. v. Whirlpool Corp., 728 F.2d 1423, 1439, 221 U.S.P.Q. 97, 107 (Fed. Cir. 1984). The express provisions of MPEP set forth an established Patent Office policy on which applicants for patents are entitled to rely in good faith in the orderly conduct of their business in the Patent Office. *In re* Fried, 312 F.2d 930, 934, 136 U.S.P.Q. 429, 433 n. 4 (C.C.P.A. 1963).

[50] MPEP 608.01(p)(c)(5th ed. 1983 rev. 1985):

> Some inventions which are the subject of patent applications depend on the use of microorganisms which must be described in the specification in accordance with 35 U.S.C. 112. No problem exists when the microorganisms used are known and readily available to the public. When the invention depends on the use of a microorganism which is not so known and readily available, applicants must take additional steps to comply with the requirements of § 112.
>
> *In re Argoudelis, et al.*, 168 U.S.P.Q. 99 (CCPA, 1970), accepted a procedure for meeting the requirements of 35 U.S.C. 112. Accordingly, the Patent and Trademark Office will accept the following as complying with the requirements of § 112 for an adequate disclosure of the microorganism required to carry out the invention:
>
> (1) the applicant, no later than the effective U.S. filing date of the application, has made a deposit of a culture of the microorganism in a depository affording permanence of the deposit and ready accessibility thereto by the public if a patent is granted,under conditions which assure (a) that access to the culture will be available during pendency of the patent application to one determined by the Commissioner to be entitled thereto under 37 CFR 1.14 and 35 U.S.C. 122, and (b) that all restrictions on the availability to the public of the culture so deposited will be irrevocably removed upon the granting of the patent;
>
> (2) such deposit is referred to in the body of the specification as filed and is identified by deposit number, name and address of the depository, and the taxonomic description to the extent available is included in the specification; and

3. *FELDMAN v. AUNSTRUP*

In 1975, the C.C.P.A. further considered the role of deposits in connection with the enabling disclosure requirements in *Feldman v. Aunstrup.*[51] The case was an appeal from a decision of the PTO Board of Interferences awarding priority of invention to Aunstrup, the senior party. Aunstrup deposited the microorganism involved in the claimed process[52] in a private depository located in a foreign country.[53] Though access was initially restricted on a conditional basis as in *Argoudelis,* Aunstrup later removed the access restrictions while the patent was still pending, but before the declaration of interference.[54] Feldman, the junior party, appealed, basing his challenge on the adequacy of Aunstrup's enabling disclosure.

In response to Feldman's contention that the enabling disclosure was insufficient, the *Feldman* court adopted the two-step analysis of Baldwin's concurrence in *Argoudelis.* In the first step of the analysis the C.C.P.A. found that Aunstrup had met the requirement of assuring public disclosure at the time the invention was made public.[55] The C.C.P.A. reasoned that since Aunstrup removed the access restrictions during the pendency of this application, public access to the essential microorganism was satisfied.[56]

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(3) the applicant or his assigns has provided assurance of permanent availability of the culture to the public through a depository meeting the requirements of (1). Such assurance may be in the form of an averment under oath or by declaration by the applicant to this effect.

A copy of the applicant's contract with the depository may be required by the examiner to be made of record as evidence of making the culture available under the conditions stated above.

[51] Feldman v. Aunstrup, 517 F.2d 1351, 186 U.S.P.Q. 108 (C.C.P.A. 1975), *cert. denied,* 424 U.S. 912, 188 U.S.P.Q. 720 (1976).

[52] According to the *Feldman* opinion:

The microorganism, *Mucor miehei,* is said to be a species of fungus within the genus *Mucor* in the family of *Mucoraceae* in the order *Mucorales.* The inventive process is based on the discovery that *Mucor miehei* produces a milk-coagulating enzyme (rennin) which is useful in cheese making.

[53] The depository used by Aunstrup was the Centraalbureau voor Schimmelcultures, located in Baarn, Netherlands.

[54] *See supra* notes 31-33 and accompanying text for an explanation of an interference proceeding. The procedures followed by the PTO in declaring an interference are found at 37 C.F.R. § 1.207 (1985).

[55] 517 F.2d at 1355, 186 U.S.P.Q. at 113.

[56] *Id.* at 1355, 186 U.S.P.Q. at 113.

In the second step of the enabling disclosure analysis, the court ascertained that at the time of filing, the Aunstrup invention was fully capable of being reduced to practice.[57] The specification had established the application filing date as the prima facie date of invention.[58]

The C.C.P.A. noted that the PTO was assured availability to the deposit during the pendency of Aunstrup's application.[59] Under 35 U.S.C. § 114,[60] the PTO may require an applicant to furnish specimens for the purpose of inspection or experiment. The court reasoned that the PTO *could* have obtained access to the deposited culture *through Aunstrup* at any time during the pendency of the application.[61]

The C.C.P.A. also found no merit in the contention that the depository's private character and foreign location were fatal defects.[62] The court sanctioned depositories which were located in foreign countries, and accepted that private, as well as public, depositories could be recognized if they ensure permanent availability of the microbe.[63]

The C.C.P.A. therefore upheld the decision of the PTO Board of Interferences.[64] The *Feldman* case re-affirmed the withholding of public access to a culture deposited in a commercial depository during pendency of the patent application.

III. SECTION 132 AND NEW MATTER

An issue closely related to the enabling disclosure requirement is that of "new matter." New matter is matter added to the specification after filing which modifies any of the disclosure requirements of section 112 (which includes the enabling requirement).[65] The addition of new mat-

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[57] *Id.* at 1355, 186 U.S.P.Q. at 113.

[58] *Id.* at 1355, 186 U.S.P.Q. at 113.

[59] *Id.* at 1354, 186 U.S.P.Q. at 112.

[60] 35 U.S.C. § 114 (1982):

> The Commissioner may require the applicant to furnish a model of convenient size to exhibit advantageously the several parts of his invention.
>
> When the invention relates to a composition of matter, the Commissioner may require the applicant to furnish specimens or ingredients for the purpose of inspection or experiment.

[61] 517 F.2d at 1354, 186 U.S.P.Q. at 112.

[62] *Id.* at 1356, 186 U.S.P.Q. at 113.

[63] *Id.* at 1356, 186 U.S.P.Q. at 113.

[64] *Id.* at 1356, 186 U.S.P.Q. at 113.

[65] 2 S. Sutton, I. Kayton, & W. Biggart, Patent Preparation & Prosecution Practice, 8-1 (2d ed. 1983). The disclosure requirements, "description," "enabling," and "best mode" were discussed *supra* notes 16-33 and accompanying text.

ter is barred by 35 U.S.C. § 132.[66] The proscription of new matter is therefore corollary to the rules regarding the filing date of a complete application as the prima facie date of invention and of constructive reduction to practice.[67]

The rationale for the rule against new matter is that it precludes an applicant, under the guise of an amendment, from introducing into his application a wholly different invention or changing the construction of a fully disclosed invention or presenting a different or preferred form of invention.[68] An amendment to a specification does not violate the new matter rule if it merely clarifies or completes the original disclosure.[69] Matter added that makes explicit that which was implicit, inherent or intrinsic in the original disclosure is not new matter and is permitted.[70]

"New matter" is a term of art in patent law.[71] Its meaning has never been clearly defined for it cannot be.[72] Therefore, the PTO and the courts determine what changes are prohibited on a case-by-case basis.[73] An example of the application of the new matter rule is *In re Glass.*[74] In *Glass,* the applicant attempted to supplement an insufficient, nonenabling disclosure. During the pendency of the application, the applicant sought to make reference to publications which were published after the filing date to make the application sufficient. The C.C.P.A. noted that suffi-

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[66] 35 U.S.C. § 132 (1982):

> Whenever, on examination, any claim for a patent is rejected, or any objection or requirement made, the Commissioner shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such information and references as may be useful in judging of the propriety of continuing the prosecution of his application; and if after receiving such notice, the applicant persists in his claim for a patent, with or without amendment, the application shall be reexamined. No amendment shall introduce new matter into the disclosure of the invention.

An exception to the bar against new matter is in the filing of a continuation-in-part application. *See generally* 3 Chisum, Patents § 13.03[3] (1986).

[67] 3 D. Chisum, Patents § 11.04 (1986).

[68] L. Nunn, *New Matter in a Chemical Patent Application,* 45 J. Pat. Off. Soc'y 686, 686-87 (1963).

[69] 3 D. Chisum, Patents § 11.04[2] n.1 (1986).

[70] 2 S. Sutton I. Kayton, & W. Biggart, *supra* note 65, at 8-1.

[71] *In re* Oda, 443 F.2d 1200, 1203, 170 U.S.P.Q. 268, 270 (C.C.P.A. 1971).

[72] *Id.* at 1203, 170 U.S.P.Q. at 270.

[73] *Id.* at 1203, 170 U.S.P.Q. at 270-271.

[74] *In re* Glass, 492 F.2d 1228, 181 U.S.P.Q. 31 (C.C.P.A. 1974).

ciency must be judged as of the filing date, and concluded that such additions would constitute new matter.[75]

On the other hand, in *In re Hawkins,*[76] the C.C.P.A. allowed the applicant to incorporate the full text of previously referenced British patent applications. This information was necessary for the application to be enabling. The C.C.P.A. concluded that the complete text was not new matter because it was identified and specifically referred to in the specification as originally filed.[77]

The *Glass* and *Hawkins* cases did not involve biological technology. Deposits were therefore not required. The *Lundak* case was the first opportunity for a court to decide whether a microbiological deposit made after filing might be considered as new matter. As will be seen, the *Lundak* opinion formed part of its "new matter" analysis by drawing parallels or distinctions to these cases.

IV. *IN RE LUNDAK*

A. Facts

Dr. Robert L. Lundak, a professor at the University of California at Riverside, developed a new cell line[78] by mutagenesis and selection.[79]

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[75] *Id.* at 1232, 181 U.S.P.Q. at 34.

[76] *In re* Hawkins, 486 F.2d 569, 179 U.S.P.Q. 157 (C.C.P.A. 1973).

[77] *Id.* at 575, 179 U.S.P.Q. at 162.

[78] The subject invention was a human cancer cell line (designated as WI-L2-729HF$_2$) and the hybridomas resulting from its fusion with lymphoid cells. 773 F.2d at 1217, 227 U.S.P.Q. at 91. The cell line was a modified progeny of a known cancer cell line. Brief for Appellant at 2, *Lundak.* The subject cell line was found to provide a much higher efficiency of formation of human hybridomas resulting in successful secretion of monoclonal antibodies. *Id.* The ability to prepare human monoclonal antibodies has numerous advantages in therapeutic treatment of humans in that the human monoclonal antibodies should not be rejected by the human immune system when administered for therapy. *Id.*

Claims 1 and 2 of the patent application (Serial No. 247,656) were as follows:

1. An immortal B-cell line WI-L2-729HF$_2$.
2. A hybridoma resulting from the fusion of an immunized lymphocyte and a cell line according to Claim 1.

[79] Genes are the determinants controlling the properties of an organism. A gene mutation causes a heritable change in one or more properties of the organism. *See generally* E. Jawetz, J. Melnick & E. Adelberg, Review of Medical Microbiology 37 (16th ed. 1984). Mutagenesis is the induction of genetic mutation by physical or chemical agents (called mutagenic agents). Dorland's Illustrated Medical Dictionary 1004 (25th ed. 1974).

Selection is the process whereby those organisms which exhibit desired properties after exposure to the mutagenic agents are isolated to produce succeeding generations of organisms with the desired properties. *Id.* at 1396. The process of screening

Because of the uncertainties of reproducibility inherent in such processes,[80] the invention was of the class covered by the deposit requirement.

Lundak filed his patent application on March 26, 1981. However, he did not deposit a sample of the cell line with an independent depository until April 2, 1981, seven days after the date of filing. Lundak's specification did not identify the actual location of a sample at the time of filing, although it did name the American Type Culture Collection (ATCC) in Rockville, Maryland as the intended location of the sample. The PTO examiner rejected Lundak's claims because Lundak had failed to comply with the enabling requirements, which as noted above,[81] had been interpreted to require a deposit on or before his filing date.

During the prosecution of the patent application, Lundak filed a declaration stating that during the week following the filing of the application, members of the faculty of the University of California, Lundak's assignee, maintained the subject cell line at three different locations. Lundak also declared that the cell line was stored and maintained at a fourth location as further protection against its loss by a colleague at another university. The cell line was then deposited with the ATCC.

Lundak first sought relief by petition[82] to the Commissioner of Patents and Trademarks (Commissioner), to change his filing date from March 26, 1981 to April 2, 1981. He based the petition upon a regula-

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organisms exhibiting desired properties from those that have undesired properties is "shotgun" (i.e. random) in nature. *See* Hampar, *supra* note 35, at 586-87. *See also supra* note 35.

[80] The probability that one can develop a monoclonal antibody whose properties are identical to those of a patented antibody may be low, even where the procedure described in the specification is followed faithfully. Hampar, *supra* note 35, at 585. It should be noted from *supra* notes 35, 78, and 79, and accompanying text, that reproducibility of Lundak's procedures is uncertain for two reasons. One is the "shotgun" nature of the selection process. The second is that monoclonal antibodies are involved.

[81] *See supra* notes 43-64 and accompanying text.

[82] 37 C.F.R. § 1.181 (1985) provides in part:

(a) Petition may be taken to the Commissioner: (1) From any action or requirement of any examiner in the ex parte prosecution of an application which is not subject to appeal to the Board of Appeals or to the court; (2) in cases in which a statute or the rules specify that the matter is to be determined directly by or reviewed by the Commissioner; and (3) to invoke the supervisory authority of the Commissioner in appropriate circumstances.

tion[83] which provides that the filing date accorded to a patent application is the date on which a specification is filed with the PTO that meets the written description, enabling, and best mode requirements of section 112.[84]

The Commissioner denied the petition, finding that there had been no showing that the application as filed on March 26, 1981, was not a complete application for the purposes of assigning a filing date.[85] The Commissioner believed the question of whether the enabling requirement had been met was a question separate and distinct from the question of whether a filing date should be accorded to the application.[86]

Subsequent to a final rejection by the examiner, Lundak appealed to the PTO Board of Appeals (Board). An expanded panel of the Board affirmed the rejection.[87] In the majority opinion, joined by twelve of the eighteen members of the panel, the Board held that Lundak's deposit of the cell line at university laboratories was inadequate to meet the legal requirements because they were not "recognized depositories" that could guarantee permanent availability.[88] The Board stated further that the academic institutions that were maintaining the culture would not meet the terms of the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure, to which the United States is a signatory.[89] The treaty sets forth

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[83] 37 C.F.R. § 1.53(b) (1985):

> The filing date of an application for patent is the date on which (1) a specification containing a description pursuant to § 1.71 and at least one claim. . .; and (2) any drawing required. . . are filed in the Patent and Trademark Office. No matter may be introduced into an application after its filing date. . .

The regulation referred to above (37 C.F.R. § 1.71) is basically a restatement of the written description, enabling, and best mode requirements of 35 U.S.C. § 112 (1982). *See supra* notes 16-33 and accompanying text.

[84] *See supra* notes 16-33 and accompanying text.

[85] Appendix at 39, *Lundak*. The Commissioner stated that "[t]here has been no showing that the application as deposited on March 26, 1981, was not a complete application for the purposes of having a filing date accorded thereto. The question of whether or not the requirements of 35 U.S.C. 112 have been met is a question which is separate and distinct from the question of whether or not a filing date should be accorded to the application."

[86] *Id.* at 39.

[87] *Ex parte* Lundak, No. 588-11, slip op. at 12 (P.T.O. Bd. App. Aug. 21, 1984).

[88] *Id.* at 4.

