

“Top Ten Intellectual Property Cases of the Federal Circuit 1982-2002,” Twentieth Anniversary Judicial Conference of the Court of Appeals for the Federal Circuit, Washington, D.C., April 8, 2002.

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\*548 UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT 20TH ANNIVERSARY JUDICIAL CONFERENCE

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*“A Salute to the Federal Circuit”*

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PATENT AND TRADEMARK BREAKOUT SESSION

MR. SWAIN: Thank you and welcome to the Patent & Trademark Breakout Session.

We are very fortunate this afternoon to have as our principal speaker, the pre-eminent scholar and commentator in the field of patent law Professor Donald S. Chisum, the Inez Mable Professor of Law at Santa Clara University School of Law in California.

Perhaps most of us know him, though, as the author of the treatise on Patent Law, which was first published in 1978. In preparing to introduce Professor Chisum, I went back and looked at Volume One of Chisum on Patents, which I think is now 16 volumes. I looked at the preface that he wrote to his treatise 25 years ago, and at that time, this was 1978, he singled out three individuals who loom large in the history of patent law—Justice Joseph Story, who wrote many patent opinions in the 19th century for both the Circuit Court of Massachusetts and then the United States Supreme Court; Professor William Robinson, who published his notable treatise on patents in 1890; and third, Judge Learned Hand, who wrote so many important and eloquent patent opinions during his 50 plus years upon the federal bench.

And now, to that eminent list of three noble figures, I think, it's fair to add a fourth name, and that's the institution of the United States Court of Appeals for the Federal Circuit, which has had an equally profound influence on the intellectual property laws of this country.

So now ladies and gentlemen, please welcome Professor Donald Chisum, who will address his list of the Top 10 intellectual property decisions of the Federal Circuit. Professor Chisum.

(Applause.)

PROFESSOR CHISUM: It is a privilege, an honor, and a pleasure to address this Honorable Court with so many distinguished members of the bar. This Court's decisions concerning patent, trademark and other related issues over the past 20 years have had a major impact, not only on the law and the legal system, but also on the national and global economy.

\*718 Wait, did I say 20 years? In fact, this Court came into being on October 1, 1982. It's now early April 2002, by my count, that's 19.5 years—19.5 meets this Court's standards for substantially 20?

(Laughter.)

PROFESSOR CHISUM: About 20? Certainly not at least about 20, an equivalent to 20? Is there an estoppel out there? Nineteen years ago, it held its first judicial conference. Anyway, so many decisions; so little time.

Here is what time does allow. First, I want to address just briefly some of the Federal Circuit's decisions on Trademark law, and then review the Top 10 cases concerning patents.

This Court's influence on trademark law cannot compare with its influence on patent law. The Court has appellate jurisdiction over decisions by the Patent and Trademark Office on applications and interparty matters. The regional circuits continue to hear numerous cases concerning trademark infringement and unfair competition.

Yet, this Court has played, and will continue to play, a significant role in interpreting and applying trademark law in an era of rapid and fundamental changes. These changes are both in the marketplace, for example, with the development of the internet, and in the government statute, the Lanham Act, which has been amended to include important new provisions such as intent to use applications and rights against dilution.

Forced by time to pick just a few decisions, I would single out the Court's influence on registrable subject matter because its decisions signaled the end of arbitrary exclusions.

For example, in the 1985 Decision, *In Re Owens Corning Fiberglass*, (774 F.2d 1116, 1120, 227 USPQ 417, 419 (Fed.cir. )) the Court in a thorough opinion, rejected the traditional rule that color alone could not be a trademark. Rather, color could be a registerable trademark, if it is, in fact, used as a source designator and is not functional.

Other appeals courts disagreed, but in the 1995 decision *Qualitex v. Jacobson* in the USPQ 2D 1161 (1995), the Supreme Court endorsed this Court's approach to that question.

One of the most critical issues today for trademark and unfair competition law is functionality, especially with regard to designs, packaging, and product configurations, things that are called "trade dress." Here, again, this Court has been a player. In a 1982 decision, just prior to this Court's coming into existence, one of its predecessors, the Court of the Customs and Patent Appeals, *In Re Morton-Norwich Products* 514 U.S. 159, 34 (671 F.2d 1332, 213 USPQ 13 (CCPA 1982)) held that the pistol-grip, contoured spray bottle of Fantastik cleaning fluid was not functional. In an opinion by Judge Rich, the Court carefully distinguished de facto and de jure functionality. Important to functionality were the availability of alternative designs and the ability of others to compete effectively without using the design. This Court later addressed functionality on numerous occasions. For example, in the 1994 decision, *Brunswick v. British Seagull* (35 F.3d 1527, 32 USPQ 2d 1120 (Fed.Cir. 1994)), it held that the color black was functional for outboard motors for boats, even though, of course, the color did not affect the motor's mechanical purpose. It was functional for two reasons. \*719 First, black exhibits color compatibility with a wide variety of boat colors. And second, black has the ability to make objects appear smaller.

