Last month at | The Federal Circuit

MAY 2002

Month at a Glance

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This publication brings you a synopsis of patent cases decided last month by the United States Court of Appeals for the Federal Circuit based on slip opinions received from the court. You can review and download the full text of each opinion by visiting our website at *www.finnegan.com*

Written-Description Requirement Is Not Satisfied by Deposit of Biological Materials

Lisa M. Matovcik

[Judges: Lourie (author), Proust, and Dyk (dissenting)]

In *Enzo Biochem, Inc. v. Gen-Probe, Inc.*, No. 01-1230 (Fed. Cir. Apr. 2, 2002), the Federal Circuit upheld a district court's decision to grant Gen-Probe, Inc.'s ("Gen-Probe") motion for SJ that Enzo Biochem, Inc.'s ("Enzo") patent failed to meet the written-description requirement.

Enzo is the assignee of U.S. Patent No. 4,900,659 ("the Enzo patent"), which claims nucleic-acid probes that selectively hybridize to the nucleic acid of *Neisseria gonorrhoeae*, the bacteria that causes gonorrhea. Previous probes were not able to distinguish *N. gonorrhoeae* from the similar bacteria *N. meningitides*, so were limited in their ability to help diagnose gonorrhea. Enzo claimed, as a composition of matter, three probes that were highly selective for *N. gonorrhoeae* and did not hybridize with *N. meningitides*. The claims, in relevant part, were to nucleic-acid probes that contained a high ratio of nucleotide sequence that hybridized to *N. gonorrhoeae* compared to a sequence that hybridized to *N. meningitides*. The specification contained information regarding how the probes were obtained and their approximate lengths, but not their sequences or the means by which the probes were identified. The probes were deposited with the American Type Culture Collection, a repository for biological material.

Enzo sued for infringement, and the Defendants moved for SJ that the claims were invalid for failure to meet the written-description requirement of 35 U.S.C. § 112. The district court granted the motion, concluding that the claimed composition of matter was defined only by its biological activity or function, specifically, its ability to preferentially hybridize to *N. gonorrhoeae* over *N. meningitides* and that this definition was insufficient to satisfy the written-description requirement.

On appeal, the Federal Circuit upheld the district court's finding that describing genetic material in functional terms, i.e., its ability to specifically hybridize to a disease-causing agent, is insufficient to satisfy the written-description requirement. The Court characterized an adequate written description of genetic material as one that includes a structure, formula, chemical name, or physical property. An adequate description may include functional characteristics when they are correlated with the invention's structure.

Enzo failed to meet this standard because hybridization properties were the only characteristics that described the claimed nucleic-acid sequences. The Court reasoned that Enzo made an invention of a nucleotide sequence to diagnose the presence of the bacteria that causes gonorrhea and broadly claimed it in a circular fashion as any nucleotide sequence that hybridizes with *N. gonorrhoeae* so as to diagnose its presence.

The Court rejected Enzo's argument that biological deposits satisfy the written-description requirement. While deposits may enable the invention, the Court concluded, they do not contribute to the description in the patent specification. Also, while deposits may indicate possession of the invention, and one purpose of the written-description requirement is to ascertain that the applicant has possession of the invention on the filing date, possession alone is insufficient to satisfy the requirement.

Judge Dyk dissented, concluding that SJ was inappropriate because there was a genuine issue of material fact involved in whether Enzo's written description was merely functional or described structural information. Thus, one of ordinary skill in the art may conclude that by describing the degree of hybridization, the specification may adequately describe the structure of the claimed sequences.

He also disagreed with the majority that a biological deposit does not satisfy the written-description requirement and criticized the majority for departing from the general rule that an applicant satisfies the written-description requirement by conveying with reasonable clarity that he or she was in possession of the invention.

Federal Circuit Affirms Use of Technical Advisor by District Court

Lawrence F. Galvin

[Judges: Gajarsa (author), Newman, and Dyk (concurring)]

In *TechSearch v. Intel Corp.*, No. 00-1226 (Fed. Cir. Apr. 11, 2002), the Federal Circuit affirmed a district court's grant of SJ of noninfringement in a patent case dealing with complex computer microprocessor technology.

A Complex Instruction Set Computer ("CISC") architecture requires an extensive, fixed set of instructions in the logic of a CISC microprocessor. A Reduced Instruction Set Computer ("RISC") architecture uses microinstructions to reduce the complexity of a RISC microprocessor. This reduced complexity allows a RISC microprocessor to execute instructions at significantly higher speeds than a CISC micro-

processor.