[89] *Id.* at 7.

minimum requirements for necessary staffing, safety, and other measures which each depository must meet to be recognized by international patent offices.[90]

The Board also held that Lundak's deposit made with the ATCC after his filing date could not overcome the rejection for failure to meet the enabling requirement because this deposit was new matter.[91] As to the

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[90] Article 6(2) and Rule 2 of the Budapest Treaty are the applicable provisions. Article 6(2) is as follows:

The depositary institution must, in its capacity of international depositary authority:

(i) have a continuous existence;

(ii) have the necessary staff and facilities, as prescribed in the Regulations, to perform its scientific and administrative tasks under this Treaty;

(iii) be impartial and objective;

(iv) be available, for the purposes of deposit, to any depositor under the same conditions;

(v) accept for deposit any or certain kinds of microorganisms, examine their viability and store them . . .;

(vi) issue a receipt to the depositor, any required viability statement . . .;

(vii) comply, in respect of the deposited microorganisms, with the requirement of secrecy . . .;

(viii) furnish samples of any deposited microorganism under the conditions and in conformity with the procedure prescribed in the Regulations.

Rule 2 reads:

2.1 *Legal Status*

Any international depositary authority may be a government agency, including any public institution attached to a public administration other than the central government, or a private entity.

2.2 *Staff and Facilities*

The requirements referred to in Article 6(2)(ii) shall include in particular the following:

(i) the staff and facilities of any international depositary authority must enable the said authority to store the deposited microorganisms in a manner which ensures that they are kept viable and uncontaminated;

(ii) any international depositary authority must, for the storage of microorganisms, provide for sufficient safety measures to minimize the risk of losing microorganisms deposited with it.

2.3 *Furnishing of Samples*

The requirements referred to in Article 6(2) (viii) shall include in particular the requirement that any international depositary authority must furnish samples of deposited microorganisms in an expeditious and proper manner.

Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure, *opened for signature* Apr. 28, 1977, 32 U.S.T. 1241, T.I.A.S. No. 9768.

[91] *Ex parte* Lundak, No. 588-11, slip op. at 8 (P.T.O. Bd. App. Aug. 21, 1984). For the text of section 132 *see supra* note 65.

question of the filing date, the Board lacked jurisdiction over the subject matter since the issue was merely petitionable and not reviewable.[92] The Board therefore declined to make any decision or comment regarding the filing date.[93]

Two separate concurring opinions accompanied the majority opinion. In Examiner-in-Chief McKelvey's concurring opinion, two Board members observed that based on *Feldman v. Aunstrup,*[94] an applicant must meet two conditions in order to comply with the enabling requirement.[95] First, the PTO must be assured of access to the microorganism during pendency, as required by 35 U.S.C. § 114;[96] and second, the public must be assured of access to the material after the patent is issued.[97] These Board members noted that the first condition was met by Lundak's statement concerning his possession and retention of the cell line at the university.[98] The second condition, that the cell line be permanently available to the public after patent grant, in their view had not been met because Lundak did not prove that the material deposited with the ATCC was the same as the material in his possession on March 26, 1981.[99]

Examiner-in-Chief Rzucidlo wrote a second concurring opinion in which he and three other Board members affirmed the rejection on the ground that Lundak had failed to overcome a prima facie case of non-enablement.[100] In their view a failure to deposit the biological material with an independent depository on or before the filing date should not be fatal, since such deposits are not the sole means of presenting evidence of reduction to practice.[101] Rzucidlo would have allowed Lundak to present additional evidence of the existence of this cell line at the time of

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[92] *Ex parte* Lundak, No. 588-11, slip op. at 3 (P.T.O. Bd. App. Aug. 21, 1984).

[93] *Id.*

[94] 517 F.2d 1351, 186 U.S.P.Q. 108 (C.C.P.A. 1975), *cert. denied,* 424 U.S. 912, 188 U.S.P.Q. 720 (1976).

[95] *Ex parte* Lundak, No. 588-11, slip op. at 14 (P.T.O. Bd. App. Aug. 21, 1984) (McKelvey, Examiner-in-Chief, concurring).

[96] For the text of section 114 *see supra* note 59.

[97] *Ex parte* Lundak, No. 588-11, slip op. at 14 (P.T.O. Bd. App. Aug. 21, 1984) (McKelvey, Examiner-in-Chief, concurring).

[98] *Id.* at 15.

[99] *Id.* at 16.

[100] *Ex parte* Lundak, No. 588-11, slip op. at 18 (P.T.O. Bd. App. Aug. 21, 1984) (Rzucidlo, Examiner-in-Chief, concurring).

[101] *Id.* at 23.

his filing date, to overcome the rejection under the statutory enabling provisions.[102]

Upon a request for reconsideration by Lundak, the Board concluded that permanent availability of the culture was guaranteed by the terms of the contract with the ATCC.[103] The Board adhered to its decision on all other grounds.[104] In the subsequent appeal before the Federal Circuit, explained below, the PTO no longer relied on the Board's concern for compliance with the Budapest Treaty, since individual patent applications are governed by the national patent laws.[105]

B. THE FEDERAL CIRCUIT DECISION

On appeal, the Court of Appeals for the Federal Circuit[106] reversed the decision of the Board.[107] In an opinion written by Judge Newman, the court held that: 1) an inventor's deposit in his laboratory or in the laboratories of colleagues suffices to meet requirements of statutes governing patent specifications and models (section 114);[108] 2) a deposit with a recognized depository, which is made after filing but prior to issuance of the patent, meets the statutory enabling requirement;[109] and 3) a biological inventor's written specification meets the requirements of constructive reduction to practice, and the insertion of depository data after filing is not prohibited as new matter.[110]

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[102] *Id.* at 24.

[103] *Ex parte* Lundak, No. 588-11, slip op. at 2 (P.T.O. Bd. App. Oct. 31, 1984), *request for reconsideration of Ex parte* Lundak, No. 588-11 (P.T.O. Bd. App. Aug. 21, 1984).

[104] *Id.* at 5.

[105] 773 F.2d at 1220, 227 U.S.P.Q. at 93 n.2.

[106] The Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25, merged the C.C.P.A. with the Court of Claims to create the United States Court of Appeals for the Federal Circuit. The Federal Circuit is an article III court that is at the same level as the other twelve courts of appeals.

The Federal Circuit is now the only court which hears patent appeals, though it has jurisdiction over other subjects as well. S. Rep. No. 275, 97th Cong., 2d Sess. 3-5 (1982). The holdings of the predecessor courts, the C.C.P.A. and the Court of Claims are binding as precedent in the Court of Appeals for the Federal Circuit. South Corp. v. United States, 690 F.2d 1368, 1370, 215 U.S.P.Q. 657, 658 (Fed. Cir. 1982).

[107] 773 F.2d at 1224, 227 U.S.P.Q. at 96.

[108] *Id.* at 1222, 227 U.S.P.Q. at 95.

[109] *Id.* at 1222, 227 U.S.P.Q. at 95.

[110] *Id.* at 1223, 227 U.S.P.Q. at 95-96.

The Federal Circuit's opinion is divided into two main parts. The first part discusses the question of whether Lundak's deposit met the enablement requirement of section 112. The second part examines whether the post-filing deposit should be barred as new matter under section 132.

1. THE ENABLING DISCLOSURE REQUIREMENT

In the first part of its opinion, the court concluded that the enabling provisions do not require a deposit of an invention sample in a recognized depository prior to the patent application filing date.[111] In considering whether Lundak's procedures met the section 112 enablement requirement, the court utilized the two-step approach of Judge Baldwin's concurrence in *Argoudelis,* and as adopted in *Feldman.*

The *Lundak* court summarily disposed of the first step of the analysis, that of requiring public access upon patent issuance. The court relied upon the Board's decision on reconsideration that the terms of Lundak's ATCC deposit had satisfied preservation and public disclosure requirements.[112]

The second inquiry of the enabling disclosure analysis requires that, at the time the application for patent is filed, the claimed invention must be capable of reduction to practice. The court implied that the access allowed to the PTO under section 114 guarantees that the invention was complete as of filing.[113] The court compared the *Lundak* procedures to those used by Aunstrup, the senior party in *Feldman,* and to those the inventors used in *Argoudelis.* The court saw no controlling distinction between Lundak's deposit at the University of California and deposits that had been made and upheld in other cases.[114]

On this basis, the court concluded that Lundak's deposit met the requirements of 35 U.S.C. §§ 112 and 114 as the statutes apply to pending patent applications.[115] The court concluded that it was immaterial whether a possible specimen request by the Commissioner was filled directly by the applicant, or on the instructions of the applicant by a third person to whom the applicant has entrusted the specimen.[116]

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[111] *Id.* at 1222, 227 U.S.P.Q. at 95.

[112] *Id.* at 1222, 227 U.S.P.Q. at 95.

[113] *Id.* at 1221-122, 227 U.S.P.Q. at 94-95. *See also supra* notes 57-61, and 108 and accompanying text.

[114] *Id.* at 1222, 227 U.S.P.Q. at 94.

[115] *Id.* at 1222, 227 U.S.P.Q. at 95. *See also supra* notes 57-61, 108 and 113-114 and accompanying text.

[116] *Id.* at 1222, 227 U.S.P.Q. at 95.

2. THE ISSUE OF NEW MATTER

The second part of the *Lundak* opinion discussed whether a post-filing deposit, or insertion into the specification of reference to such deposit, constitutes new matter. The PTO argued that to achieve constructive reduction to practice, the specimen must have been deposited before filing and incorporated by written reference into the specification as filed.[117] The court rejected the PTO's argument by looking to section 112.[118] Paraphrasing the statute, the court stated that the specification must contain a "written description" that must "enable" the practice of the invention by others.[119] The court implied that the patentability examination proceeds solely on the basis of the written description.[120] It stated that although a sample is not a written description, *Feldman* established that the public availability of a sample after the patent has issued will meet the enablement requirement.[121]

The court stated that *Argoudelis, Feldman,* and related precedent clearly establish that the requirements for constructive reduction to practice are met when inventors file their patent applications.[122] The court concluded that constructive reduction to practice does not turn on the question of who has possession of a sample, and thus does not turn on the inclusion or absence, in the specification as filed, of the name and address of who will have possession of the sample on the grant of the patent.[123] The court stated that the accession number, deposit date, and the sample itself were not the types of "new matter" that section 132 was designed to prevent.[124]

3. OTHER ISSUES

The *Lundak* court briefly considered some other points. The PTO had argued that not requiring a deposit with an independent depository might lead to sham patent applications.[125] The *Lundak* court suggested that there is no greater or lesser risk of dishonesty in this procedure

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[117] *Id.* at 1222-1223, 227 U.S.P.Q. 95.

[118] *Id.* at 1223, 227 U.S.P.Q. at 95.

[119] *Id.* at 1223, 227 U.S.P.Q. at 95.

[120] *Id.* at 1223, 227 U.S.P.Q. at 95.

[121] *Id.* at 1223, 227 U.S.P.Q. at 95.

[122] *Id.* at 1223, 227 U.S.P.Q. at 96.

[123] *Id.* at 1223, 227 U.S.P.Q. at 96.

[124] *Id.* at 1223, 227 U.S.P.Q. at 96.

[125] *Id.* at 1223, 227 U.S.P.Q. at 96.

than in any other procedure.[126] It noted how easily dishonest applicants could subvert such supposed safeguards, while being unnecessary for the honest.[127] The court re-emphasized that the sample in no way aids the patent examination because the examination is based on the written description in the specification.[128]

The court stated that it was unnecessary to reach the issue of whether Lundak's plea to change the filing date should have been granted.[129] The court noted that the Commissioner had insisted that Lundak's specification was adequate for examination purposes when filed, even as the Commissioner had insisted that Lundak's specification was fatally flawed by lack of the deposit.[130] The court commented that if the application was flawed then it should not have been accepted for examination or been given a filing date.[131]

The Federal Circuit also discussed the policies underlying the patent system. The *Lundak* court noted that interpreting the enabling requirement so as to deny patent rights in microbiological inventions would contravene the public interest.[132] The court commented that the PTO must continue to adapt its procedures to facilitate the advance of science and technology.[133]

C. *Analysis of the* Lundak *decision*

Ex parte Lundak was the first Board decision to address the issue of deposits in connection with the disclosure of cell lines, as opposed to microorganisms.[134] The *Lundak* Board found no reason to treat a novel cell line differently than a novel organism, and therefore considered the claimed cell line in the same light as a new microorganism.[135] The court did not mention that Lundak's deposit was a cell line rather than a microorganism. This silence on what could have been a distinguishing

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[126] *Id.* at 1224, 227 U.S.P.Q. at 96.

[127] *Id.* at 1223-24, 227 U.S.P.Q. at 96.

[128] *Id.* at 1224, 227 U.S.P.Q. at 96.

[129] *Id.* at 1223, 227 U.S.P.Q. at 95 n.3.

[130] *Id.* at 1223, 227 U.S.P.Q. at 95 n.3.

[131] *Id.* at 1223, 227 U.S.P.Q. at 95 n.3.

[132] *Id.* at 1219, 227 U.S.P.Q. at 93 n.1.

[133] *Id.* at 1220, 227 U.S.P.Q. at 93 n.1.

[134] I. Cooper, *supra* note 36, at § 502[11].

[135] *Ex parte* Lundak, No. 588-11, slip op. at 3 (P.T.O. Bd. App. Aug. 21, 1984).

factor must be viewed as tacit approval of cell lines as patentable subject matter.[136]

This analysis of the *Lundak* opinion parallels the structure of the opinion by examining: 1) whether or not the procedures used by Lundak meet the two-step enablement analysis as originally suggested by Baldwin, and adopted by the C.C.P.A. in *Feldman;* and 2) whether the Federal Circuit appropriately applied precedent to its first determination of the rule against new matter in a microbiological patent context. This analysis also examines: 3) the appropriateness of the court's deference of the filing date issue, and 4) the import of the court's decision in light of international patent concerns.

1. THE ENABLING DISCLOSURE REQUIREMENT

As noted above,[137] the *Lundak* court used the two-step enabling analysis as adopted by the C.C.P.A. in *Feldman.* First, the court concluded that public access upon patent issuance was satisfied because the terms of Lundak's ATCC deposit had satisfied the preservation and public disclosure requirements, as decided in the Board's decision on reconsideration. Here, as in *Argoudelis,* public disclosure was assured by the contractual agreement with the depository that upon the granting of patent, access was to be made unrestricted. The only relevant consideration in assuring public access is that on the date of issuance, this condition come to fruition. The *Feldman* decision legitimized post-filing actions to remove restrictions on access.[138] Therefore, the arrangement of the contract between Lundak and the ATCC fulfilled the public disclosure function, even though enacted after filing.

The second step of the enablement analysis is to determine whether the application filing date has been established as the prima facie date of invention. The court implied that Lundak's depositing procedures,

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[136] Though the underlying rationale and policies embraced by the Supreme Court in *Diamond v. Chakrabarty* would support the patenting of cell lines, the specific holding is limited to microorganisms. 447 U.S. at 309. There is, however, a question of whether a line might have to be drawn as to whether or not certain life forms would be patentable subject matter. As pointed out by a professor of physiology, Dr. Gene Pautler: "It should be emphasized that the patenting of higher life forms presents some formidable problems under current patent laws. It would be extremely difficult to obtain a written description of multi-cellular organisms or whole animals which would safisfy § 112 of Title 35." Pautler, *supra* note 4, at 49. Indeed, this sounds like the sort of problem which would be solved by requiring a deposit. One could envision future "depositories" as cryogenic zoos.

[137] *See supra* notes 113-16 and accompanying text.