Meanwhile, among the regional circuits, increasingly in the 1990s, and in this Century, chaos reigned with regard to trade dress protection, especially with regard to functionality. The Supreme Court decided to take matters into its own hands. First, there was the 2000 decision in *Wall Mart v. Samara Bros.*, 529 U.S. 205, 54 USPQ 2d 1065 (2000), where the Court held that a product's design was protectible only upon a showing of secondary meaning. It could not be per se, inherently, in other words, distinctive. Then, in the 2001 *Traffix Devices v. Marketing Displays* (532 U.S. 23, 58 USPQ 2d 1001 (2001)) case, the Supreme Court addressed functionality in the context of trade dress design that had been claimed in an expired utility patent. Traffix articulated a standard of non-functionality that, some would argue, de-emphasized the factors of "competitive necessity" and available alternatives. Those factors had been given great weight by prior lower Court decisions, including this Court's Morton-Norwich decision. But in a very recent decision of this Court in *Valu Engineering v. Rexnord* (278 F.3d 1268, 61 USPQ 2d 1422 (Fed.Cir. 2002)), this Court held that the Supreme Court's decision in Traffix did not alter the basic *Morton-Norwich* analysis. Somehow, I think we're bound to hear more on this

subject.

Now let's turn to this Court's jurisprudence relating to patent law. At first, I'll start with a global comment. Because if it's a global comment, it will undoubtedly estop me from all the rest of my comments being adverse to this global comment.

The legislative history of the statute creating this Court was quite clear that one purpose was to achieve doctrinal stability and, thereby, to increase certainty with regard to patent rights and, thereby, to decrease the volume and expense of patent litigation. In particular, many companies supported the creation of this Court to that end.

What has been the 20 or 19.5 year history? Has patent litigation moderated in volume and expense? Obviously not. Patent litigation is much worse. Indeed, a major law firm advertises in television commercials about its prowess in patent litigation. One of the most precious resources in the law the time of our United States district judges is spent on patent cases to an extent not seen since at least the late 19th Century.

It would be false and naive to suggest that somehow this Court fell short of a Congressional mandate.

First, fundamentally, whatever Congress intended, the judges of this Court have no mandate other than to decide cases and controversies, according to the Constitution, laws, and treaties of the United States. They are, after all, Article III judges.

Second, Congress' hope of stemming patent litigation was doomed. I'm reminded, actually, of an often invoked image of King Canute-remember King Canute? He was reputed to have commanded the tides to recede. Actually, history, rather than legend, teaches that Canute was not such a fool. He came from Denmark to England and brought much needed peace, but his subjects became too flattering of him. So to teach them a lesson, he took them to the beach and duly ordered the tides to stop. The tides came \*720 in, and the subjects almost drowned. So Canute pointed out: "the power of kings is empty"-a wise person.

The geometric increase in the potential economic value of intellectual property rights and technologies, together with the inherent difficulty of adjusting the patent system to provide rights appropriate in scope and clarity doomed the dream of less patent litigation. Before criticizing this Court on that ground, consider the question: Would there have been less litigation or less uncertainty if this Court had not been created? The answer must be no. For example, some argue that the pre-1982 regional circuits held most patents invalid. If that had continued, then, of course, there would be fewer patents and less litigation. That condition would certainly not have continued because political and economic conditions changed during the 1980s and 1990s. New judges, massive investment in new technologies, increasing international competition: these and other developments would have had eviscerated or vitiated, one of those words, the judicial hostility towards patents that was evident in the 1960s and 1970s. So with that global comment, let's turn to the Top 10 patent cases from 1982 to 2002, starting, of course, with No. 10.

Number 10 is the 1989 decision, *MCV v. King-Seeley Thermos* (870 F.2d 1568, 10 USP1Q 2d 1287 (Fed.Cir. 1989)). The subject is correction of inventorship on issued patents. The problem can be simply put: patent is issued naming A as inventor. It's assigned to A's employer, Company

C. Later, B, a stranger to C asserts that she made a contribution to the invention claimed in the patent and that she should be named as a joint the sole inventor. C disagrees.

Prior to the 1952 Patent Act and the enactment of Section 256, the law was clear on two rules. First, if B were truly a joint inventor, the patent was invalid even if B, A and C were all agreed on an inventorship correction. The second rule was that B could not bring any independent action to “march onto” the patent to acquire an ownership interest in the patent.

Section 256 clearly changed the *first* rule. It was intended to authorize inventorship corrections, either by application to the Patent and Trademark Office or on order of a Court, so as to save the validity of the patent if an inventorship error had occurred without deceptive intent. However, there is no legislative history or even any strong textual support for the view that Section 256 was meant to change the *second* rule. In fact, if you look at the language of 256, it talks, in the second paragraph, about an error not “invalidating,” a patent that could be corrected. Then it goes on to empower Court “before which such a matter is called into question to order correction.” The “matter” referred to is the potential invalidity of the patent, raised either in an infringement suit or in a declaratory judgment action.

That Section 256 was not meant to authorize inventorship contests is supported by the overall structure of the 1952 Act. Persons such as B, like any other inventor or co-inventor, were expected to file timely patent applications. Section 116, for example, authorizing B to file a joint application, naming A and B, even if A refuses to join. If necessary, the Patent and Trademark Office can declare an interference to clarify which of the \*721 two applications claiming the same invention should issue. Section 135(b) bars a person such as B, in an A-B application from claiming the same invention as that claimed in an issued patent, such as that to A, unless that claim is made within one year.

In *MCV*, this Court held otherwise. It not only recognized a cause of action for involuntary inventorship correction; it also held that the statute created subject-matter jurisdiction in a federal court. This holding cast a new cloud over the ownership of any patent. An owner can never know for sure whether or not there is a B out there.

Many decisions of this Court have since addressed issues arising in the application of Section 256 inventorship contests.