TechSearch, L.L.C. ("TechSearch") owns U.S. Patent No. 5,574,927 ("the '927 patent") directed to a RISC architecture computer ("RAC") configured for emulation of the instruction set of a target computer ("target"). The RAC can run existing software written for targets, including CISC architecture computers.

Intel Corporation ("Intel") manufactures an x86 series of CISC microprocessors, including, in chronological order of development, the 486, the P5, and the P6. The instruction set of each later microprocessor includes all of the instructions, without modification, of its immediate predecessor and some new instructions.

TechSearch sued Intel in the U.S. District Court for the Northern District of California, alleging infringement of the '927 patent by the P6 microprocessor. Two of the three independent claims of the '927 patent require the RAC to use two instruction sets—native and expanded. The instructions of the native set have a width of N bits, while the instructions of the expanded set have a width of M+N bits. The other independent claim requires both "a plurality of indirect registers pointing to emulated registers" and "processing said emulated registers with an arithmetic logic unit."

After a *Markman* hearing, the district court had appointed a technical advisor ("TA"), employing procedural safeguards to ensure that the TA remained a neutral third party and limited his role to that of providing technical advice based upon the record and references standard in the field. The district court subsequently ruled that when not emulating a target, the RAC uses the N-bit, native-set instructions. And, when emulating a target, the RAC uses both M-bit portions and N-bit portions of the M+N bit expanded-set instructions. For a given expanded-set instruction, the district court concluded that its N-bit portion corresponds to a native-set instruction, while its M-bit portion redefines the N-bit portion, enabling the RAC to emulate the target. The district court also had interpreted the meaning of several other claim terms.

Both parties filed cross-motions for SJ. Finding multiple reasons why Intel's P6 microprocessors did not infringe any independent claims of the '927 patent, the district court granted Intel's motion for SJ of noninfringement.

On appeal, the Federal Circuit limited its review of claim construction to those terms essential for disposition of the case, and the Court agreed with the district court as to the meaning of each such term. Regarding two of the independent claims, the Federal Circuit agreed that the P6 microprocessor could not infringe because it uses only one set of instructions with a fixed number of bits and because that set includes all of the instructions, without modification, of the P5 microprocessor. Regarding the third independent claim, the Court agreed that the claim's express language prevented a finding of infringement, because in the P6 microprocessor at least two layers of registers exist between the alleged indirect registers and the alleged arithmetic logic unit. Thus, these indirect registers could not point to any registers that were themselves processed by this arithmetic logic unit.

In examining the role of the TA, the Federal Circuit noted that district courts possess the inherent authority to appoint a TA outside the purview of Rule 706 of the Federal Rules of Evidence. Therefore, agreeing with the district court's claim construction and conclusions, and finding sufficient procedural safeguards regarding the TA, the Federal Circuit affirmed the district court's grant of SJ of noninfringement.

In a concurring opinion, Judge Dyk voiced his concern that the district court's judgment may have been too heavily influenced by the TA and, as a result, the district court may have resolved factual issues on SJ. However, he also pointed out that at least one ground, not implicating this concern, existed for a finding of noninfringement as to each asserted independent claim.

License of the Right to Commercialize an Invention Does Not Trigger On-Sale Bar

Laba Karki

[Judges: Lourie (author), Friedman, and Clevenger]

In *In re Kollar*, No. 01-1640 (Fed. Cir. Apr. 11, 2002), the Federal Circuit vacated and remanded the Board's decision holding the claims in John Kollar's U.S. Patent Application No. 08/657,564 ("the '564 application") to be unpatentable under the on-sale bar of 35 U.S.C. § 102(b) because the Board had erred in determining that a mere grant of a license to an invention triggered the on-sale bar and in failing to recognize the distinction between a claim to a product and a claim to a process within the purview of § 102(b).

John Kollar's '564 application describes a process for a low-cost method of preparing various dialkyl peroxides by reacting one or more alcohols and/or an olefin with a monoalkyl hydroperoxide, which in turn can be used to make, inter alia, ethylene glycol—a versatile chemical in manufacturing various other commercial products. The Examiner had rejected claims 1 through 17 of the '564 application based upon a purported sale of the invention by

Kollar's assignee, Redox Technologies, Inc. ("Redox"), a company owned and operated by Kollar, to Celanese Corporation ("Celanese"). Kollar appealed that rejection to the Board, and the Board affirmed, determining that a July 1, 1980, Agreement ("the Celanese Agreement" or "the Agreement") between Redox and Celanese constituted a firm offer to sell embodiments of the claimed process and transferred a right to commercialize Kollar's invention and the necessary technical information to do so in exchange for a series of royalty payments.