[138] *See supra* notes 54-56 and accompanying text.

or lack thereof, still provided the necessary assurance that his biological invention was fully completed when the application was filed.[139]

Until the *Lundak* decision, the method of proving completion of a biological invention was to use an independent, recognized depository to act as trustee of the sample for the PTO, as the PTO has no such depository facilities.[140] By having the independent depository hold this sample throughout the pendency of the application, even though access was restricted, the inventor proved that the invention was complete on or before the date of filing.

In both *Argoudelis* and *Feldman,* the inventions were established as complete because they were held by an independent depository for the entire pendency of the application. The applications in those cases referred to the deposits and their locations. The prior case law drew no distinctions as to whether the character of the depository institution was national or foreign, governmental or private. In all instances, however, the depository was independent and could provide impartial, third party verification that the biological invention was completed. In *Lundak,* however, the inventor maintained the sample himself. Despite the court's suggestion to the contrary, therefore, the *Lundak* invention lacked proof of completion on the date of application filing.

In choosing not to distinguish *Lundak* from prior case law, the court garnered support from section 114, the provision giving the PTO the authority to require the applicant to furnish a specimen.[141] Absent a request from the Commissioner, however, applicants are not required to furnish specimens.[142] The *Lundak* court quoted a statement from *Feldman,* which approved of the applicant's procedure in that "there [was] no question [under section 114] that the PTO *could* obtain access to [the deposit] *through the applicant* at any time during the pendency of the application."[143] Thus, proof of completion of the invention could be inferred because the sample was available to the PTO if it so requested.

As noted above,[144] in *Feldman* the invention was already established as completed since it was in an independent depository from the date

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[139] 773 F.2d at 1221-22, 227 U.S.P.Q. at 95.

[140] I. Cooper, *supra* note 36, at § 5.02[8].

[141] *See supra* note 60 for the text of 35 U.S.C. § 114 (1982).

[142] The authority vested in the Commissioner to require a model, specimen, or ingredient is almost never used. *In re* Breslow, 616 F.2d 516, 522, 205 U.S.P.Q. 221, 227 (C.C.P.A. 1980).

[143] 773 F.2d at 1221, 227 U.S.P.Q. at 94.

[144] *See* text in paragraph following note 139.

of filing. The access to which the PTO was assured under section 114 was available in the form of a sample from the depository. If the PTO did not request such a sample, proof of completion still existed. In the *Lundak* case, however, absent some other form of proof, Lundak did not establish that the invention was complete on the filing date. Lundak had no independent authority, such as a recognized depository, to back up his claim.

The section 114 authority relied upon by the court, then, is not the functional equivalent of establishing the application filing date as the prima facie date of invention, the second step of the enablement analysis. The result in *Lundak* is therefore significant in that it essentially removes the necessity of proof of completion at the time of filing for microbiological inventions requiring a deposit.

Though dealt with by the court in a separate part of the opinion, the possibility of sham claims also relates to the issue of proving an invention is complete on the date of filing. It is conceivable that an inventor with a nearly perfected microorganism or cell line invention may file for a patent because a rival competitor is also working on the same, or similar project. Having so filed, that inventor now establishes "priority" over his competitor, and has time to perfect the invention while the application is awaiting first examination in the PTO.

The opportunity for sham claims is apparent in the *Lundak* case. In *Lundak,* the application was first filed on March 26, 1981,[145] and deposit was made on April 2, 1981.[146] The first action taken by the PTO was not made until May 12, 1982, and Lundak was then given three more months to respond.[147] If followed in other cases, such a timetable would give an inventor at least sixteen months to continue work on his invention, presuming that a request for the sample would be made on the first action taken by the PTO.[148] Though the *Lundak* court stated that

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[145] Appendix at 19, *Lundak.*

[146] *Id.* at 31.

[147] *Id.* at 19.

[148] The processing of patents is generally slow, however, the delays cause problems unique to the biotechnical and software fields. *See* Work, *Inventors' Just Rewards,* 100 U.S. News & World Rep. 43, wherein it is said:

> For companies with high-tech software and biotechnology inventions, the two years or so it takes to get a patent can be a major obstacle. The useful life of many inventions is often shorter. But the Patent and Trademark Office is becoming more efficient. *The average waiting period is expected to be down to 18 months by next year* (emphasis added). In fiscal 1985, the PTO issued 75,302 patents and received a record 125,931 applications.

there was no greater or lesser risk in this procedure than in any other, this type of situation would seem to be peculiar to patent applications involving deposits. In most other fields, completeness of the invention can be determined solely upon the written specification and no deposit is required for enablement purposes. In a similar vein, the PTO noted in its brief that even if the applicant had reduced to practice as of the filing date, there could be no guarantee that the sample eventually deposited was not of a different cell line having the same characteristics, or of a superior or inferior "clone" of the same cell line.[149] Therefore, even if the microbiological invention was complete and existed as of filing, there is no confirmation that the invention eventually deposited upon patent issuance is the same one as that claimed on the date of filing.

In deciding the question of enablement, therefore, the court has glossed over the second inquiry of the enablement analysis, which requires proof of completion of the invention on the date of filing. In so doing, the court leaves open the question of whether any proof of completion on the date of filing is necessary, and also raises the possibility of sham claims. After completing its analysis of the enabling disclosure requirement, the court then turned to the issue of new matter.

2. THE ISSUE OF NEW MATTER

The second part of the *Lundak* opinion discussed whether a post-filing deposit, or insertion into the specification of reference to such deposit, may constitute new matter. The court concluded that neither the deposit nor the reference to the deposit were the types of new matter that section 132 was designed to prevent.[150]

The PTO relied upon *In re Glass,*[151] which ruled that Glass could not supplement his disclosure, after filing, with references to publications that became available after his filing date. The *Glass* court held that the sufficiency of a disclosure must be judged as of the filing date. The PTO contended therefore that to achieve constructive reduction to practice the deposit must therefore be made before filing, and incorporated by written reference into the specification as filed.[152]

The *Lundak* court responded by stating that section 112 merely requires that the specification contain a "written description" which must

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[149] Brief for the Commissioner of Patents and Trademarks at 19, *Lundak.*

[150] 773 F.2d at 1223, 227 U.S.P.Q. at 96.

[151] *See supra* notes 74-75 and accompanying text.

[152] 773 F.2d at 1222-23, 227 U.S.P.Q. at 95.

"enable" the practice of the invention by others.[153] The court implied, therefore, that the examination for patentability proceeds solely on the basis of the written description.[154]

The court's paraphrasal of section 112 is, however, an oversimplification. The "written description" requirement of section 112 is regarded as independent of the "enablement" requirement. Both the statutory language and prior case law establish the separateness of these two section 112 disclosure requirements.[155] It is therefore incorrect to tie the two together as the Federal Circuit did.

In tying the written description and enablement requirements together, the court suggests that an enabling disclosure is restricted to only that which can be reduced to writing. Under this approach, any deposit or reference to something unwritten, such as a deposit, would be superfluous.

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[153] *Id.* at 1223, 227 U.S.P.Q. at 95.

[154] *Id.* at 1223, 227 U.S.P.Q. at 95.

[155] Section 112 states that "[t]he specification shall contain a written description of the invention, *and* of the manner and process of making and using it..." (emphasis added). This suggests that the written description requirement is one which is in addition to that of enablement. *See supra* notes 16-19 and accompanying text. *See also* Gholz, *Recent Developments in the CCPA Relating to the First Paragraph of 35 USC 112*, 54 J. Pat. Off. Soc'y 768 (1972); 2 D. Chisum, Patents §§ 7.04, 7.04[1] (1986); and I. Cooper, *supra* note 36, at §§ 5.01[2], 5.02[1]. Further support for the separateness of the description and enablement requirements is found in case law. *See, e.g., In re* Barker, 559 F.2d 588, 591, 194 U.S.P.Q. 470, 472 (C.C.P.A. 1977), *cert. denied,* 434 U.S. 1064, 197 U.S.P.Q. 271 (1978) ("[the C.C.P.A.] has clearly recognized that there is a description of the invention requirement in 35 U.S.C. § 112, first paragraph, separate and distinct from the enablement requirement."). The Federal Circuit expressly adopted this same view in *In re* Wilder, 736 F.2d 1516, 1520, 222 U.S.P.Q. 369, 372 (Fed. Cir. 1984), *cert. denied,* 105 S.Ct. 1173 (1985). *See also In re* Bowen, 492 F.2d 859, 864, 181 U.S.P.Q. 48, 52 (C.C.P.A. 1974); *In re* Smith, 481 F.2d 910, 914-915, 178 U.S.P.Q. 620, 623-625 (C.C.P.A. 1973); *In re* Gardner, 475 F.2d 1389, 1391, 177 U.S.P.Q. 396, 397 (C.C.P.A. 1973), *reh'g denied,* 480 F.2d 879, 178 U.S.P.Q. 149 (C.C.P.A. 1973); *In re* Moore, 439 F.2d 1232, 1235, 169 U.S.P.Q. 236, 238-239 (C.C.P.A. 1971); *In re* DiLeone, 436 F.2d 1404, 1405, 168 U.S.P.Q. 592, 593 (C.C.P.A. 1971); *In re* Albrecht, 435 F.2d 908, 911, 168 U.S.P.Q. 293, 296 (C.C.P.A. 1971). For a dissenting view, see Chief Judge Markey's dissent in the *Barker* case. 559 F.2d at 594-95.

If the *Lundak* court meant to overrule these cases so that the requirements were no longer independent, it should have done so expressly. In that situation, though, it could arguably be said that the court had re-written the statute. The *Barker* opinion discusses the statutory construction of section 112 at some length. 559 F.2d at 591-93, 194 U.S.P.Q. at 473-74.

Though the court improperly linked the written description and enablement requirements, it may still be argued that if emphasis is placed on written embodiment, then it is all the more important that the written reference in the specification include an accession number and deposit date. At the very least the specification should state the location of the sample, something which Lundak failed to include in his application. This would provide some minimal degree of assurance that the invention is complete. To construe as the *Lundak* court did is another means of eliminating the requirement that there be proof of completion of the invention on the filing date, since there is no independent curator to verify the location of the deposit, and hence its existence, on the date of filing.

Outside of its flawed analysis which linked the written description and enablement requirements, the *Lundak* court gave no reason why *Glass* was inapplicable to Lundak's fact situation. The *Glass* inventor was disallowed from supplementing his disclosure by referring to publications that became available after the filing date. If enablement and written description are properly to remain independent requirements, then *Glass* should not be so readily dismissed. Where the requirements are independent, it cannot be said that the enabling information must necessarily be restricted to the written word. Where both a publication and deposit are enabling material, then, it should be found that a late reference to either violates the rule against new matter.

Logically, the *Lundak* court's ruling in regard to new matter results in one of two possible interpretations. Either proof of completion of the invention is no longer necessary to establish enabling disclosure, or many microbiological inventions are not patentable because the enabling information cannot be reduced to written terms.[156] Both results are against established patent policies. The first interpretation results in a system which clouds questions of invention priority,[157] and the second would deny rights in microbiological inventions, thereby discouraging ingenuity.[158]

The *Lundak* court found *In re Hawkins* to be on point,[159] and opted for the former interpretation, that proof of completion on the date of filing is not necessary. The court, quoting *Hawkins,* stated that "the function of section 112 in ensuring *complete public disclosure* is only

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[156] *See supra* note 35 and accompanying text.

[157] *See supra* notes 22-33 and accompanying text.

[158] *See supra* notes 27-28, and 132-33 and accompanying text.

[159] 773 F.2d at 1223, 227 U.S.P.Q. at 95. *See supra* notes 76-77 and accompanying text.

violated if the disclosure is not complete at the time it is made public."[160] However, the *Lundak* court took this isolated quotation out of context, because in *Hawkins* it was also noted that *"at the time the application was filed,* the invention claimed . . . was fully capable of being reduced to practice."[161] Judge Baldwin authored the *Hawkins* opinion, in which he restated his two-part enablement analysis. The *Lundak* court is therefore incorrect in relying upon *Hawkins* to eliminate, or ignore, that part of the enablement analysis which requires proof of completion on the date of filing.

The analogy drawn between *Hawkins* and *Lundak* is actually weaker than that which was discounted by the court in a comparison of *Glass* and *Lundak* because the facts in *Hawkins* are less similar to *Lundak* than the facts of *Glass. Hawkins* allowed the addition of the full text of previously referenced British patent applications. However, in the *Glass* and *Lundak* cases no prior reference was made to the information sought to be added. If prior reference has been made to the information sought to be added, then it is arguably information that makes explicit that which was implicit, and is therefore not new matter.[162] If the information (deposit or publication) was not referred to in the original application, then it is not implicit, and should be barred as new matter. Thus, the *Lundak* court misinterpreted the *Hawkins* decision in both law and in facts.

With respect to the new matter issue, the *Lundak* court concluded that constructive reduction to practice does not turn on the question of who has possession of a sample, and that an accession number and deposit were not new matter. [163] The court believed that such information or deposit would add nothing to the written description, and would not enlarge or limit the disclosure.[164]

In addition to those reasons articulated in its opinion, the *Lundak* court may have observed some equitable considerations that gave it cause to eliminate the requirement that a sample be deposited as of the filing date. The court may have noted that the depositing requirement was unique to the patenting of biotechnology, and having recognized this anomaly, attempted to adjust the requirement to bring all fields into

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[160] *Id.* at 1223, 227 U.S.P.Q. at 95, *quoting In re* Hawkins, 486 F.2d 569, 574, 179 U.S.P.Q. 157, 161 (C.C.P.A. 1973).

[161] 486 F.2d at 575, 179 U.S.P.Q. at 162.

[162] *See supra* notes 69-70 and accompanying text.

[163] 773 F.2d at 1223, 227 U.S.P.Q. at 95.

[164] *Id.* at 1223, 227 U.S.P.Q. at 96.

conformity. If the underlying reason was to make uniform the filing requirements of the different fields, such reasoning would not be entirely without its merits. However, there are valid reasons for placing the harsher burden upon microbiological applicants.

One concern of the court may have been the large expenses associated with making a commercial deposit.[165] All major depositories charge substantial fees for depositing an organism. The fees vary, depending upon the period of time for which the organism is deposited, the conditions under which the organism is deposited, and other requirements which may be associated with the distribution of the organism.[166] These expenses are not incurred by other patent applicants.

As noted above, however, problems may develop as to invention priority if the deposit is not made in a commercial depository. The court's reliance upon the authority of section 114 does not solve the difficulties associated with the needed proof of completion on the application filing

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[165] As an example, if the deposit is in connection with a U.S. application only, the ATCC charges an initial fee of $145, and the depositor then pays $100 each year until the patent issues. *See* I. Cooper, *supra* note 36, at § 5.03[2]. This fee structure covers the maintenance of the deposit for the life of the U.S. patent. *Id.*

If the deposit is in connection with national patent offices outside the United States, a one-time fee of $570 must be paid. *Id.* This fee covers maintenance of the deposit for thirty years. *Id.*

Payment of an additional fee of $300 ensures that ATCC will notify the depositor of the identity of any persons requesting samples of the strain for a thirty-year period. *Id.* In the *Lundak* case, both the PTO and ATCC required that the entire fee be paid in advance. 773 F.2d at 1219, 227 U.S.P.Q. at 92.

In *Ex parte* Jackson, the PTO Board of Appeals held that an inventor attempting to claim an entire species of microorganisms would be limited in her patent only to those variant strains deposited. 217 U.S.P.Q. at 807-08. For the broadest patent protection possible, therefore, a number of strains may have to be deposited. The fees mentioned above will be multiplied by the number of strains deposited. The inventor in *Jackson* was limited in her patent to the three strains she deposited. *Id.* at 808.