First, consider the question of delay and the defenses of laches and estoppel. Given the consequences to the owner of a patent, one would expect that an omitted inventor should be bound to act equitably and with diligence. In *MCV*, the Court held that the omitted inventor, an independent consultant, was equitably estopped. He had inquired about his omission from the patent. He was told that it was company policy to only name company employees on patents, a policy which is, of course, clearly contrary to the law. He chose to take no action because he had a business relationship with the company. So the Court said he was equitably estopped.

Later decisions ruled against claims of laches based on delay when the omitted inventor had no actual knowledge of the patent. For example, in the 1993 decision in *Advanced Cardiovascular Systems v. Sci Med* (988 F.2d 1157, 26 USPQ, 2d 1038 (Fed.Cir. 1993)), the Court held that the district court made an error in measuring the delay from the date the patent issued. Generally, the

issuance of a patent is constructive notice to everyone, but the Court refused to apply that concept to inventorship correction.

Now that I've mentioned laches and estoppel, I must also mention the monumental opinion of this Court en banc on the subject in *A.C. Aukerman v. Chaides Constr. Co.* (960 R.2d 1020, 22 USPQ 2d 1321 (Fed. Cir. 1992) (en banc)). This Court described in detail the elements of those defenses to patent infringement charges. One cannot summarize the late Judge Nie's opinion. One must read it.

Back to the inventorship correction, two other decisions illustrate the unsettling nature of a Section 256 action. In the 1998 decision, *Ethicon v. United States Surgical* (135 F.3d 1456, 45 USPQ 3d 1545 (Fed.Cir. 1998)), the Court held that a person's inventive contribution to two of multiple claims in a patent presumptively gave that person an undivided ownership interest in the patent. This included the power to grant a license to a potential infringer to practice the invention of any of the claims without the consent of the co-owner.

In the 2001 decision, *Chou v. University of Chicago* (254 F.3d 1347, 59 USPQ 2d 1257 (Fed.Cir. 2001)), the Court held that a person could pursue a Section 256 claim against her former employer—a university—even though she had agreed to assign ownership of the patent to her employer. Standing to bring the suit was supported by her economic interest—she would get \*722 a royalty, under university policy—or even by her “reputational” interest for failure to be named as an inventor.

Number 9 is the 1998 decision *State Street Bank & Trust v. Signature Financial Group, Inc.* (149 F.3d 1368, 47 USPQ 2d 1596 (Fed.Cir. 1998)). This case is like a speaker who needs no introduction.

The notorious *State Street Bank* decision held that patentable subject matter does “not turn on whether the claimed subject matter does ‘business’ instead of something else.” Hence came a plethora of business method patents. The opinion was written, of course, by the late distinguished jurist, Giles Rich. Throughout his lengthy career, his opinions on patents and trademarks had great influence, but none more than on the question of patentable subject matter.

His opinions, especially, the 1971 Bergy opinion, lead to the later Supreme Court opinions *Chakrabarty* and, very recently, *Pioneer Hybrid International*, which recognized that living organisms and plants are proper subject matter for Section 101 utility patents.

Number 8 is the 2001 decision, *Brasseler USA v. Stryker* (267 F.3d 1370, 60 USPQ 2d 1482 (Fed.Cir. 2001)), dealing with inequitable conduct, especially the existence of duty of attorneys to investigate a potential “on sale” bar. This recent decision may be a harbinger.

The inequitable conduct defense has been a long journey for this Court. Trends in judge-made law are sometimes like a pendulum, swinging from side to side, settling into a balanced equilibrium only after a long period of time.

Earlier decisions of this Court, such as 1984 *J.P. Stevens v. Lex Tex* (747 F.2d 1553, 223 USPQ 1089 (Fed.Cir. 1984)), emphasized the importance of duty of candor and the consequences of violating the duty. Inequitable conduct rendered the entire patent unenforceable, even when the

misconduct related to claims in the patent that were not asserted. Consistent with the increasing value and importance of patents, it seemed reasonable, at least to some, that patent applicants and their attorneys should partner with examiners, who have limited time to devote to any one application, to make sure, to the maximum extent possible, that all material facts and prior art were considered prior to issuance of a patent. This would lead to higher quality patents, with claims of appropriate scope.

In time this Court came to perceive that charges of inequitable conduct were “an absolute plague.” But, of course, historically, it should not have been surprising that accused infringers came to rely on the defense. After 1982 this Court made it more difficult to rely on the traditional defense to a weak patent, that is, invalidity through obviousness. Unlike the regional courts before it, this Court held that the presumption of validity is strong and has not been dissipated by a showing that material prior art had not been considered during the examination. Accused infringers switched to the defense *de jour*, which was inequitable conduct. Another preferred defense became violation of the best mode disclosure requirement. Both defenses directed attention away from the merits of the patented technology, and the accused product's relationship to it and onto the conduct and character of the patent owner.

\*723 In 1988 the worm turned. The 1988 decision, *In re Harrita* (847 F.2d 801, 6 USPQ 2d 1930 (Fed.cir. 1988)), effectively put the PTO out of the inequitable conduct business. Then in a 1988 en banc decision, *Kingsdown Medical Consultants v. Hollister* (863 F.2d 867, 9 USPQ 2d 1384 (Fed.Cir. 1988)), the Court resolved a conflict on the intent requirement of the inequitable conduct defense. It said intent to deceive had to be found and it could not be based merely on gross negligence.

No analysis was provided. *Kingsdown* discouraged inequitable conduct defenses in the courts.