On appeal, Kollar primarily argued that the Celanese Agreement was merely a license and therefore did not involve the sale of a commercial embodiment of the invention within the meaning of the on-sale bar of § 102(b). Kollar further contended that the invention was not ready for patenting because it had not been determined whether a commercial plant meeting the quality specifications necessary to carry out the claimed process could be built. In response, the PTO argued that the Celanese Agreement constituted a sale of the process disclosed in claim 1 because Kollar received royalty payments and licensing agreements in certain Celanese technology as consideration for disclosing his process and granting Celanese the "right to commercialize" the invention. The PTO also contended that the claimed process was ready for patenting because Kollar admitted that it was reduced to practice at the time the Celanese Agreement was signed.

The Federal Circuit reasoned that although the Celanese Agreement specifically contemplated that resultant products manufactured using the claimed process could potentially be sold, nowhere did the Agreement indicate that a product of the claimed process was actually offered for sale. Rather, the Agreement constituted a license to Celanese under any future patents relating to Kollar's invention. Accordingly, the Court held that the "right to commercialize" the invention granted to Celanese pursuant to the Agreement was insufficient to bar the claims of the '564 application under § 102(b).

The Court also ruled that the Board had erred in failing to recognize the distinction between a claim to a product and a claim to a process. The transfer of know-how describing the process was not a sale of the invention within the meaning of § 102(b) because the process had not been carried out or performed as a result of the transaction. The Court concluded that the issue concerning the on-sale bar was not whether the process was physically represented or enabled by a written description, but whether the process had been commercialized. The mere transmission of a written description of the process did not meet that test.

The Court also reasoned that exempting licenses under a patent from the on-sale bar was not inconsistent with traditional policies underlying that doctrine. The Court rationalized that many inventors do not have the resources to produce commercial embodiments of their inventions and, therefore, the ability to license or assign without fear of triggering the on-sale bar facilitates providing the public with the benefit of their inventions under circumstances in which they might not otherwise have the ability or the incentive to do so.

Consent Decree Stipulating to Validity Does Not Foreclose Invalidity Defense in Future Actions

Michele L. Mayberry

[Judges: Dyk (author), Clevenger, and Gajarsa]

In *Ecolab Inc. v. Paraclipse, Inc.*, No. 01-1204 (Fed. Cir. Apr. 3, 2002), the Federal Circuit affirmed-in-part and vacated-in-part a district court's denial of JMOL on two issues of noninfringement, remanding for a new trial, and reversed the district court's decision that the Defendant waived its right to assert invalidity defenses as a consequence of an earlier consent judgment.

Ecolab Inc. ("Ecolab") sued Paraclipse, Inc. ("Paraclipse") for infringement of U.S. Patent No. 5,365,690 ("the '690 patent") in the United States District Court for the District of Nebraska. The '690 patent, commercially implemented as the Stealth™ trap, relates to lighted insect traps used to trap flies in restaurants, hospitals, and other sensitive areas where traditional means of insect control are undesirable. Paraclipse manufactures and sells a competing insect trap, the Insect Inn IV trap ("Insect IV"), and was sued by Ecolab previously in the same court because of an earlier product, the Insect Inn II trap ("Insect II").

Concerning the jury verdict of noninfringement, the Federal Circuit found that the jury instructions were partially flawed and that the error was prejudicial. Ecolab at trial, however, failed to contest the jury instructions and/or propose alternative instructions for the Court's consideration. Thus, the Court considered whether Ecolab's failure to object to the instructions constituted waiver under Fed. R. Civ. P. 51 or whether its objection at the *Markman* hearing was sufficient to preserve the issue for appeal under the Rule's futility exception.

At the *Markman* hearing, Ecolab fully briefed its position concerning the proper construction of certain terms in the claims. Thus, on appeal, Ecolab argued that it would have been futile for it to have objected to the jury instructions or to have proposed conflicting jury instructions because the instructions were consistent with the *Markman* order. Because

the Federal Circuit found that there was no error in this portion of the jury instructions, however, it determined that there was no need to finally dispose of the futility issue.

The Federal Circuit also ruled that the consent judgment, which resolved the previous litigation between the parties, did not bar Paraclipse from asserting invalidity of the '690 patent. In the earlier consent decree, Paraclipse had agreed to the validity and enforceability of the '690 patent. The Court concluded that such a generic statement only precludes future assertions of invalidity if the accused products in both suits are essentially the same.