The biological inventor incurs the depositing costs without knowing whether the invention is patentable — or even marketable. Given the newness of genetic engineering (see *infra* note 174 and accompanying text) and that many of the biotechnology-related companies are therefore young, they may have limited investment capital. *See generally* Note, *Microorganisms and the Patent Office: To Deposit or Not to Deposit, That is the Question,* 52 Fordham L. Rev. 592, 603 (1984). Other candidates for microbiological patent protection may be universities on limited budgets. Increasing the cost of securing a patent would unnecessarily cause some companies to fail and force others to pursue other forms of protection such as trade secrets. *Id.*

[166] Brief for Appellant at 14, *Lundak.*

date.[167] Absent an alternative means of proof, the deposit requirement must therefore be retained to ensure that the public receives a disclosure in exchange for the monopolization rights granted to the inventor. This additional burden imposed upon the microbiological inventor is therefore necessary to preserve the policy underlying the purpose of patent system — the attainment of full and complete disclosure of the claimed invention in order to add to the public storehouse of knowledge.[168]

The requirement of proof of completion (or, reduction to practice) on the date of filing manifests itself in a manner distinctive to the area of biotechnology. The *Argoudelis* and *Feldman* decisions established "constructive" reduction to practice when the microbiological inventor made a deposit with a recognized depository.[169] Despite the fact that constructive reduction to practice (the mere filing) is deemed to be sufficient in all fields for purposes of inventorship priority,[170] the deposit of a completed microbiological invention constitutes not only *constructive* reduction to practice, but also *actual* reduction to practice. This is because the sample is an actual embodiment of the claimed invention, and hence, has necessarily reached the stage of invention such that it demonstrates the capacity of the invention idea to achieve its intended purpose.[171]

It may seem to be an unfair burden to place upon a biological inventor the requirement that proof be actual. A comparison to other representative fields, however, justifies the imposition of a requirement of actual reduction to practice as of the filing date on the biological inventor. Where it may be possible to assemble hydraulic and mechanical components constructively (that is, without actual reduction), such would probably not be true of a biological invention. The individual mechanical or hydraulic components would be known to work and one skilled in those arts could design a novel, useful, and non-obvious[172] invention and be relatively certain that it will work without actually manufacturing

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[167] *See supra* notes 141-45 and accompanying text.

[168] *See supra* notes 22-64 and accompanying text.

[169] 773 F.2d at 1221, 227 U.S.P.Q. at 94; 443 F.2d at 1393, 168 U.S.P.Q. at 102.

[170] *See supra* note 30 and accompanying text.

[171] *See supra* note 29 and accompanying text.

[172] These are the substantive requirements for patentability. *See supra* notes 6-8 and accompanying text.

the device. However, the recombination of DNA[173] is a new field,[174] and its approach cannot be made with the same degree of certainty. Apart from the recombinant DNA aspects, there is the mutagenesis and selection[175] approach which Lundak employed. These techniques are not reproducible because the selection process is random.[176] Biotechnology therefore differs from the other arts in that it is less certain that biological inventions could be established as workable without actual reduction to practice.

The uncertainties associated with biological processes lead to difficulties in explaining those processes in print. It is clearly more likely that the mere written description of an applicant who is a mechanical engineer will better enable others to do what is described than will the description of the microbiologist, even relative to those in the respective fields.[177] The difficulty of enablement by a microbiological inventor is solved by an actual reduction to practice, verified by the deposit of a sample embodying the invention in a recognized depository. Though it may be viewed as inconsistent to require actual reduction to practice as of filing for microbiological inventors and allow mere constructive reduction in other fields, a greater inconsistency stems from the *Lundak* decision in that microbiological inventions no longer need to be enabling, whereas in other fields of patents the enablement requirement must still be met. The removal of the enablement requirement for microbiological inventions is the greater inconsistency because, as noted above,[178] it contravenes the policy justifying the patent system itself, the inducement of full and complete disclosure of new, useful, and nonobvious inventions.

Despite the appearance of introducing greater uniformity in filing requirements between the different fields of patents, the elimination of

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[173] DNA (deoxyribonucleic acid) serves as the molecular basis of heredity and determines the cell's genetic composition. *See supra* note 79. Recombinant DNA (rDNA) technology or genetic engineering encompasses methodologies whereby a cell's genetic material or DNA can be altered in a predictable manner to generate a novel lifeform. Hampar, *supra* note 35, at 570-71. These alterations can be effected either by introducing new DNA sequences or by deleting or modifying existing DNA sequences. *Id.* at 571.

[174] Dr. Paul Berg conducted the first recombinant DNA experiment in 1973 at Stanford University. E. Sylvester & L. Klotz, The Gene Age 4 (1983).

[175] *See supra* note 79.

[176] *See supra* note 35, where the selection process is characterized as a "shotgun" approach.

[177] *See supra* note 35, particularly the discussion of the relationship of probability of duplication to the question of undue experimentation.

[178] *See* text accompanying note 168.

the requirement of deposit as of filing actually creates greater inconsistencies and problems. Though the requirement of deposit as of filing is unique to biotechnology, the unique problems associated with the application of the patent laws to that field justify the application of a special treatment.

The *Lundak* court ignored the reasons for considering a late deposit, or late reference to deposit, as new matter. In deciding the new matter issue, the requirement that the filing date be the prima facie date of a completed invention was eliminated, in the same manner as it did when it decided the enablement issue. Though not specifically considered in the text of the opinion, there are other issues which the court should have considered.

3. THE ISSUE OF THE FILING DATE

The Federal Circuit could have avoided confronting the enablement and new matter issues by holding that Lundak's petition for a change in the date of application should have been granted. Lundak relied upon statutory and regulatory provisions that defined the filing date as the date upon which the application contains a specification that meets the section 112 requirements.[179] Therefore, the court could have avoided the enablement issue by ruling that the application should not have been accorded a filing date until it met the enabling requirement.

The PTO's action therefore seems contradictory in that it rejected the application for not making an enabling disclosure, and at the same time it assigned a filing date to the application even though the application was not enabling. This contradiction would seem to be a problem which is written into the regulations, as no patent application should be rejected on grounds that it is non-enabling. Since the application should not have been given a filing date, it should not even have been considered as an application.

The *Lundak* court agreed that if the application was flawed because there had been no deposit, then it should not have been accepted for examination or given a filing date.[180] The court, however, never reached the issue. Instead the court focused on the enablement and new matter issues through its section 112 analysis. The court may have done better to have decided the application filing date issue and not reached the other issues, since, at any rate, their approach on those issues was flawed.[181]

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[179] 37 C.F.R. § 1.53(b) (1985). *See supra* notes 16-19 and 82-83, and accompanying text.

[180] 773 F.2d at 1223, 227 U.S.P.Q. at 95. *See supra* notes 129-131 and accompanying text.

[181] *See supra* notes 137-178 and accompanying text.

4. INTERNATIONAL PATENT CONCERNS

Contrary to what the Federal Circuit intends,[182] the *Lundak* decision might actually serve to deny the rights of microbiological inventors. Microbiological inventors who act in reliance upon the *Lundak*-type procedures would have their interests in world markets severely restricted. The Patent Cooperation Treaty (PCT)[183] allows an inventor to file an international application in one signatory country, designating other member countries to which the application is to be forwarded for examination.[184] The effective filing date for all of the countries is the filing date of the country in which the application was first filed.[185] If an inventor designates any country which requires a culture deposit on or before the filing date of the application, this requirement must be met before the international application is filed.[186]

Europe and Japan would likely be the more significant worldwide markets in which a microbiological inventor would seek patent protection.[187] According to Japanese patent law, a disclosed microorganism strain must be deposited with an authorized depository before an application is filed, and the deposit number assigned to the strain must be entered in the specification unless the strain is available to those skilled in the art.[188] Rule 28 of the European Patent Convention (EPC)[189] specifies that the culture must be deposited with a recognized depository

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[182] 773 F.2d at 1219-1220, 227 U.S.P.Q. at 93 n.1. *See also supra* notes 132-33 and accompanying text.

[183] Patent Cooperation Treaty, *adopted* June 19, 1970, 28 U.S.T. 7645, T.I.A.S. No. 8733 (*entered into force* Jan. 24, 1978).

[184] *Id.* at Article 4(1) (ii).

[185] *Id.* at Article 11(1).

[186] *Id.* at Rules 13*bis*.1, 13*bis*.2, and 13*bis*.3. *See also* Meyer, *supra* note 35, at 463.

[187] Signatories to the European Patent Convention (EPC), *infra* note 189, include Austria, Belgium, the Federal Republic of Germany (West Germany), France, Great Britain, Italy, Liechtenstein, Luxembourg, the Netherlands, Sweden, and Switzerland.

[188] Meyer, *supra* note 35, *citing* The Patent Law Enforcement Regulations Effective November 20, 1978. Article 27-2.

[189] Convention on the Grant of European Patents, *adopted* Oct. 5, 1973, 1977 Recueil des Traites et Accords (Fr.) 76, 1978 Gr. Brit. T.S. No. 20 (Cmd. 7090) (*entered into force* Oct. 7, 1977).

institution not later than the date of filing the application.[190] The depository institution and file number of the culture deposit must also be stated in the application.[191]

Since a microbiological inventor must make deposit as of filing to meet the requirements of a number of foreign countries, the inventor must do so notwithstanding the *Lundak* decision if an international application is filed under the PCT. The *Lundak* decision might limit an uninformed inventor to the United States market if the inventor relied on the procedures endorsed in *Lundak* and failed to make the required deposit. To the knowledgeable inventor who does seek the international market, it may actually change nothing, since the inventor still must meet the more stringent requirements of other nations.[192]

V. PROPOSED SOLUTION

The *Lundak* court made no distinction between PTO access to the deposit from Lundak's own laboratory, the laboratories of colleagues, or commercial depositories during the pendency of the application. The

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[190] Pertinent quotes of EPC Rule 28 are as follows:

Rule 28
Requirements of European patent applications
relating to micro-organisms

(1) If an invention concerns a micro-biological process or the product thereof and involves the use of a micro-organism which is not available to the public and which cannot be described in the European patent application in such a manner as to enable the invention to be carried out by a person skilled in the art, the invention shall only be regarded as being disclosed... if:
(a) a culture of the micro-organism has been deposited with a recognized depositary institution not later than the date of filing of the application;
(b) the application as filed gives such relevant information as is available to the applicant on the characteristics of the micro-organism;
(c) the depositary institution and file number of the culture deposit are stated in the application.

[191] *See supra* note 190. Rule 28(1)(c).

[192] *See* Meyer, *supra* note 35, at 466, in which she states:

Given the worldwide marketability of many biological iventions, a rational system of consistent laws regarding deposits is greatly needed. Unfortunately the relevant law with respect to microorganism-related inventions is so new and so unsettled that it is likely to be undergoing change and clarification for sometime to come. Therefore the deposit issue is not likely to be settled soon.

Especially in light of the *Lundak* decision, Meyer's prediction in 1983 has proven to be correct. She continues: "As a result, each potential microorganism deposit must be carefully evaluated in light of both current and predicted trends in the technology, the markets and the law."

prior PTO procedure, which required a deposit with a recognized depository, served as a means to prove completion of the invention as of the filing date. A deposit with such a depository on or before filing met this proof because the depository's independent nature and reputation engendered a presumption that the invention was then complete because there could be no competing interests. Since the sample could not be tampered with, a presumption also attached that the sample was the same as originally deposited.

Because the premise of the second step of the enabling disclosure analysis depends upon proof of the filing date as prima facie date of invention, the inventor or colleague should be able to maintain possession of the sample if the inventor can prove completion as of the filing date. The problem is marshaling sufficient proof of completion. One possible solution might be to have corroborating evidence show a chain of custody from the applicant to the depository (upon issuance), coupled with corroboration that the deposit made is identical to the culture described in the specification disclosure and in applicant's possession at the time the application was filed. This procedure would thus provide evidence equal in value to procedures presently used.

The standard of corroborating evidence in the proposed procedure would be analogous to that in interference proceedings. Interference proceedings resolve inventorship contests between two or more competing applicants who claim the same invention.[193] The use of a standard analogous to that of an interference proceeding is appropriate because an interference proceeding also establishes priority. This solution is similar to the reasoning of Examiner-in-Chief Rzucidlo's concurring opinion in the *Lundak* appeal before the PTO Board of Appeals. Rzucidlo would have allowed Lundak to present additional evidence of the existence of the cell line at the time of his filing date.[194]

Under the solution proposed here, the inventor's proof would require corroboration from sources other than the inventor's own self-serving testimony or records.[195] Evidence of reduction to practice should therefore be independently corroborated.[196] Such independent corroboration replaces the depository in proving impartial, third party verification of

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[193] *See supra* notes 31-33 and accompanying text.

[194] *Ex parte* Lundak, No. 588-11, slip op. at 23-24 (P.T.O. Bd. App. Aug. 21, 1984) (Rzucidlo, Examiner-in-Chief, concurring). *See also supra* notes 100-102 and accompanying text.

[195] Wilder v. Snyder, 201 U.S.P.Q. 927, 932 (P.T.O. Bd. Pat. Inter. 1977).

[196] Ralston Purina Co. v. Far-Mar-Co., 222 U.S.P.Q. 863, 892 (D.C. Kans. 1984).

the invention's reduction to practice. By reinstating a mode of proving completion as of the invention filing date, this proposal remedies the principal problem created by the *Lundak* decision.

The means of proving completion would also be the same as those employed in interference proceedings. Affidavits or testimony offered to prove completion would be accepted only from these witnesses who are knowledgeable in the art and understand the invention.[197] Notebooks or other circumstantial evidence would also be acceptable if witnessed and signed by a third party.[198] Joint inventors would not be allowed to corroborate each other's testimony,[199] as such evidence would be merely self-serving. The inventor's evidence must be supported with specific dates and events to establish the necessary proof.[200]

In establishing chain of custody from the time of filing to the time a sample is deposited, the corroborating witness need not understand the invention, but rather that individual merely need know who had possession and that the sample has not been tampered with. That individual should again be free of an interest in the invention. Thus, to avoid the appearance of collusion, the person maintaining the sample should be an independent third party.

Because of the large expenses that are associated with the deposits,[201] it would be fairer to allow inventors to prove completion as of the filing date in this alternate manner. There are two reasons why this method is fairer. First, it is one less expense sustained by the biological inventor that is not incurred by inventors in other fields. Second, the added costs of a deposit are especially burdensome on those applicants who subsequently fail to secure patents.

Though the above proposal satisfies the requirement of proof of completion, the proposed procedures would not fully protect inventors seeking international markets. Because other countries retain the depository requirement, those seeking international patents would still have to use a recognized depository.

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[197] *Id.* at 892; Choi v. Godfrey, 212 U.S.P.Q. 286, 288 (P.T.O. Bd. Pat. Inter. 1980).

[198] Donohue v. Baudry, 223 U.S.P.Q. 823, 827 (P.T.O. Bd. Pat. Inter. 1984); White v. Habenstein, 219 U.S.P.Q. 1213, 1218-19 (P.T.O. Bd. Pat. Inter. 1983).

[199] National Tractor Pullers Assn., Inc. v. Watkins, 205 U.S.P.Q. 892, 912 (N.D. Ill. 1980).

[200] Hamlin v. Dunleavy, 221 U.S.P.Q. 1006, 1012 (P.T.O. Bd. Pat. Inter. 1983).

[201] *See supra* notes 165-66 and accompanying text.

VI. CONCLUSION

In *Lundak,* the Federal Circuit permitted an inventor to withhold depositing of a culture into a recognized depository until such time as the inventor's patent might issue. This ruling altered the long-standing practice which had required a deposit of the sample in a recognized depository as of the filing date, though access to such deposit may have been restricted to the PTO or its designees.