In other decisions this Court emphasized that the duty to disclose material information related only to what a person under the duty actually knows. We were to believe that there was not even a minimum duty to inquire or search into the existence of relevant information. So, For example, in the 1996 decision, *Norberg v. Telsmith* (82 F.3d 394, 38 USPQ 2d 1593 (Fed.Cir. 1996)), the Court held that the failure to disclose a highly material, indeed, an anticipatory prior reference patent could not have been with an intent to conceal, even though the patentee owned the reference patent and it was in its own files. The persons prosecuting the patent application didn't actually know of the referenced patent.

In our No. 8 decision, *Brasseler*, the Court announced a carefully prescribed duty to investigate. It held that a district court did not err in concluding that there had been inequitable conduct under its findings of the following facts: A patent owner and inventor requested patent attorneys to prepare and file a patent application. A “concocted deadline” of May 1, 1993 to avoid an one-year Section 102(b) “on sale” bar was given to the attorneys. Actually, a barring commercial sale had taken place already, more than one year prior to that date. The attorneys prepared and filed an application in two days, meeting the end of April deadline. The attorneys did *not* conduct any investigation before or after filing into the exact date of the potential on-sale bar.

This Court rejected what it called the patent owner's “circular logic,” to wit, that the inventors who knew of the sale didn't know it was material and needed to be disclosed to the attorneys, but

the attorneys who knew the law did not know the facts, that is, the early barring sale. First, the Court held that inventors represented by counsel are presumed to know the law. Second, the attorneys had sufficient information that material information existed, and that could be readily obtained so as to put them under a duty to investigate.

Never mind that a 1983 decision in this Court, *Kansas Jack v. Kuhn* (719 F.2d 1144, 219 USPQ 857 (Fed.Cir. 1983)), seemed to support exactly the circular logic that was condemned in *Brasseler*.

Perhaps anticipating a potential flood of allegations of inequitable conduct through failure to search, the *Brasseler* opinion contains multiple cautionary notes. First, it says there is no need for an attorney to pursue a fishing expedition to obtain information. Second, “counsel can reasonably rely on information provided by the client... unless there is a reason to question the accuracy or completeness of the information or to doubt the accuracy of the client's own investigation into the material facts.” Third, “no duty to inquire arises unless counsel is on notice of the likelihood that specific, \*724 relevant material information exists and should be disclosed.” Finally, the issue was not one of “a wrong judgment being made by attorneys.”

Number 7 is the 1996 *Linton Systems v. Honeywell* 87 F.3d 1559, 39 USPQ 2d 1321 (Fed.Cir. 1996), *remanded*, 520 U.S. 1111 (1997), *aff'd in part, rev'd in part, vacated in part and remanded*, 140 F.3d 1449, 46 USPQ 2D 1321 (Fed.Cir. 1998) petition for rehearing and suggestion for rehearing en banc denied, 145 F.3d 1472, 47 USPQ 2d 1106 (Fed.Cir. 1998) decision. This is one of several mega cases raising questions about the doctrine of equivalence and prosecution history estoppel that came up to this Court several times in the 1990s.

The \$1.2 billion jury verdict, interesting technology (processes for making mirrors for laser ring gyroscopes for aircraft navigation systems), complex commercial relationships among major corporate competitors—all of these made *Linton* one of the spicier patent cases in the past two decades. But of the many issues in the case, two are illustrative of the problem areas that this Court repeatedly addressed in the past 19.5 years.

First, is the “non-obviousness” standard of patentability generally and particularly how the defense of patent invalidity for obviousness should be handled in jury trials and on appellate review.

In its early years this Court's opinions cleaned house on the law of obviousness. Gone were special tests for mechanical combinations such as “synergism.” Gone was the notion that “secondary considerations,” such as commercial success, were to be considered only in closed cases. Indeed, secondary considerations were renamed “objective evidence.” and made a fourth *Graham* factor. The Supreme Court's 1996 *Graham* decision (*Graham v. John Deere*, 383 U.S. 1, 17-18 (1966)), of course, listed only three factors, which, though often recited, rarely provided much help. The Supreme Court then added “secondary considerations,” which “may have relevancy.”

Recent decisions of this Court have begun to suggest that some secondary considerations may be more equal than others because in *Graham*, the Supreme Court mentioned commercial success,

long felt need and failure of others and then added an “etc.” So things like copying are “etc.” and thus entitled to less weight.

The question of obviousness as a question of law or fact for jury trial and appellate review purposes plagued this Court, and it plagued courts before its creation in 1982. In 1987 in the Pan DeWitt Case, this Court had remanded back to it, from the Supreme Court, its prior decision overturning a District Court's detailed finding that patent claims were invalid for obviousness. Interestingly, the Supreme Court's opinion expressed doubt about whether the conclusion on obviousness was law or fact. *Graham* did not say that obviousness was a legal conclusion. Rather, it said *validity* was a legal conclusion. In the remanded Panduit decision, this Court took a firm position that obviousness is “a conclusion of law,” but it's based on “a foundation of facts.”

How then should obviousness be treated for jury trial purposes? Again, early on, this Court faced that question. It held that a defense of obviousness could, be submitted, with proper instructions, to a jury. Decisions\*725 oscillated on whether the submission must be accompanied by detailed special interrogations on the pertinent fact issues.