The result in *Lundak* is significant in that it essentially removes that part of the enablement requirement which necessitates proof of completion of the microbiological invention as of the application filing date. The prior procedure which required deposit with a recognized depository as of the filing date was a means of establishing proof of completion at the time of filing. The removal of a need to prove completion as of the filing date could result in application filings before the inventors have perfected their inventions. Even if an applicant had reduced the invention to practice as of the filing date, there is no guarantee that the sample of the invention eventually deposited upon patent issuance is not a different cell line having the same characteristics, or a superior or inferior "clone" of the same cell line.

Though the depositing requirement may seem inequitable in that it imposes financial and procedural burdens that only microbiological inventors must bear, there were valid reasons for its existence. The elimination of the deposit requirement contravenes the policy justifying the patent system itself. Since microbiological inventions need not meet the enablement requirement, complete disclosure of inventions are not properly induced at the time of filing, and there is the risk of improperly assigning monopolization rights or priority of invention.

Rather than eliminate the requirement that there be proof of completion as of the filing date, this Note proposes that the inventor be allowed alternative means of proving completion.[202] This alternative is to allow the inventor to prove reduction to practice as of filing by independent verification, such as by affidavits or testimony by impartial, third party witnesses. Under this proposal, the inventor would also be required to prove that the sample deposited in the depository at the issuance of the patent was the same as the one referred to in the specification by corroborating the chain of custody. By restoring proof of completion as of the filing date, this proposal remedies some of the problems created by the *Lundak* decision.

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[202] It is emphasized that this proposal may not suffice to meet the requirements of other countries under which an international patent application might be filed.

THE EXPANDING PERSONAL LIABILITY OF CORPORATE OFFICERS AND DIRECTORS FOR PATENT INFRINGEMENT*

NED L. CONLEY AND ERIC P. MIRABEL

INTRODUCTION: THE IMPOSITION OF PERSONAL LIABILITY FOR PATENT INFRINGEMENT IS A GROWING TREND

Corporate officers and directors have generally been held personally liable for patent infringement only when special circumstances existed.[1]

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[1] 4 D.S. Chisum, *PATENTS* § 16.06 [2] (1986) ("The prevailing rule today is probably that... corporate officers and directors are not liable absent some special showing, such as deliberate use of a corporation as an instrument to infringe."); R.B. Coolley, *PERSONAL LIABILITY OF CORPORATE OFFICERS AND DIRECTORS FOR INFRINGEMENT OF INTELLECTUAL PROPERTY*, 68 J. Pat. & Trad. Off. Soc'y 228, 230 (1986) ("Most of [the early] decisions concurred that an officer or director should not be liable for the profits of infringement if the profits benefited only the corporation.") In *Dangler v. Imperial Mach. Co.*, 11 F.2d 945, 946-47 (7th Cir. 1926) the Seventh Circuit reviewed the question of liability of officers for corporate infringement:

> The weight of authority, it seems, denies such liability in the ordinary case. That is to say, if the officers act merely as officers, they are not liable jointly with the corporation. It is only when the officers act outside the scope of their official duties that they become liable.... [W]e... hold that, in the absence of some special showing, the managing officers of a corporation are not liable...

Accord, Panther Pumps & Equip. Co., v. Hydrocraft, Inc., 468 F.2d 225, 233 (7th Cir. 1972); Powder Power Tool Corp. v. Powder Actuated Tool Co., 230 F.2d 409, 414 (7th Cir. 1956); Hutter v. De Q. Bottle Stopper Co., 128 F. 283, 286 (2d Cir. 1904); Cooper Industries, Inc. v. Juno Lighting, Inc., 1 U.S.P.Q. 2d 1313 (N.D. Ill. 1986); Schreyer v. Casco Prod. Corp., 97 F. Supp. 159, 170 (D. Conn. 1951), *aff'd in part, rev'd in part on other grounds,* 190 F.2d 921 (2d Cir. 1951). In Besly-Welles Corp. v. Balax, Inc., 291 F. Supp. 328 (E.D. Wis. 1968), *aff'd in part, rev'd in part on other grounds sub nom,* Bendix Corp. v. Balax, Inc., 421 F.2d 809 (7th Cir. 1970) the court refused to hold an individual defendant personally liable for infringement although the individual was the president and majority shareholder of the defendant corporation. The court

There is a trend afoot, however, to subject officers and directors of closely held corporations to liability whenever the corporation is found to infringe. For example, finding that the three incorporators and officers of the corporate defendant in *Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc.*[2] had actively induced the corporation's patent infringement, the court entered a judgment of $1,113,660.11 against them. More recently, the United States District Court for the Southern District of Texas awarded damages of $4,023,114 for infringement plus 6% prejudgment interest against the corporate defendants in *Rohm & Haas Co. v. Dawson Chemical Co.*[3] The majority stockholder, who was also president, chief executive officer and a director of the corporate defendants, was held personally liable for the full amount of the judgment, notwithstanding the fact that he had the advice of counsel that the patent was unenforceable, and that the Supreme Court held, by only the narrowest possible margin, a five-to-four decision, that this advice was erroneous.[3-1]

This growing tendency to hold corporate officers and directors liable is certainly disturbing to those involved with small corporations. However, it apparently is wholly justified under the precedent. A large variety of "special circumstances" have been relied upon by courts to justify the imposition of personal liability. For example, officers and directors have been held personally liable based on their personal,[4] willful,

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found that the board of directors of the corporation did have a hand in its management, and that the corporation and the individual were not one and the same "even though because of his majority stockholding and the relatively small size of the organization, [he was] a most integral cog." 291 F. Supp. at 346-47.

[2] 561 F. Supp. 512, 532 (E.D. La. 1981), *aff'd*, 708 F.2d 151 (5th Cir. 1983).

[3] 557 F. Supp. 739, 819 (S.D. Tex. 1983), *rev'd on other grounds sub nom*, Rohm & Haas Co. v. Crystal Chem. Co., 722 F.2d 1556 (Fed. Cir. 1983).

[3-1] *See* Dawson Chemical Co. v. Rohm & Haas Co., 448 U.S. 176 (1980).

[4] *See* Rex Chainbelt, Inc. v. General Kinematics Corp., 363 F.2d 336, 348 (7th Cir. 1966); General Motors Corp. v. Provus, 100 F.2d 562, 564 (7th Cir. 1938); Dangler v. Imperial Mach. Co., 11 F.2d 945, 947 (7th Cir. 1926); National Car-Brake Shoe Co. v. Terre Haute Car & Mfg. Co., 19 F. 514 (C.C.D.Ind. 1884); A. Stucki Co. v. Schwam, 634 F. Supp. 259, 264-265 (E.D. Pa. 1986), *vacated in part on other grounds*, 638 F. Supp. 1257 (E.D. Pa. 1986); Universal Athletic Sales Co. v. American Gym, 480 F. Supp. 408, 416 (W.D. Pa. 1979); Pugh v. Roe, 440 F. Supp. 638, 646 (W.D. La. 1977); State Bank of Annawan v. Rendispos Corp., 173 U.S.P.Q. 136, 142 (S.D.Ill. 1971).

deliberate and knowing,[5] or active[6] participation in the infringement; because they "actively aid and abet their corporation's infringement,"[7] are the "moving force"[8] behind it; or because they induce the corporation to infringe[9] or otherwise further infringement.[10]

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[5] *See* R.B. Coolley, *PERSONAL LIABILITY OF CORPORATE OFFICERS AND DIRECTORS FOR INFRINGEMENT OF INTELLECTUAL PROPERTY*, 68 J. Pat. & Trad. Off. Soc'y 228, 232 (1986) ("The special showing normally required to demonstrate that corporate officers and directors are personally liable for infringement is that the officer or director acted willfully.")' Panther Pumps & Equip. Co. v. Hydrocraft, Inc., 468 F.2d 225, 233 (7th Cir. 1972); Bewal, Inc. v. Minnesota Mining & Mfg. Co., 292 F.2d 159, 167 (10th Cir. 1961); General Motors Corp. v. Provus, 100 F.2d 562, 564 (7th Cir. 1938); Southwestern Tool Co. v. Hughes Tool Co., 98 F.2d 42, 45-46 (10th Cir. 1938); Claude Neon Lights, Inc. v. American Neon Light Corp., 39 F.2d 548, 551 (2d Cir. 1930); Dangler v. Imperial Mach. Co., 11 F.2d 945, 947 (7th Cir. 1926); Cooper Industries, Inc. v. Juno Lighting, Inc., 1 U.S.P.Q. 2d 1313 (N.D. Ill. 1986); A. Stucki Co. v. Schwam, 634 F. Supp. 259, 265 (E.D. Pa. 1986), *vacated in part on other grounds*, 638 F. Supp. 1257 (E.D. Pa. 1986); Max Daetwyler Corp. v. Input Graphics, Inc., 541 F. Supp. 115, 117 (E.D. Pa. 1982); Thompson Tool Co. v. Rosenbaum, 443 F. Supp. 559, 561 (D. Conn. 1977); State Bank of Annawan v. Rendispos Corp., 173 U.S.P.Q. 136, 142 (S.D. Ill. 1971); M. Feuer, *Personal Liabilities of Corporate Officers and Directors* 2d ed. at 195 (1974) ("[T]he courts, in the normal case, particularly where the question of infringement may be a close one, are not disposed to extend the liability to directors and officers unless some element of bad faith is found."). *Contra* Dean Rubber Mfg. Co. v. Killian, 106 F.2d 316, 320 (8th Cir. 1939) ("As with other infringers, it is immaterial whether the director knew or was ignorant that the article manufactured and sold did infringe a patent.").

[6] *See* International Mfg. Co. v. Landon, Inc., 336 F.2d 723, 728-29 (9th Cir. 1964); Marks v. Polaroid Corp., 237 F.2d 428, 435 (1st Cir. 1956); Hitchcock v. American Plate Glass Co., 259 F. 948, 955 (3d Cir. 1919); D'Arcy Spring Co. v. Marshall Ventilated Mattress Co., 259 F. 236, 242 (6th Cir. 1919).

[7] Power Lift, Inc. v. Lang Tools, Inc., 774 F.2d 478, 481 (Fed. Cir. 1985). *See also* Universal Athletic Sales Co. v. American Gym, 480 F. Supp. 408, 416 (W.D.Pa. 1979).

[8] *See* White v. Mar-Bel, Inc., 509 F.2d 287, 292-93 (5th Cir. 1975); International Mfg. Co. v. Landon, Inc., 336 F.2d 723, 729 (9th Cir. 1964); Marks v. Polaroid Corp., 237 F.2d 428, 435 (1st Cir. 1956); Rohm & Haas Co. v. Dawson Chem. Co., 557 F. Supp. 739, 819 (S.D. Tex. 1983), *rev'd on other grounds sub nom*, Rohm & Haas Co. v. Crystal Chem. Co., 722 F.2d 1556 (Fed. Cir. 1983); Molinaro v. Burnbaum, 201 U.S.P.Q. 83, 98 (D. Mass. 1977).

[9] *See* Power Lift, Inc. v. Lang Tools, Inc., 774 F.2d 478, 481 (Fed. Cir. 1985); White v. Mar-Bel, Inc., 509 F.2d 287, 292-93 (5th Cir. 1975); International Mfg. Co. v. Landon, Inc., 336 F.2d 723, 728-29 (9th Cir. 1964); Bewal, Inc. v. Minnesota Mining & Mfg. Co., 292 F.2d 159, 167 (10th Cir. 1961); Marks v. Polaroid Corp., 237 F.2d 428, 435 (1st Cir. 1956); Universal Athletic Sales Co. v. American Gym, 480 F. Supp. 408, 416 (W.D. Pa. 1979).

While imposing personal liability on any of these bases may be in accordance with the general rule — that is, all may represent special circumstances — the knowledge that liability is based on precedent will provide little comfort to the small businessman. Such circumstances are normally present in a small, closely held corporation, and rarely exist in a large, publicly owned corporation. The unfairness is that by these tests officers and directors of close corporations are rendered liable, while their brethren who lead and direct the Fortune 500 are sufficiently insulated to avoid that result.[11] A glaring example of this selective imposition of personal liability is the case of *General Motors Corp. v. Devex Corp.*[12] Although the total judgment rendered exceeded 20 million dollars, and although the litigation spanned almost 30 years, not a single corporate officer, director or other employee of General Motors was ever even named as a defendant, much less held liable for inducing the infringement.

Cynics employed by large corporations may consider it acceptable that personal liability is inflicted only upon the small. However, those of that view are ignoring the trend to expansion of liability (and to increasing monetary damage awards for infringement) which, if it continues, will

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[10] *See* Weller Mfg. Co. v. Wen Prods. Inc., 231 F.2d 795, 801 (7th Cir. 1956); Dean Rubber Mfg. Co. v. Killian, 106 F.2d 316, 320 (8th Cir. 1939); Denomination Envelope Co. v. Duplex Envelope Co., 80 F.2d 186, 194 (4th Cir. 1935); National Cash-Register Co. v. Leland, 94 F. 502, 507-12 (1st Cir. 1899).

[11] *In United States Phillips Corp. v. National Micronetics, Inc.*, 410 F. Supp. 449 (S.D.N.Y. 1976), *aff'd*, 550 F.2d 716 (2d Cir. 1977) the corporate officer was sufficiently insulated to avoid personal liability for patent infringement. The court noted that:

> Buoymaster is a large shareholder in Micronetics, although by no means a majority shareholder, and serves on the four man Board of Directors which manages the corporation.... The evidence shows only that Buoymaster was the chief administrative officer of the corporation. As such he was involved in the business aspects of corporate affairs and not in the technical production phase.

In *Monolith Portland Midwest Co. v. Kaiser Aluminum & Chem. Corp.*, 267 F. Supp. 726, 787 (S.D. Cal. 1966), *aff'd as modified*, 407 F.2d 288 (9th Cir. 1969), Kaiser was held liable for contributory infringement, but "[t]he individual defendants did nothing in their individual capacities which would put them in the same position as Kaiser."

[12] 461 U.S. 648 (1983).

place their homes on the auctioneer's block in the next phase.[13] Indeed, the expansion of personal liability in the patent area is only one part of a broader trend, under which officers, directors and shareholders are subjected to personal liability for an increasing range of activities.[14]

The premise of this article is that the size of the corporation should not be a factor in determining whether personal liability should be imposed on corporate officers and directors. Instead, the critical question should be whether the person who directed the infringing act did so with the support of an opinion of counsel that the actions he set into motion were not illegal. If he did, then personal liability should not be imposed, and the size of the corporate defendant should have no bearing. To support this premise, those decisions announcing a rationale for imposing personal liability will be critically examined. Personal liability for patent infringement will also be contrasted with that for violations of non-patent intellectual property rights.

I. THE PRESENT STATE OF THE LAW REGARDING IMPOSING PERSONAL LIABILITY ON OFFICERS AND DIRECTORS

To understand what the law of personal liability currently is, it is first necessary to examine where it has been. Probably the most important early decision was authored by the Seventh Circuit. In *Dangler v. Imperial Machine Co.*[15] that court held that the officers and directors of an infringing corporation were not personally liable for the corporation's infringement. The court announced the rule that some "special showing" was required before personal liability would be imposed — *e.g.*, officers deliberately using the corporation as an instrument to infringe, or acting outside the scope of their official duties. The court reasoned

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[13] In view of the size of the damage awards in recent patent infringement suits, there is a distinct possibility that even large corporations would be unable to fully satisfy adverse judgments. *See* Smith Int'l, Inc. v. Hughes Tool Co., 229 U.S.P.Q. 81 (C.D. Cal. 1986) (awarding $134,569,161.15 plus interest); Hughes Tool Co. v. Dresser Indus., Inc., No. 4-76-53-E (S.D. Tex. Feb. 6, 1984) (awarding 25% of $343,354,994 plus 10% prejudgment interest), *rev'd in part*, 816 F. 2d 1549 (Fed. Cir. 1987). Those held personally liable would then have to make up the deficiency.

[14] *See, e.g.*, D. Golann, C.K. Dietz, S. P. McHugh, S.M. Roberts, *In Search of Deeper Pockets: Theories of Extended Liability* 71 Mass. L. Rev. 114-130 (1986), in which a number of examples of this broader trend to expansion are noted.

[15] 11 F.2d 945 (7th Cir. 1926).

that the "uncertainty surrounding the questions of validity and infringement make [*sic.*] any other rule unduly harsh and oppressive."[16]

In subsequent decisions, the Seventh Circuit has adhered to the relatively strict guidelines of *Dangler* regarding what constitutes a "special showing."[17] However, in decisions from other Circuits, courts merely pay lip service to the *Dangler* guidelines before failing to apply them and holding the officers liable.[18] Some other Circuits ignored the guidelines outright, without even referring to the *Dangler* opinion.[19] For example, in *White v. Mar-Bel, Inc.*, the Fifth Circuit did not cite *Dangler* and did not mention the inherent uncertainty in determining patent validity and infringement before holding an officer personally liable.[20]

It seems, in fact, that outside the Seventh Circuit there was considerable resistance to the *Dangler* court's axiom that patent validity and infringement are not readily determinable. Oddly enough, this resistance continued after the creation in 1982 of the United States Court of Appeals for the Federal Circuit — the court which was supposed to standardize the law in patent cases. In both cases in which the issue of personal liability was considered by the Federal Circuit, neither the *Dangler* decision nor the *Dangler* court's reasoning was mentioned.[21]

Thus, under current law personal liability is imposed on officers and directors without regard to the uniqueness of the questions raised in patent cases. It will be seen that it is the unique difficulty of determining patent validity and infringement which makes it inequitable to impose personal liability upon one who relies on an opinion of counsel.

II. A SUPPORTING OPINION OF COUNSEL SHOULD ALWAYS PREVENT PERSONAL LIABILITY

A. *Personal Liability in Patent Cases*

(i) *direct infringement*

Officers and directors should never be held liable when they act in

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[16] *Id.* at 947.

[17] *See* General Motors Corp. v. Provus, 100 F.2d 562 (7th Cir. 1938).

[18] *See* Telling v. Bellows-Claude Neon Co., 77 F.2d 584 (6th Cir. 1935).

[19] *See* Dean Rubber Mfg. Co. v. Killian, 106 F.2d 316 (8th Cir. 1939).

[20] *See* White v. Mar-Bel, Inc., 509 F.2d 287, 292 (5th Cir. 1975).

[21] *See* Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565 (Fed. Cir. 1986); Power Lift, Inc. v. Lang Tools, Inc., 774 F.2d 478 (Fed. Cir. 1985).

reliance on a legal opinion of non-infringement or patent invalidity.[22] The officer or director who directs patent infringement is unlike one who directs commission of other tortious or illegal acts. An officer or director who, for example, authorizes fraud for profit will know that his actions are illegal (or at least tortious). In contrast, one who authorizes manufacturing of an infringing product, without knowledge of the patent or in reliance on an opinion of counsel, will think of himself as a *bona fide* producer. The latter really has no way of knowing whether the actions he authorizes are illegal, because the complexity of the questions of patent validity and infringement render lay determination of that issue all but impossible.[23] It is only through opinion of counsel that the directors and officers can determine whether the acts they authorize are justified. Imposing liability for infringement on officers and directors who direct the corporation on advice of counsel would be peculiar and illogical.

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[22] *See* Dangler v. Imperial Mach. Co., 11 F.2d 945, 948 (7th Cir. 1926); Upjohn Co. v. Italian Drugs Importing Co., 190 F. Supp. 361, 368 (S.D.N.Y. 1961); Wisconsin Alumni Research Foundation v. Vitamin Technologists, Inc., 41 F. Supp. 857 (S.D. Cal. 1941), *aff'd in part, rev'd in part on other grounds,* 146 F.2d 941 (9th Cir. 1945), (Result: No personal liability where supporting opinion of counsel shown.). Compare *Rohm & Haas Co. v. Dawson Chem. Co.,* 557 F. Supp. 739 (S.D. Tex. 1983), *rev'd on other grounds sub nom,* Rohm & Haas Co. v. Crystal Chem. Co., 722 F.2d 1556 (Fed. Cir. 1983), where the court noted that defendants had relied on a favorable opinion of counsel in carrying out the acts found to infringe. Nevertheless, in another portion of the opinion, the court held the controlling corporate officer personally liable.

[23] *See, e.g.,* Ludlow Corp. v. Textile Rubber & Chem. Co., 636 F.2d 1057, 1060 (5th Cir. 1981) ("Because the scientific underpinnings of chemical patents are so complex, trial courts must depend heavily on expert witnesses for both explanation and evaluation of the patent disclosures and the accused infringing operations.") quoting, Ziegler v. Phillips Petroleum Co., 483 F.2d 858, 861 (5th Cir. 1973); Houston v. Polymer Corp., 637 F.2d 617, 619 (9th Cir. 1980) ("Summary judgment is generally not favored in patent law because of the complexity frequently presented by scientific questions."); Smith v. Acme General Corp., 614 F.2d 1086, 1090 (6th Cir. 1980) ("This court has acknowledged that every patent issued by the Patent Office carries, at the outset, a presumpton of valdity justified by the complexities of patent law and the expertise of the Patent Office."), quoting, Bolkom v. Carborudum Co., 523 F.2d 492, 498 (6th Cir. 1975) *Accord* Hanson v. Alpine Valley Ski Area, Inc., 611 F.2d 156, 159 (6th Cir. 1979); Rohm and Haas Co. v. Dawson Chem. Co., 599 F.2d 685, 706 (5th Cir. 1979), *aff'd,* 448 U.S. 176 (1980) ("[P]atent cases are the only cases argued by professionals and decided by amateurs.... [P]atent law is 'the metaphysics' of the law...."); Dangler v. Imperial Mach. Co., 11 F.2d 945, 947 (7th Cir. 1926) ("[I]n the absence of some special showing, the managing officers of a corporation are not liable for the infringements of such corporation.... The uncertainty surrounding the questions of validity and infringement make any other rule unduly harsh and oppressive.").

Holding officers and directors who act on advice of counsel personally liable would also materially decrease competition in the marketplace. Even those persons holding invalid or unenforceable patents would be able to gain effective monopolies through threat of suit against competitors. Which corporate officer or director would risk launching a competing product, even on advice of counsel, at the risk of personal bankruptcy?

Nevertheless, in deciding personal liability, some recent decisions appear to have ignored these considerations. The court in *A. Stucki Co. v. Schwam* announced that whether the president of the infringing corporation "relied on the advice of counsel is not material to a determination of his joint liability... for patent infringement."[24] It seems that the *Stucki* decision is wrong primarily because it ignores that the complexity of patent cases makes a lay determination of liability all but impossible.

The error in *Stucki* becomes more apparent if one considers that an opinion that the patent in question is invalid, or not infringed, seems necessarily to negate the "special circumstances" requisite to finding personal liability.[25] Good faith adherence to the advice of competent patent counsel is generally recognized as a defense to "willful infringement" under 35 U.S.C. § 284.[26] If the term "willful" has the same meaning in deciding personal liability as for determining willful infringement,[27] then one relying on advice of counsel would not be circumventing one of the primary justifications for imposing personal liability; *i.e.*, such person would not be acting "willfully, deliberately, or knowingly."[28] In

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[24] A. Stucki Co. v. Schwam, 634 F. Supp. 259, 265 (E.D. Pa. 1986), *vacated in part on other grounds*, 638 F. Supp. 1257 (E.D. Pa. 1986).

[25] *See* n. 1, *supra*, and accompanying test.

[26] *See* Central Soya Co. v. George A. Hormel & Co., 723 F.2d 1573, 1577 (Fed. Cir. 1983); Underwater Devices Inc. v. Morrison-Knudson Co., 717 F.2d 1380 (Fed. Cir. 1983); 5 D.S. Chisum, *PATENTS* § 20.03[4] [v] (1986).

[27] In *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1579 (Fed. Cir. 1986) the court indicated that "willful" does not have the same meaning in both instances. The court stated that if the officer was aware of what he was doing, even if his acts did not rise to the level of "willful infringement," personal liability could be imposed. In *Rohm & Haas Co. v. Dawson Chem. Co.*, 557 F. Supp. 739 (S.D. Tex. 1983) *rev'd on other grounds sub nom, Rohm & Haas Co. v. Crystal Chem. Co.*, 722 F.2d 1556 (Fed. Cir. 1983) the court concluded that because defendant had relied on the advice of counsel, there was no willful infringement. Notwithstanding that conclusion, in another portion of the opinion the court held the controlling corporate officer personally liable.

[28] *See* n. 5, *supra*, and accompanying test.

short, the *Stucki* court ignored that the framework underlying the traditional reasons for imposing director and officer liability is destroyed by a supporting opinion of counsel.

(ii) *induced infringement*

There is another basis in the Patent Law for imposing personal liability on officers or directors. In general they are found personally liable as direct infringers.[29] However, in a number of cases they have been found liable as "one who actively induces infringement."[30] Where the charge is for induced infringement, however, there are even stronger reasons for not imposing personal liability where there is a supporting opinion of counsel.

Intent is not required to establish a charge for "simple" direct infringement (*i.e.*, absent a charge of personal liability of the officers or directors).[31] In contrast, an element of "willfulness" is requisite to an induced

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[29] *See* 35 U.S.C. § 271(a), "Except as otherwise provided in this title, whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent."

[30] *See* 35 U.S.C. § 271(b), "Whoever actively induces infringement of a patent shall be liable as an infringer."

[31] *See, e.g.*, 4 D.S. Chisum, *PATENTS* § 16.02[2] (1986), ("One making, using or selling matter covered by a patent without authority of the owner infringes regardless of knowledge or intent. . . "); Thurber Corp. v. Fairchild Motor Corp., 269 F.2d 841, 845 (5th Cir. 1959) ("[T]he determination of. . . infringement of a patent can be made irrespective of the purpose and intent of the alleged infringer, and. . . it is not necessary that he even have knowledge of the patent alleged to be infringed.") Kansas City S. Ry. Co. v. Silica Prod. Co., 48 F.2d 503, 508 (8th Cir. 1931) ("The purpose and intent of defendants is immaterial."); Metal Film Co. v. Metlon Corp., 316 F. Supp. 96, 111 n.15 (S.D.N.Y. 1970) ("[N]either lack of knowledge of the patent nor lack of intent to infringe is relevant to the issue of infringement."); Blair v. Westinghouse Elec. Corp., 291 F. Supp. 664, 670 (D.D.C. 1968), *aff'd sub nom,* Blair v. Dowd's, Inc., 438 F.2d 136 (D.C. Cir. 1970) ("It is, of course, elementary, that an infringement may be entirely inadvertent and unintentional and without knowledge of the patent.").

infringement charge.[32] Inasmuch as willful infringement is generally negated by an opinion of counsel,[33] then, assuming that "willful" is to be given a consistent meaning in the law, a supporting opinion should also negate finding induced infringement.

There are, however, conflicting indications on whether a supporting opinion actually prohibits personal liability for induced infringement.[34]

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[32] *See* 4 D.S. Chisum, *PATENTS* § 17.04 [2] (1986); Sims v. Western Steel Co., 551 F.2d 811, 817 (10th Cir. 1977) (requiring that the inducement be intentional); Procter & Gamble Co. v. Nabisco Brands, Inc., 604 F. Supp. 1485, 1488 (D. Del. 1985) ("Liability under section 271(b) requires a state of mind at least as culpable as is required for liability under section 271(c)."); Filmways Pictures, Inc. v. Marks Polarized Corp., 552 F. Supp. 863, 868 (S.D.N.Y. 1982); Electronized Chems. Corp. v. Rad-Mat, Inc., 288 F. Supp. 781, 784 (D. Md. 1968) ("[T]he degree and amount of intent and knowledge required by subsection (b)... would certainly appear... to exceed the mere intent purposely to do an act."). *See also* Bewal, Inc. v. Minnesota Mining & Mfg. Co., 292 F.2d 159, 167 (10th Cir. 1961) (corporate officer held liable for inducing infringement; the court indicated that he acted willfully and knowingly.) *But see* Hauni Werke Koerber & Co. v. Molins, Ltd., 183 U.S.P.Q. 168, 171 (E.D. Va. 1974) ("Anticipating... the argument that an act of inducement... requires a specific intent... the Court... does not necessarily agree.")

[33] *See* n. 25, *supra,* and accompanying text.

[34] *See* Upjohn Co. v. Italian Drugs Importing Co., 190 F. Supp. 361, 368 (S.D.N.Y. 1961) (president-major stockholder of defendant corporations not personally liable because he in good faith relied on a supporting opinion of counsel). *See also* Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc., 561 F. Supp. 512, 532 (E.D. La. 1981), *aff'd,* 708 F.2d 151 (5th Cir. 1983) ("The evidence before the court indicates that the defendants willfully and deliberately copied the Rivet '785 patent without soliciting advice of counsel." In another portion of the opinion, three defendants, incorporators of the named defendant, were held personally liable for inducing infringement.) Contrast these decisions with *White v. Mar-Bel, Inc.,* 509 F.2d 287, 292-93 (5th Cir. 1975) where the jury found that the infringement was "willful and wanton." The Fifth Circuit held that there was substantial evidence upon which the jury could find the president of Mar-Bel liable for inducing its infringement, reasoning that, "Marshlack's argument that he acted only as president of Mar-Bel *and then only with advice of counsel has a hollow ring.* He was the incorporator, president, majority stockholder, and moving force which resulted in the manufacture of the accused device." *Id.* at 292, (emphasis added). In *Universal Athletic Sales Co. v. American Gym,* 480 F. Supp. 408, 416 (W.D.Pa. 1979), the court found that S. David Brodsky, along with other defendants, had consulted an attorney. Nevertheless, he was held liable "as an inducer of the infringement of this patent..." In *International Mfg. Co. v. Landon, Inc.,* 336 F.2d 723 (9th Cir. 1964), the court upheld the judgment that defendant Rodolfo Jacuzzi, president and sole stockholder of International, was liable for induced infringement without regard to willfulness or reliance on opinion of counsel.

Of course, as a practical matter it makes no difference to one held personally liable whether liability is due to induced or direct infringement. Personal liability apparently always can be grounded in direct infringement because there is not, as yet, any binding authority on whether a supporting opinion of counsel negates liability for direct infringement.[35] Thus, the patentee always retains the option to bring suit under the theory of direct infringement and establish personal liability of the officers or directors, who therefore continue to run the same amount of personal risk.

In addition to personal liability from inducing infringement or where the special circumstances noted above[36] are shown, personal liability can also ensue when the corporate veil is pierced,[37] that is, when the corporation is deemed merely the alter ego of the controlling officer or director.[38]

B. *Piercing the Corporate Veil*

The corporation is designed to limit the personal liability of its shareholders, officers and directors. This is the primary advantage of using the corporate form for doing business. In general, the law allows personal liability to be limited even where the corporation was organized

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[35] *See* n. 22, *supra,* and accompanying text; A. Stucki Co. v. Schwam, 634 F. Supp. 259 (E.D. Pa. 1986), *vacated in part on other grounds,* 638 F. Supp. 1257 (E.D. Pa. 1986) (holding that an opinion of counsel is immaterial to the issue of direct infringement).

[36] *See* ns. 4-10, *supra,* and accompanying text.