Our No. 7 decision, *Litton*, addressed a recurring scenario here. The obviousness issue was submitted to the jury. The jury found no obviousness. The District Court judge, after a careful review, overturned the verdict. This Court reversed, holding that the jury could presumably have found favorably to the patent owner on various fact issues, including secondary considerations. Judge Bryson concurred, pointing out that the jury found for the patentee on almost every conceivable point. The District Court had provided a careful and comprehensive 113-page opinion. Nevertheless, Judge Bryson acquiesced, albeit with reservations, in the Court's ruling on obviousness. And the situation is today, as several post-*Litton* cases demonstrate. Recently it's become clear that juries are not necessarily as programmed to find patent claims non-obvious as once was thought. Rather, in many instances, based on factors one can never know, juries find patent claims invalid. It is irrational. Can one square such uncertainty on a central validity question with this Court's current jurisprudence on infringement, which so heavily emphasizes the need for certainty and reduces the role of juries?

The second illustrative issue in *Litton* was damages. One can seriously argue that the credit some give to this Court in strengthening patent laws, making the patent system relevant rather than just “moot court,” is not its jurisprudence on validity, but rather it's jurisprudence on remedies for patent infringement. First, this Court altered the prior, almost universal standard for a preliminary injunction. Based on a key decision by Judge Hand, courts before 1982 held that a preliminary injunction could not issue unless the validity of the patent was clear “beyond question.” This Court quickly assimilated patent law into that of intellectual property generally. Such injunctions could issue if a patent owner established a reasonable probability of success on any validity issue raised by an accused infringer and met other criteria. Nevertheless, this Court has developed a balanced jurisprudence on preliminary injunctions, as this Court's recent *amazon.com* decision (*amazon.com v. Barnesandnoble.com*, 329 F.3d 1343, 57 USPQ 2d 1747 (Fed.Cir. 2001)) demonstrated. It is error to issue a preliminary injunction with serious doubts on validity are raised.

On monetary damages, this Court's early opinions tended to elevate damage awards. Established

law provided, and provides, that a patent owner is entitled to lost profits if causation is proved or, if not, at a minimum, to a reasonable royalty. This Court approved creative theories for a reasonable royalty. Calculations based on the presumed profitability of the invention to the presumed licensee resulted in royalty rates as high as 20 percent or more. These found royalty rates often stretched any connection with reality, and in turn, over time this Court has struck down excesses.

So, too, the lost profits. Again, this Court approves creative theories, including awards based, not on lost sales, but on price submersion.

In the 1995 en banc decision, *Rite-Hite Corp. v. Kelley Co.* (56 F.3d 1538, 35 USPQ 2d 1065 (Fed.Cir. 1995)(in banc)), this Court's judges split sharply on several issues of damages computation. It approved a high reasonable \*726 royalty rate based, in part, on the *patentee's* lost profits. It approved a lost profits award, even though the patentee itself was not selling a product covered by the infringed patent. Rather the patentee sold products, sales of which it lost due to the infringement, but they were covered by another patent, which was not infringed. Complicated, I think you would agree. Finally, the Court held-well, maybe it held-that damages could be awarded for unpatented components sold in connection with a patented device only if the components and device functioned together. It was not sufficient that, under typical market condition, the sale of the device led to sale of the components. But was it really a holding? The voting pattern was complex. *Rite-Hite* did not show this Court in its best light.

A frequent damages problem was excessive damage awards predicated on abstract theories posed to juries by expert witnesses. In our No. 7 decision, *Litton*, the Court affirmed the trial court decision granting a new trial. The defendant, Honeywell, was found to infringe the patent on a method of making mirrors for laser ring gyroscopes, which were a component of systems that Honeywell contracted to sell to Boeing for a new fleet of commercial aircraft. The patent claimed a method for making a part of a component of a much larger, complicated system. The jury's \$1.2 billion verdict was based on a damage expert's report. The report assumed that, but for the infringement, Boeing would not have granted the contract to Honeywell but rather would have granted it to *Litton*, that *Litton* could have overcome its own problems, and then it would have been selling commercial aircraft systems, even long after the patents expired. According to this Court, the expert's report was “pure fantasy” “predicted on speculation” and “unrealistic assertions.”

Number 6 is the 1987 decision, *UMC Electronics (v. United States)*, 816 F.2d 647, 2 USPQ 2d 1465 (Fed.Cir. 1987), *cert. denied*, 484 U.S. 1025 (1988)), dealing with the Section 102(b) on sale bar. Now Section 102(b) is a statute of ancient and venerable origins. An inventor's patent is invalid if the inventor files an application more than one year after the invention was on sale or in public use in the United States. Deceptively simple in wording, it has vexed the Courts in their efforts in determining what pre-critical date activity constitutes a bar.

The “on sale and public use” bar is the Russia of American patent law. It is, as Winston Churchill would say, “a riddle wrapped in a mystery inside an enigma.”

With regard to the on sale bar, the Courts in the early part of the century said that an invention could not be on sale unless there were commercial embodiments on hand ready for sale on the record books. Private contracts to supply an invention were not bars. In time other courts, such as the 2nd Circuit, moved away from that.

Enter this Court in 1982. The *UMC* case, in a controversial split decision, held that a reduction to practice was not necessary, an “almost” complete invention was enough. Then the confusion increased. Panels of this court struggled to define when an invention was complete enough. This Court “espoused” a totality of the circumstances approach. Inconsistencies in holdings by various panels became painfully obvious.

\*727 The Supreme Court was induced to intervene and granted certiorari to the *Pfaff* decision. *Pfaff* wiped the on sale bar law clean, adopted a new two-step or two-pronged approach. First, the invention must have been the subject of a commercial offer. Second, it must have been “ready for patenting”: either it was reduced to practice or the inventor had prepared a description that was sufficiently specific to enable a person skilled in the art to practice it.