[37] *See* R.B. Coolley, *PERSONAL LIABILITY OF CORPORATE OFFICERS AND DIRECTORS FOR INFRINGEMENT OF INTELLECTUAL PROPERTY,* 68 J. Pat. & Trad. Off. Soc'y 228, 235 (1986) ("The liability of an officer or director for infringement is distinct from the liability resulting from piercing the corporate veil.")

[38] In *H C Prod. Co. v. Air Vent, Inc.,* 468 F. Supp. 750, 760 (C.D. Ill. 1979), the court held the president of defendant corporation not personally liable because "[t]here is no proof that Air Vent is the alter ego of Curran." *See also* Milgo Elec. Corp. v. United Business Communications, 623 F.2d 645, 662 (10th Cir. 1980) upholding the lower court's finding that the wholly owned subsidiary of defendant was its alter ego and holding defendant liable for subsidiary's infringement. *Compare* Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1579 (Fed. Cir. 1986) ("To determine whether corporate officers are personally liable for the direct infringement of the corporation under § 271(a) requires invocation of those general principles relating to piercing the corporate veil.")

for the express purpose of avoiding personal liability.[39] Thus it would seem logical that the corporate veil should not be pierced merely because the corporate principals were concerned with avoiding personal liability for infringement at the time of formation, and that something more should be required. The law is, however, not yet settled in this area.

Traditionally, the corporate form could be disregarded, and personal liability imposed, where the formalities involved with maintaining the corporate entity were not followed or where the enterprise was undercapitalized.[40] These justifications for piercing the corporate veil should,

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[39] *See* F.H. O'Neal & G.A. Payne, *O'NEAL CLOSE CORPORATIONS* § 1.10 (1986) ("As a general proposition, shareholders in a close corporation are not personally liable for corporate obligations; and that is true irrespective of whether the obligations arise out of contract or from tort."); Note, *PIERCING THE CORPORATE LAW VEIL: THE ALTER EGO DOCTRINE UNDER FEDERAL COMMON LAW,* 95 Harv. L. Rev. 853, 854 (1982) ("Courts will recognize even incorporation accomplished solely to limit risk, and 'the principle of limited liability remains a dominant characteristic of American corporation law.' "); D.H. Barber, *PIERCING THE CORPORATE VEIL,* 17 Will. L. Rev. 371, 373 (1981) ("Consequently, something more than the shareholders' desire to avoid personal liability must exist to justify piercing the corporate veil."); R.W. Hamilton, *THE CORPORATE ENTITY,* 49 Tex. L. Rev. 979, 982-83 (1971) ("[I]t is well established that shareholder liability will not result even when there is a single shareholder, and the corporation was formed for the specific purpose of limiting or escaping liability. Any other conclusion would make the whole process of incorporation a snare or a delusion."); Note, *Should Shareholders Be Personally Liable for the Torts of Their Corporations?* 76 Yale L.J. 1190, 1191 (1967) ("Even where shareholders have incorporated for the clear purpose of escaping tort liabilities, claims against the firm must be satisfied solely from corporate assets."); B.F. Cataldo, *LIMITED LIABILITY WITH ONE-MAN COMPANIES AND SUBSIDIARY CORPORATIONS,* 18 Law & Contemp. Probs. 473, 475 (1953) ("Limited liability is privilege held out by the corporation law of the state; one who organizes a one-man or family corporation, in compliance with the formalities of that law, for the purpose of attaining limited liability in a commercial venture, is merely taking advantage of a privilege conferred by law.").

[40] *See* F.H. O'Neal & G.A. Payne, *O'NEAL CLOSE CORPORATIONS* § 1.10 (1986) ("Many of the cases in which the courts have disregarded the separate personality of a close corporation and have imposed personal liability on shareholders fall into one of the two following categories: (1) the participants in the enterprise neglected conventional formalities of the corporate ritual (for instance, the holding of shareholders' and directors' meetings) and failed to keep separate corporate books and accounts or otherwise to distinguish between corporate assets and liabilities and those of the shareholders; or (2) the participants failed to provide the corporation with adequate financial resources to conduct business operations of the nature and scope contemplated."); Note, *PIERCING THE CORPORATE LAW VEIL: THE ALTER EGO DOCTRINE UNDER FEDERAL COMMON LAW,* 95 Harv. L. Rev. 853, 855 (1982); D.H. Barber, *PIERCING THE CORPORATE VEIL,* 17 Will. L. Rev. 371,

however, have no peculiar application where the basis for corporate disregard is that the corporation was infringing. On the basis of these tests for corporate disregard, the acts of the officers and directors who direct the infringement are not examined with any particular scrutiny. Rather, it is the acts of those who are responsible for maintaining the corporate formalities and finances which are studied. Thus, the corporate veil should not be pierced more easily in a patent infringement case than where any other sort of business tort is involved.

Adding to the traditional requirements that piercing can take place only where the corporate formalities are not followed or where the enterprise is undercapitalized, a number of recent decisions have further required that the corporate form must be used to perpetrate a fraud, sham, or other inequitable behavior before the corporate form can be disregarded.[41] Under the rule of these more recent decisions, it should be

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374-75 (1981); R.W. Hamilton, *THE CORPORATE ENTITY,* 49 Tex. L. Rev. 979, 985 (1971); Note, *Should Shareholders Be Personally Liable for the Torts of Their Corporations?* 76 Yale L.J. 1190, 1193-95 (1967).

[41] *See* Note, *PIERCING THE CORPORATE LAW VEIL: THE ALTER EGO DOCTRINE UNDER FEDERAL COMMON LAW,* 95 Harv. L. Rev. 853, 855 (1982) ("First, there must be 'such unity of interest and ownership that the separate personalities of the corporation and the individual no longer exist.' Second, it must be true that, 'if the acts are treated as those of the corporation alone, an inequitable result will follow.' "); D.H. Barber, *PIERCING THE CORPORATE VEIL,* 17 Will. L. Rev. 371, 374-75 (1981) ("In locating the point where encouragement of business development is overshadowed by the public interest in protecting those who deal with the corporation, the courts have required that the party seeking to pierce the corporate veil satisfy a two-prong test: '(1) that there must be such unity of interest and ownership that the separate personalities of the corporation and the individual [shareholders] no longer exist; and (2) that, if the acts are treated as those of the corporation alone, an inequitable result will follow.' "); T.V. Harris, *WASHINGTON'S DOCTRINE OF DISREGARD,* 56 Wash. L. Rev. 253, 258 (1981) ("The Washington Supreme Court has indicated that both of the following elements must be proved before the corporate entity will be disregarded: (1) That there is such a commingling of property rights or interests as to render it apparent that the corporation and some other entity were intended to function as one; (2) That to regard the corporation and the other entity as separate would aid the consummation of a fraud or wrong upon others."); R.W. Hamilton, *THE CORPORATE ENTITY,* 49 Tex. L. Rev. 979, 983 (1971) ("[L]iability must be based on two factors: first, 'a substantial identity of interest and ownership' between the corporation and the shareholder, and secondly, 'the danger that the corporate form is being used or will be used to achieve an inequitable result.' ") *Compare* Milgo Elec. Corp. v. United Business Communications, 623 F.2d 645, 662 (10th Cir. 1980) ("Most of the cases have involved fraud or a more blatant commingling than the instant case; but proof of fraud is not a necessary element in finding alter ego. *E.g., DeWitt Truck Brokers, Inc. v. W. Ray Flemming Fruit Co.,* 540 F.2d 681, 684 (4th Cir. 1976).")

even more difficult to pierce the corporate veil in a patent case. Directing infringement seems completely unlike the perpetration of a "fraud or sham." Directing infringement is, at worst, the knowing commission of a tort, which should not warrant disregard of the corporate form.

Where there is reliance upon a well-founded opinion of counsel that the patent is invalid or not infringed, infringing activity could never be deemed the perpetration of a "fraud or sham".[42] Under the rule of the more recent decisions, which require "fraud or sham," there can be no corporate disregard without knowledge or intent.[43] As discussed above, an opinion of counsel negates the intent to infringe. The corollary from the rule of the more recent decisions, therefore, is that a supporting opinion of counsel should always prevent piercing of the corporate veil, because it negates intent and prevents the perpetration of a "fraud or sham."

The recent trend of requiring "fraud, sham, or inequitable conduct," which would make piercing of the corporate veil more difficult, is tempered by the suggestion of some commentators that such a requirement is improper in tort cases. Since the plaintiff in a tort case — unlike his counterpart in a contract case — has engaged in no prior dealings with the corporation, he has had no opportunity to assess the financial soundness of the corporation or the degree of compliance with the corporate formalities. They argue that it is illogical to require disregard of corporate formalities (the first prong of the "alter ego" test) as a prerequisite to piercing,[44] and that the corporate veil should be pierced in a tort case even where all corporate formalities have been followed.

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[42] *See Milgo Elec. Corp. v. United Business Communications,* 623 F.2d 645, 662 (10th Cir. 1980) upholding the lower court's finding that the wholly owned subsidiary of defendant was its alter ego. It was noted elsewhere that defendant made no effort to secure an opinion from patent counsel as to whether its products were infringements. *Id.* at 666.

[43] In general "fraud" (or "misrepresentation") within the meaning of the common law requires intent or reckless disregard of the truth. W.P. Keeton et al., *PROSSER AND KEETON ON THE LAW OF TORTS,* 5th Ed., § 107 (1984). Fraud or inequitable conduct, as those terms are used with respect to actions taken by an applicant for patent, requires a balancing of intent against materiality. *See* American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1364 (Fed. Cir. 1984). *See also* authorities cited, n. 22 *supra,* and accompanying text for the proposition that an opinion of counsel negates willful infringement.

[44] *See* D.H. Barber, *PIERCING THE CORPORATE VEIL,* 17 Will. L. Rev. 371, 381 (1981). *See also* B.F. Cataldo, *LIMITED LIABILITY WITH ONE-MAN COMPANIES AND SUBSIDIARY CORPORATIONS,* 18 Law & Contemp. Probs. 473, 477 (1953).

Though the commentators have advocated this position for many years,[45] it has not been embraced by the courts.[46] Its application to patent cases would seem particularly perverse, because infringement is essentially a *business* tort causing only loss of profits. It does not result in an uncompensated personal injury, the evil against which the commentators have railed.[47] Thus, there is no sound reason to increase the ease with which the corporate form can be disregarded in a patent case by, for example, abolishing the usual requisite that the corporate formalities must be overlooked.

One commentator indicates that the corporate form should be disregarded more easily in patent cases than when state or common law torts are involved.[48] The reasoning is that the federal patent law is supreme and the states, under whose authority the corporation exists, lack the power to defeat federal policy by shielding the responsible parties from liability.[49] This reasoning could be a basis for easily permitting piercing in a patent case. However, this commentator also acknowledges that except when state law is hostile or contradictory to an applicable federal statute, the state law should be adopted as the federal rule of decision.[50]

It is clear that state corporation law does not contradict the federal patent statutes.[51] Each body of law is independent and the two can coexist without conflict. Thus, when the issue is piercing the corporate veil in a patent case, the state corporation law is to be adopted and awarded full dignity. There is, therefore, no sound reason to disregard the corporate form more readily in patent cases than where non-federal causes of action are involved.

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[45] *See, e.g.*, Note, *Should Shareholders Be Personally Liable for the Torts of Their Corporations?* 76 Yale L.J. 1190 (1967). *See also* B.F. Cataldo, *LIMITED LIABILITY WITH ONE-MAN COMPANIES AND SUBSIDIARY CORPORATIONS*, 18 Law & Contemp. Probs. 473, 477 (1953).

[46] *See* D.H. Barber, *PIERCING THE CORPORATE VEIL*, 17 Will. L. Rev. 371, 381-82 (1981).

[47] *See, e.g.*, Note, *Should Shareholders Be Personally Liable for the Torts of Their Corporations?* 76 Yale L.J. 1190 (1967).

[48] Note, *PIERCING THE CORPORATE LAW VEIL: THE ALTER EGO DOCTRINE UNDER FEDERAL COMMON LAW*, 95 Harv. L. Rev. 853 (1982).

[49] *Id.* at 856-57.

[50] *Id.* at 859.

[51] It is for this reason that, as the commentator notes, there has been no consistency in the application of the alter ego doctrine in patent cases. Note, *PIERCING THE CORPORATE LAW VEIL: THE ALTER EGO DOCTRINE UNDER FEDERAL COMMON LAW*, 95 Harv. L. Rev. 853, 859-60 (1982).

Finally, it must be noted that the Federal Circuit has recently stated that determining personal liability for infringement involves the same general principles as does piercing the corporate veil.[52] However, it has been explained above that personal liability for direct infringement involves completely different tests than does piercing, where failure to comply with corporate formalities and/or the degree of undercapitalization are the primary concerns. It is, therefore, difficult to determine whether by this statement the court intended to expand the scope of actions justifying the imposition of personal liability, or to contract them.

A difficult question remains: to what extent are decisions finding personal liability for violations of non-patent intellectual property rights applicable by analogy?

III. DISTINGUISHING DECISIONS WHERE PERSONAL LIABILITY WAS FOUND FOR VIOLATIONS OF OTHER TYPES OF INTELLECTUAL PROPERTY RIGHTS

A. *Trademark Infringement and Unfair Competition*

In an early decision holding the president of a defendant corporation not personally liable for unfair competition and trademark infringement, the court indicated that a "special showing" was needed to extend liability to corporate officers.[53] Later decisions, however, held that personal liability could be established if the officer was the "moving, active conscious force behind [the defendant corporation's] infringement,"[54] or if

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[52] *See* Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1579 (Fed. Cir. 1986).

[53] Smith v. Dental Prod. Co., 140 F.2d 140, 150 (7th Cir. 1944), quoting, Dangler v. Imperial Mach. Co., 11 F.2d 945, 947 (7th Cir. 1926).

[54] *See* Polo Fashions, Inc. v. Branded Apparel Merchandising, Inc., 592 F. Supp. 648, 652 (D. Mass. 1984); *see also* Donsco, Inc. v. Casper Corp., 587 F.2d 602 (3d Cir. 1978) (unfair competition); Jewish Employment & Vocational Serv., Inc. v. Pleasantville Educ. Supply Corp., 220 U.S.P.Q. 613, 625 (E.D. Pa. 1982) ("It is clear that Charles Kass was the driving force behind Pesco and either authorized or approved the acts of unfair competition which form the basis of Pesco's liability.").

he "personally committed, induced, directed or contributed" to the infringement.[55] Since the very nature of a small, closely held corporation requires that the officers take an active part in all of the activities of the corporation, such holdings result in virtually automatic liability of such officers. Indeed, several courts have adopted a rule that proximates unquestioned personal liability for officers, directors and shareholders, particularly when the infringing entity is a small concern.[56] While no opinion is offered here on whether personal liability should be so broadly imposed in trademark/unfair competition cases, there are good reasons not to extend this "unquestioned liability" standard to patent law.

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[55] Klitzner Ind., Inc. v. H.K. James & Co., 223 U.S.P.Q. 813, 814 (E.D. Pa. 1983) (Complaint for copyright infringement, unfair competition, and violation of the National Stamping Act, 15 U.S.C. §§ 291 et seq.)

[56] *See* Transgo, Inc. v. Ajac Transmission Parts Corp., 225 U.S.P.Q. 458 (9th Cir. 1985) (President and sole stockholder of defendant corporation held personally liable for "passing off." The court stated that a corporate "officer or director is, in general, personally liable for all torts which he authorizes or directs or in which he participates, notwithstanding that he acted as an agent of the corporation and not on his own behalf."); Mead Johnson & Co. v. Baby's Formula Serv., Inc., 402 F.2d 19, 23 (5th Cir. 1968) (Trademark infringement: "It is infringed when an individual performs the act or does the things that the patent or trademark law protects against. The fact that the persons thus acting are acting for a corporation... does not relieve the individuals of their responsibility."); Polo Fashions, Inc. v. Extra Special Prod., Inc., 208 U.S.P.Q. 421, 426 (S.D.N.Y. 1980) (Trademark infringement and unfair competition: "Marks is liable as a participant in a wrongful act...") Polo Fashions, Inc. v. BDB, Inc., 223 U.S.P.Q. 43, 44 (S.D. Cal. 1983) (Trademark infringement: "A corporate officer is individually liable for the torts he commits, and he cannot shield himself behind the corporate veil."); Max Daetwyler Corp. v. Input Graphics, Inc., 541 F. Supp. 115, 117 (E.D. Pa. 1982) ("Since plaintiffs' proposed second amended complaint, if read liberally, asserts that the individual corporate officers were to some extent personally involved in their corporate employers' allegedly tortious acts of unfair competition, they may be named as co-defendants with the corporate defendants..."); Steak & Brew, Inc. v. Makris, 177 U.S.P.Q. 412, 413-14 (D.C. Conn. 1973) ("All persons thus participating in the unlawful infringement of a trademark may be liable even though merely acting as officers of a corporation.").

Though courts often use patent cases as precedent for finding personal liability for trademark infringement or unfair competition,[57] there seems little concern in these decisions with whether the parties held liable intended to act unlawfully.[58] This disregard is logical because trademark infringement and "passing off" do not involve the complex issues of fact and law presented in patent cases.[59] Instead, these torts, like the personal torts, involve concepts which are more easily understood. Therefore, where trademark infringement or unfair competition are at issue, intent can be imputed to individuals within the infringing entity by virtue of their having performed (or authorized) the unlawful acts, if such individuals were aware of the existence of the rights infringed upon. In contrast, the complexity of patent law negates knowledge that infringing actions are illegal, particularly if there is a supporting opinion of counsel. Thus the interests of fairness, when the complexity of patent law is taken into account, demand isolation from patent law of those trademark/unfair competition decisions in which personal liability was found without any "special showing."[60]

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[57] *See, e.g.,* Mead Johnson & Co. v. Baby's Formula Service, Inc., 402 F.2d 19, 23 (5th Cir. 1968) ("There can be no doubt but that a trademark, like a patent, can be infringed by an individual."); Saxlehner v. Eisner, 147 F. 189, 190-91 (2d Cir. 1906); Breese v. Tampax, Inc., 42 F. Supp. 115, 116-17 (S.D.N.Y. 1941) *See also* M. Feuer, *Personal Liabilities of Corporate Officers and Directors* 2d ed. at 195 (1974) ("The principles pertaining to liability by an officer or director in [trademark, unfair competition, and copyright] cases are similar to those applicable in cases of patent infringement by the corporation. In fact the cases are indiscriminately cross-cited.").

[58] A decision where the court adverted to intent was *Donsco, Inc. v. Casper Corp.,* 587 F.2d 602 (3d Cir. 1978), where it said that: "The [lower] court also found that Pinsker was the only manufacturer of penny banks using such a certificate of authenticity in connection with its products." *Id.* at 606. *See also* Solo Cup Co. v. Paper Mach. Corp., 359 F.2d 754, 760 (7th Cir. 1966) (Intent adverted to where personal liability found for unfair competition resulting from improper use of trade secrets.) Note that the lack of intent to infringe a patent is considered an important factor in deciding personal liability for patent infringement. *See* n. 22, *supra,* and accompanying text for the proposition that an opinion of counsel negates personal liability for direct infringement; ns. 31-36, *supra,* and accompanying text for the proposition that it also negates liability for induced infringement.

[59] *See* n. 23, *supra,* and accompanying text for the proposition that patent cases present some of the most complex questions in law.

[60] Note that the court in *A. Stucki Co. v. Schwam,* 634 F. Supp. 259 (E.D. Pa. 1986), *vacated in part on other grounds,* 638 F. Supp. 1257 (E.D. Pa. 1986) relied on certain trademark cases which imposed the personal liability without mention of intent or knowledge, in holding that the president, 50% owner and director of the infringing corporation was liable "without regard to his specific intent or knowledge." *Id.* at 265.

Trademark cases which support an expansive imposition of personal liability do not address whether an opinion of counsel prevents personal liability,[61] and thus do not support imposing personal liability where there is a supporting opinion. Trademark cases in which personal liability was found cannot, therefore, be extended to support imposition of personal liability in a patent case in which there is an opinion that the patent is invalid or not infringed.

B. *Copyright Infringement*

Corporate officers can be found liable for copyright infringement in a wider variety of circumstances than have traditionally justified imposing personal liability for patent infringement.[62] Indicia of knowledge or intent often are not required.[63] Not requiring such indicia is logical, because a legal conclusion of copyright infringement can only be reached upon showing copying by the defendant.[64] In other words, the test for

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[61] None of the cases reviewed made any reference to an opinion of counsel.

[62] *See* 3 M.B. Nimmer, *NIMMER ON COPYRIGHT* § 12.04[A] (1986) ("If a corporation commits an act of infringement, its individual officers . . . will be liable as related defendants if there is a substantial and continuing connection between them and the corporation with respect to the infringing acts. Thus an officer of an infringing corporation will be personally liable if . . . he derived financial benefit from the infringing activities either as a major shareholder or through other means . . . The fact that a corporate officer or director has not exceeded his corporate authority will not immunize him from personal liability if by his decision, order or vote he causes acts of infringement to occur.").

[63] *See, e.g.*, Shapiro, Bernstein & Co. v. H.L. Green Co., 316 F.2d 304, 308 (2d Cir. 1963) (Defendant company held liable for infringements committed by its concessionare: "The imposition of liability upon the Green Company, even in the absence of an intention to infringe or knowledge of infringement, is not unusual.") *See also* Boz Scaggs Music v. KND Corp., 491 F. Supp. 908, 914 (D. Conn. 1980) ("The imposition of vicarious liability on a controlling individual, even in the absence of any knowledge of infringement, is premised on the belief that the defendant 'is in a position to police the conduct of the 'primary' infringer.' "). Contrast this with the requirement in patent cases that there be personal, willful, deliberate and knowing, or active participation in the infringement; that the accused officers or directors "actively aid and abet their corporations infringement," are the "moving force" behind it; that they induce the corporation to infringe, or otherwise further infringement. *See* ns. 6-12, *supra*, and accompanying text.

[64] *See* 3 M.B. Nimmer, *NIMMER ON COPYRIGHT* § 13.01 (1986) ("Reduced to most fundamental terms, there are only two elements necessary to the plaintiff's case in an infringement action: ownership of the copyright by the plaintiff, and copying by the defendant.").

infringement requires proof that someone performed acts indicative of bad faith.[65] It would therefore be redundant to require indicia of knowledge or intent (as is generally needed to make out personal liability for patent infringement) in order to establish personal liability for copyright infringement.

Thus the decisions where indicia of knowledge or intent were not required to establish personal liability for copyright infringement[66] are not applicable to patent law. The knowledge or intent generally requisite to imposing personal liability in patent cases should not be eliminated based on the fact that it is not specifically mentioned in copyright infringement cases. It is impliedly present whenever copyright infringement is found. The general premise should still hold true, *i.e.*, to the extent that an opinion of counsel negates knowledge or intent, it should prevent imposition of personal liability in a patent case.

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[65] Contrast this with patent infringement, where copying, intent, or knowledge is not requisite to a prima facie case. *See* 35 U.S.C. § 271(a) ("Except as otherwise provided in this title, whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent."); 4 D.S. Chisum, PATENTS § 6.02[2] (1986) ("One making, using or selling matter covered by a patent without authority of the owner infringes regardless of knowledge or intent. . . "); Blair v. Westinghouse Elec. Corp., 291 F. Supp. 664, 670 (D.D.C. 1968) ("It is, of course, elementary, that an infringement may be entirely inadvertent and unintentional and without knowledge of the patent. In this respect the law of patents is entirely different from the law of copyright.").

[66] *See, e.g.*, Shapiro, Bernstein & Co. v. H.L. Green Co., 316 F.2d 304, 308 (2d Cir. 1963); Wihtol v. Wells, 231 F.2d 550, 554 (7th Cir. 1956) ("Wells was the dominant influence in the corporation and, in fact, ran its affairs."); Lauratex Textile Corp. v. Allton Knitting Mills, Inc., 517 F. Supp. 900, 904 (S.D.N.Y. 1981) ("[W]e find that Levine is individually liable because he had control over and a financial interest in the infringing activity and because he personally participated in that activity."); Southwestern Bell Tel. Co. v. Nationwide Indep. Directory Serv., Inc., 371 F. Supp. 900, 907 (W.D. Ark. 1974) (Holding the sole officers, directors, stockholders and employees liable: "Officers or directors of a corporation guilty of infringement are individually liable if personally participating in the acts constituting infringement or if they are sole shareholders."); Warner Bros.-Seven Arts, Inc. v. Kalantzakis, 326 F. Supp. 80, 82 (S.D. Tex. 1971) (Defendant held jointly liable with the corporation: "Evidence was also presented that defendant Kalantzakis had been notified several times. . . that he had been and was infringing plaintiffs' copyrights. Despite these warnings, defendant Kalantzakis took no corrective action."); Tempo Music, Inc. v. International Good Music, Inc., 143 U.S.P.Q. 67, 69 (W.D. Wash. 1964) ("I also find the defendant Rogan Jones, who is and has been the dominant influence in defendant International Good Music, Inc., and who has determined its policies for more than 25 years, is equally liable with the corporation for these infringements.") *aff'd sub nom*, K-91, Inc. v. Gershwin Publishing Corp., 372 F.2d 1 (9th Cir. 1967).

Further, decisions imposing personal liability for copyright infringement have no application to patent cases because, once again, the complex issues of fact and law which arise with patent infringement are not present. The only real issues in a copyright infringement action are whether plaintiff owned the copyright and whether defendant copied it.[67] A defendant can determine whether he authorized or directed the copying of copyrighted matter without assistance of counsel. Therefore, while it is not clear whether a supporting opinion should be an absolute bar to personal liability in copyright cases, the complexity of patent cases forces the conclusion that an opinion should have that effect.

It is also apparent that copyright decisions in which personal liability was founded upon vicarious liability, and intent or knowledge was not required, should not be extended to render officers and directors personally liable in patent cases where induced infringement is the issue.[68] An expansive reach of vicarious liability within the meaning of the copyright law was provided for by Congress.[69] In contrast, liability for

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[67] *See* n. 64, *supra,* and accompanying text.

[68] *See, e.g.,* Shapiro, Bernstein & Co. v. H.L. Green Co., 316 F.2d 304, 308 (2d Cir. 1963) (Defendant company held liable for infringements committed by its concessionare: "The imposition of liability upon the Green Company, even in the absence of an intention to infringe or knowledge of infringement, is not unusual."); Adventures In Good Eating, Inc. v. Best Places To Eat, Inc. 131 F.2d 809 (7th Cir. 1942); Varnon v. Santa Fe Reporter, Inc., 218 U.S.P.Q. 716 (D.N.M. 1982); Boz Scaggs Music v. KND Corp., 491 F. Supp. 908, 914 (D. Conn. 1980) ("The imposition of vicarious liability on a controlling individual, even in the absence of any knowledge of infringement, is premised on the belief that the defendant 'is in a position to police the conduct of the 'primary' infringer.' ").

[69] 17 U.S.C. § 106 provides that:

> Subject to sections 107 through 118, the owner of copyright under this title has the exclusive right to do and to authorize any of the following:
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> (1) to reproduce the copyrighted work in copies of phonorecords;
> (2) to prepare derivative works based upon the copyrighted work;
> (3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
> (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly; and
> (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly.

Professor Nimmer notes that: "Use of the phrase 'to authorize' was intended to establish the vicarious liability as a contributory infringer (or related defendant) of one who does no more than cause or permit another to engage in an infringing act."

inducing infringement only extends to one who "actively induces infringement."[70] It is clear that by the use of the adverb "actively," the patent statute contemplates a narrower scope of illegal activities than mandated by the language of the Copyright law, 17 U.S.C. § 106.

Moreover, induced infringement can usually be established only where there is some specific intent.[71] The copyright law has no analogous requisite to establishing vicarious liability. Thus to the extent that an opinion negates specific intent it should prevent imposition of personal liability for inducing patent infringement, notwithstanding any contrary indications in the copyright law.

CONCLUSION

The current state of the law is such as to threaten personal liability of virtually every president or CEO of a small corporation found to have infringed a patent, while exempting officers of large corporations. The officers of a small corporation necessarily have a direct hand in the decision making and day-to-day affairs of the corporation, since that is the only way it could do any business. In a large corporation, the duties and responsibilities of running the business are spread over a large number of other officers, employees and agents, often through many levels of a hierarchy, so that the president or CEO may not have participated in or even been aware of the infringement. Even if he were aware of it, he may not have directed any other officers, agents or employees to commit infringing acts.[72] This differentiation between large and small

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3 M.B. Nimmer, *NIMMER ON COPYRIGHT* § 12.04[A] (1986), citing, H.R. Rep. No. 94-1476, 94th Cong., 2d Sess. (1976) at p. 61.

[70] 35 U.S.C. § 271(b).

[71] *See* n. 32, *supra,* and accompanying text for the proposition that induced infringement under 35 U.S.C. § 271(b) requires intent or scienter.

[72] In *United States Phillips Corp. v. National Micronetics, Inc.*, 410 F. Supp. 449 (S.D.N.Y. 1976), *aff'd,* 550 F.2d 716 (2d Cir. 1977), the corporation was large enough for the corporate officer to avoid personal liability for patent infringement. The court noted that:

> Buoymaster is a large shareholder in Micronetics, although by no means a majority shareholder, and serves on the four man Board of Directors which manages the corporation.... The evidence shows only that Buoymaster was the chief administrative officer of the corporation. As such he was involved in the business aspects of corporate affairs and not in the technical production phase.... *He in no way directed or instigated the infringing method of manufacture.*

Id. at 468, (emphasis added). *See also Monolith Portland Midwest Co. v. Kaiser Aluminum & Chem. Corp.*, 267 F. Supp. 726, 787 (S.D. Cal. 1966), *aff'd as modified,* 407 F.2d 288 (9th Cir. 1969) (Individual defendants not held liable for contributory infringement).

corporations for determining liability of officers for patent infringement is inherently unfair.

The recent decision of *A. Stucki Co. v. Schwam*[73] — holding that reliance on advice of counsel is not material to personal liability of an officer — makes it impossible for the small businessman to protect himself from personal liability. The complexity of patent law sometimes makes it difficult for him to determine if he is infringing — or whether the patents in question are valid or invalid. If he makes a good faith effort to ascertain answers through counsel, and is given the go-ahead to proceed, he is still liable if counsel's advice proves erroneous. In effect, the rule of *Stucki* renders obsolete the notion that one can limit personal liability through incorporation. This "modern" result is an anachronism. The concept of limited corporate liability has been hailed by some scholars as "by far the most effective legal invention... made in the nineteenth century."[74]

What should be disturbing to officers of large corporations is the continued expansion of the reach of personal liability. As was noted at the outset, it cannot be long before those officers also come within its grasp. It appears that a concerted effort by all concerned parties is required to halt, and perhaps cut back, the growth in personal liability for patent infringement.

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[73] *See* n. 24, *supra.*

[74] B.F. Cataldo, *LIMITED LIABILITY WITH ONE-MAN COMPANIES AND SUBSIDIARY CORPORATIONS,* 18 Law & Contemp. Probs. 473 (1953), quoting President Eliot of Harvard; also quoting President Nicholas Murray Butler of Columbia, "I weigh my words when I say that in my judgment the limited liability corporation is the greatest single discovery of modern times.... Even steam and electricity are far less important than the limited liability corporation, and they would be reduced to comparative impotence without it."