*Pfaff* was supposed to be a clear, simple test-no more confusion over the on sale bar, right? Wrong. One knew it would not work out that way. Russia had not really become transparent. Panel decisions have begun to send conflicting or unpredicted signals. For example, they differ on the significance to be given to the level of confidence the inventor had in whether an invention, disclosed but not made and tested, would, in fact, work.

A perplexing decision was made on what constitutes a commercial offer under *Pfaff*. In the court's 2001 decision (*Group one v. Hallmark Cards*, 254 F.3d 1041, 59 USPQ 2d 1121 (Fed.Cir. 2001)), the Court held that *Pfaff* commercial offer requirement can only be met by an offer which rises to the level of a commercial offering for sale under contract law. That is one which the other party could make into a binding contract by acceptance. Federal common law, based on the uniform commercial code determines, regarding whether activity constitutes an offer.

This is astounding. There is not a hint from the Supreme Court's *Pfaff* case that it equated a commercial offer with a technical contract offer. It wasn't an issue in the case. There was a signed contract in *Pfaff*. The Court used other language, such “first marketed” commercial offer. So is there a concern? The second patenting prong may have moved the bar issue back in time a little too much. Somehow the Courts are attempting to compensate for that by moving the second prong forward. Actually, *Group I* is probably an example of a hard case making bad law. The alleged offer was by an inventor to a potential licensee under, arguably, confidential circumstances.

After receiving the information, the potential licensee reneged, sending a letter saying, “Thank you very much. Would you accept \$500 in exchange for a waiver of all your rights.” All those facts occurred after the bar date, and theoretically, were irrelevant to the existence of a bar. The accused infringer's equities were not strong. Unfortunately, the same rules made under one set of facts apply to a set of different facts, as the late 2001 *Linear Technology v. Micrel* (275 F.3d 1040, 61 USPQ 2d 1225 (Fed.Cir. 2001)) case shows. There the patent owner had engaged in extensive promotional activities. It had received offers to buy, but there was no bar because none of those were technical contract offers.

Number 5 is the 1983 decision *Underwater Devices v. Morrison-Knudsen* (717 F.2d 1380, 219 USPQ 569 (Fed.Cir 1983)). This was the first of many decisions of this Court concerning the standards for determining when infringement may be deemed willful. Willful infringement findings, have severe consequences, including enhanced damages and attorney fees. In *Underwater Devices* this Court announced a general principle, which it has followed ever since. That is, where a potential infringer has actual notice of another's patent rights, he has an affirmative duty to exercise due care to determine whether or not he's infringing. An affirmative duty includes the duty to seek and obtain competent legal advice from counsel before the initiation of any possibly infringing activity.

One could argue that patent law would be better off without a willful infringement standard for enhanced damages. For now, the statute says the Court “may” award enhanced damages and this Court has provided, for the most part, with some exceptions, consistent, understandable guidelines.

The No. 4 decision is *Vitronics Corporation v. Conception* (90 F.3d 1576, 39 USPQ 2d 1573 (Fed.Cir. 1996)) on claim interpretation. The Supreme Court's *Markman* decision focused on the “who” question about claim interpretation and it said little or nothing about the “how” question. How do you interpret a claim? This Court's *Markman* decision did focus on some basis “how” principles, stressing, for example, that the patent specification and prosecution history should be used to interpret but not to alter patent language. *Vitronics* addressed these issues in greater detail. It held that a district court erred in relying on extrinsic evidence, including expert testimony and the use of the disputed term by the patentee's employees to narrowly construe a patent claim. According to the Court, “because the specification clearly and unambiguously defined the disputed term, reliance on this extrinsic evidence was unnecessary and legally incorrect.”

*Vitronics* provided a nutshell on claim interpretation, making it a much cited decision by lawyers and District Court judges, but *Vitronics* was not the last word of this Court on the subject. Later important decisions include the 1999 *Pitney Bowes v. Hewlett Packard* (182 F.3d 1298, 51 USPQ 2d 1161 (Fed.Cir. 1999)) decision.

Does this Court's jurisprudence on claim interpretation as a whole provide clear guidance and predictability? Some have serious doubts. For example, we are repeatedly told to use the specification and prosecution history to interpret the claim language but, not to read limitations into the claim. This is often a critical up or down issue with regard to patent claim scope. If you examine carefully specific cases that examination will confirm that the line between “construing” and “reading in” is, as the Court has admitted, “fine.” Some would say fuzzy is a more accurate word.

In a 2001 decision, *Sci Med Life Systems v. Advanced Cardiovascular Systems* (242 F.3d 1337, 58 USPQ 2d 1059 (Fed.Cir. 2001)), Judge Dyk put it rather concisely in a concurring opinion: “The problem is that our decisions provide inadequate guidance as to when it is appropriate to look to the specification to narrow the claim by interpretation and when it is not appropriate to do so until we provide better guidance,” I fear that it is the lower courts and litigants who remain confused.

Number 3 decision is, believe it or not, the 1983 decision, *Hughes Aircraft v. United States*, 717 F.2d 1351, 219 USPQ 473 (Fed.Cir. 1983), *laster decision*, 86 F.3d 1566, 39 USPQ 2d 1065 (Fed.Cir. 1996), *vacated and remanded*, 520 U.S. 1183 (1997), *aff'd*, 140 F.3d 1470, 46 USPQ 2d 1285 (Fed.Cir. 1998), in which this Court addressed, essentially for the first time, the doctrine of equivalents and prosecution history estoppel. Many in this knowledgeable audience may be asking why *Hughes*? Why not the en banc \*729 decision in *Festo* or *Hilton Davis* or even *Pennwalt*? The answer is because *Hughes* started this whole painful struggle to achieve a balance of certainty and fairness in the application of patent claims through the “doctrine of equivalents.”

*Hughes* is a case on a grand scale, but it doesn't show the American civil justice system in its best light. An application claiming an attitude control system for space craft was filed in 1960. Eventually, a patent issued and suit was filed in the Court of Claims seeking billions of dollars and reasonable compensation for government use. In 1979 the Court of Claims Trial Division found the patent invalid, and they were right, it was. The inventor had filed a 1964 CIP application expanding the disclosure and it seemed rather clear that it was necessary for enablement. Based on the 1964 filing date rather than the 1960 date, the patent was invalid because of public disclosures more than a year before 1964.

In 1980 the Court of Claims reversed, incorrectly, so the case was not over. Indeed, it wasn't over for another 19 years. They went back for trial on infringement. The trial court found it not infringed. The case is now on appeal. By now this Court has come into existence. So this case gives this Court its first chance to come to grips with these critical issues concerning equivalency and estoppel.

Written by this Court's first Chief Judge, Howard T. Markey, the 1983 *Hughes* decision put forth two propositions that became very controversial. First, it held that the district court's “failure to apply the doctrine of equivalents to the claimed of invention *as a whole* ... was error.” Some believe, and continue to believe, that an “as a whole” approach is the appropriate approach to the doctrine of equivalents. But later, in the en banc *Pennwalt* (Corp. v. Durand-Wayland, 833 F.2d 931, 4 USPQ 2d 1737 (Fed.Cir. 1987)(in banc), *cert denied*, 485 U.S. 961 (1988)) this Court held otherwise, adopting an element-by-element approach. The heated tone of the concurring and dissenting opinions in *Penwalt* alerted the patent law world to just how deeply divided the Court's judges were on this critical subject. Oddly, the majority did not purport to overrule *Hughes*. There was nothing said about overruling *Hughes*, even though, it was thought that was the purpose of hearing the case en banc. Later, in 1977, of course, the Supreme Court, in *Warner Jenkinson* ( v. Hilton Dagvis, 520 U.S. 17, 41 USPQ 2d 1865 (1977)) adopted the element-by-element approach, based on a concurring opinion by Judge Nies.

The second proposition concerned prosecution history estoppel, that is, the effect on the doctrine of equivalents of claim amendments during prosecution. *Hughes* explicitly adopted what has now come to be called the “flexible bar” approach. It rejected the view of “some Courts,” which is to say some regional circuit courts before 1982, that there should be a wooden approach to estoppel. That would mean estoppel was a bar to all resort to the doctrine of equivalents. A much quoted passage by Chief Judge Markey said, “Amendment of claims is a common practice ... no reason exists for limiting application of the doctrine ... to those comparatively few claims allowed exactly

as originally filed and never amended.” The estopping effect may range from great to small to zero.

\*730 Many, if not most, decisions after *Hughes* adopted that approach, but others, how many are disputed, adopted the wooden approach apparently rejected by *Hughes*. Finally, as we all know, in the 2000 *Festo* case, this Court indeed adopted the wooden or absolute bar approach. But the approach did not bar the availability of the doctrine of equivalents for a whole claim, but rather only for a particular claim limitation that was narrowed during prosecution. The Supreme Court granted *certiorari*. The decision is expected almost any day. It is disappointing that the chief justice this morning didn't give us a hint as to how it is going to come out!

It's interesting to look at this Court's post-*Festo* decisions because they really demonstrate *Festo's* sharp edge, but also a softening trend, a trend to find some claim amendments don't create estoppel because they really didn't narrow the claim.

Number 2 is the 1991 decision in *Amgen (Inc. v. Chugai Pharm., 927 F.2d 1200, 18 USPQ 2d 1016 (Fed.Cir. 1991), cert. denied, 502 U.S. 856 (1991))*. Addressing multiple important issues in the context of biotechnology, including conception as the basis for prior inventorship, obviousness, enablement, and best mode disclosure compliance.

This Court's 20-year life span coincides substantially with that of the growth of the biotech industry as we now know it. Breakthroughs in the use of recombinant DNA technology occurred in the late 1970s. New companies were formed focusing on the commercial potential of this technology. Old companies also invested in the technology.

From the beginning, this new industry deemed effective patent protection crucial. Research was painstaking and expensive, yet once successfully carried out, revealed and easily adapted by others. The industry expected litigation and they were not disappointed. This Court has addressed on numerous occasions important issues concerning recombinant DNA and other biotech inventions.

*Amgen* involved patents concerning human erythropoietin (EPO). One Amgen patent claimed a purified isolated DNA sequence. One patent claimed Genetic Institute's a purified form of EPO. After trial, the district court held both patents valid and infringed. If upheld, the parties would presumably have been stymied or forced into a cross license situation. But sharing the market was not acceptable to Amgen. It appealed, running significant risks. This Court ruled in Amgen's favor, upholding a key claim in Amgen's patent and invalidating GI's patent. There was much joy in Thousand Oaks.

Time won't permit looking at all of the issues in *Amgen*, but probably the one that is most interesting is that concerning the law of conception. The Amgen scientists were clearly the first to clone and identify the EPO DNA sequence. Nevertheless, Genetic Institutes asserted that its scientists were the first to conceive and exercised diligence to a later reduction of practice. The asserted conception consisted of a method for cloning the DNA. The Court held that was not a sufficient conception, given the method's uncertainties and the lack of knowledge of the protein's amino acid sequence.

Later in time, this Court exported the *Amgen* doctrine from conception to written description.

Section 112, first paragraph provides that a specification\*731 shall set forth a written description of the invention. This Court's decisions have repeatedly visited the question of the written description requirement, including the 1991 *vas-cath v. Mahurkar* (935 F.2d 1555, 19 USPQ 2d 1111 (Fed.Cir. 1991)).

There is some ambiguity in the standard in certain contexts. For example, is there an “essential elements” test under which a court determines, from the specification, which elements are essential and then invalidates any claim that's added later that doesn't contain all of the elements? Some say yes; some say no. It depends on how you interpret, for example, the *Gentry Gallery (v. Berkline)*, 134 F.3d 1473, 45 USOQ 2d 1498 (Fed.Cir. 1998)) decision.

The exporting of the *Amgen* doctrine into written description began with the 1993 *Fiers v. Revel* (984 F.2d 1164, 25 USPQ 2d 1601 (Fed.Cir. 1993)) case. It was expanded in the 1997, *Regents of University of California v. Eli Lilly* (119 F.3d 1559, 43 USPQ 2d 1398 (Fed.Cir. 1997)), and very, very recently-I think just April 2, 2002, this Court, in a decision called *Enzo Biochem* confirmed that the *Amgen, Fears, Regents* doctrine applies to original claims. Some would argue that this is a distortion of the original purpose of the written description requirement. In the original disclosure an invention is synonymous with the claim for patent law purposes. The patentability of such a claim, of course, depends on important legal standards other than written description, including enablement. Obviously, enablement is often a serious obstacle in the case of biotechnology inventions.

As I mentioned, there are many other issues in *Amgen*, but overall it was a memorable case.

The Number 1 decision in the last 20 years is the 1998 en banc decision *Cyber Corporation v. FAS Technologies* (138 F.3D 1448, 46 USPQ 2d 1169 (Fed.Cir. 1998)(inbanc)). The Supreme Court's *Markman* decision revolutionized patent litigation. Most importantly, it imposed a substantial new burden on already overburdened judges of our United States District Courts. The burden is, at some point in time during the course of litigation, often involving complex technology, to carefully review a patent, its prosecution history and other information in order to interpret the claim.

Now I'm sure there were legitimate reasons for having a binding claim interpretation early in the litigation. *Markman* gave birth to a whole new procedure-The “Markman” hearing. Alas, one does wonder whether the Supreme Court was sufficiently aware of the magnitude of the work product that was being shifted onto the shoulders of our district court judges.

It does *not* follow from *Markman's* holding that claim interpretation is a question of law for the judge, rather than for the jury, that it is a question of law for *all* procedural contexts, including appellate review. The Supreme Court never says that in *Markman*. It focused on the judge-jury issue. Trial judges make all kinds of rulings in the course of a jury trial that are not deemed legal questions on appeal. Yet, nevertheless, in our No. 1 decision, this Court held that, indeed, claim interpretation is reviewable on appeal de novo as a question of law.

\*732 This decision deserves to be No. 1 for several reasons. First, it gives at least the appearance of devaluing the district courts' considerable work product imposed by *Markman*. True, a number of post-*Cybor* decisions have suggested that this Court respects trial court work product.

Nevertheless, the general perception is that the district court's interpretation work is simply redone on appeal.

Second, de novo review of claim interpretation tends to discourage settlements and encourage appeals.

Finally, and perhaps, most important, I think, de novo review of claim construction consumes, or at least, appears to consume, a huge amount of this Court's resources. We see a constant flow of opinions devoted primarily to claim interpretation. Of course, every detailed opinion, combing through claim language, the written description, the prosecution history, on a particular patent contributes something to the clarity and predictability of the law on the subject of claim interpretation, but how much? And recall, the purpose of appellate review is not solely to correct errors. If that were true, we would have more *lax standards review*, even on questions of fact. The purpose is to promote uniformity and predictability on propositions of general applicability-questions of law. The interpretation of a specific patent claim will rarely have the general applicability of, say the interpretation of a statute or the explication of a legal standard such as enablement or written description. Would the Court's resources be conserved and better utilized on other cases or on other issues by giving significant deference to district court claim interpretations, reviewing them only for errors in terms of the generally applicable standards.

Many believe that there is a continuing problem of panel variation in this Court's decisions. Some say the cure is to take more cases en banc. The court seems inclined to do that, but there are problems.

Possibly, another contribution to consistency would be, for example, to use five judge panels instead of three judge panels. You have a more representative sampling of the views of the judges of the Court on each panel. Now the original Congressional perception was that this Court was apt to have particularly difficult cases and that turned out to be true. Indeed, a special challenge of the future of this Court may be that of cases involving increasing complex technologies that pose multiple difficult legal issues.

Well, in conclusion, those of us who are fascinated with the workings of the patent system have enjoyed being Federal Circuit watchers for the past 10 years and we look forward to doing so for decades more. We appreciate the dedication and the hard work of the Court, its judges, its clerks and its personnel; especially, in the area of Patents and Trademarks. We thank them and I thank you for your attention.

(Applause.)