Thus, the Court compared Paraclipse's earlier product, Insect II, which prompted the consent decree, with its now-accused infringing product, Insect IV, to determine if the two were essentially the same. Finding several differences between Paraclipse's devices, the Court determined that they were not essentially the same, and, therefore, Paraclipse should be allowed to challenge the validity of the '690 patent at the new trial.

Absence of Formal Relationship Between Applications Defeats Estoppel

Robert F. Shaffer

[Judges: Prost (author), Newman, and Gajarsa]

In *Abbott Laboratories v. Dey, L.P.*, No. 01-1374 (Fed. Cir. Apr. 23, 2002), the Federal Circuit vacated and remanded a district court's grant of SJ of noninfringement, holding that (1) statements made during prosecution of an earlier-filed patent did not create an estoppel as to the scope of the later-filed patent; (2) hypothetical patent claims that would cover the accused composition would not have been anticipated or obvious based on the prior art; and (3) the patent's recitation of specific numeric ranges for chemical components did not preclude any range of equivalents.

Abbott Laboratories ("Abbott") sued Dey, L.P. and Dey, Inc. (collectively "Dey") for infringement of U.S. Patent No. 4,397,839 ("the '839 patent") and U.S. Patent No. 4,338,301 ("the '301 patent"). These patents both relate to a lung-surfactant composition for treating respiratory-distress syndrome in premature babies. The earlier-filed '301 patent represents the work of Drs. Fujiwara, Tanaka, and Takei in developing a surfactant having the desirable properties of rapid spreading in the lungs and of reducing ultra-alveolar surface tension. The relevant limitation in claim 1 of the '301 patent states: "the phospholipid content is 75.0-95.5%."

In continuing his work based on the '301 patent, one of the three inventors, Dr. Tanaka, discovered that by increasing the content of free fatty acids from less than 1.0% as found in the '301 patented composition to a range of 1.0-27.7%, several important properties were enhanced. The '301 patent's original composition contained less than 1.0% free fatty acid. Dr. Tanaka's discovery of the benefit of the added free fatty acid led him to file the '839 patent application four months before the '301 patent issued. However, Dr. Tanaka filed the '839 patent application as a separate and independent application, even though the '301 patent shared common subject matter and an inventor. The relevant limitation in claim 1 of the '839 patent reduces the percent of overall phospholipid content when compared with the '301 patent and adds an additional fatty acid content limitation: "the overall phospholipid content is 68.6-90.7%, the overall neutral fat content is 0.3-13.0%, the total cholesterol content is 0.0-8.0%, the overall free fatty acid content is 1.0-27.7%."

In a preliminary injunction motion, Abbott attempted to prove infringement of the '839 patent only under the DOE, conceding that Dey's product did not literally meet claim 1's limitation of 68.6-90.7% phospholipid. Abbott's own testing of the product found higher percentages—91.8% and 94.5% phospholipid. The district court had precluded Abbott from relying on the DOE, however, because (1) the '839 patent was an improvement patent—not a pioneer patent; (2) Abbott's expert testimony suggesting that a phospholipid percentage as high as 99.9% would effectively and improperly read out of the claim the phospholipid limitation; and (3) the court had concluded that a "hypothetical claim" of 94.5% phospholipid would not have been allowed over the prior art '301 patent.

The district court then granted SJ of noninfringement to Dey, stating that the patentees cannot recapture through the DOE the higher phospholipid percentage surrendered from the '301 patent with the issuance of the '839 patent.

The Federal Circuit disagreed. The Court reasoned that because the percent of phospholipid limitation was not discussed in the prosecution of the '839 patent, the district court had incorrectly based the estoppel on the '301 patent. In doing so, the Court concluded that the relationship between the two patents was insufficient to render arguments made during prosecution of the earlier-filed application (the '301 patent) equally applicable to the later-filed application (the '839 patent). Noting that the '839 patent application was not filed as a continuation, continuation-in-part, or divisional application of the '301 patent application, the Court concluded that these applications had no formal relationship and, thus, were presented to the patent office as

patentably distinct inventions.

The Federal Circuit also rejected the district court's hypothetical claim analysis, which incorrectly denied any range of equivalents by comparing only the phospholipid claim limitation of claim 1 of the '839 patent with the '301 patent (the only prior art considered by the district court) while ignoring all other limitations of the claim. Also, because the '301 patent failed to disclose the claim limitations of free fatty acids in the amount of 1.0-27.7%, the Court held that the '839 patent surfactant was patentably distinct from the surfactant described in the '301 patent.

The Federal Circuit also rejected the district court's decision that recitation of a specific numeric range precludes one from asserting the DOE and ruled that asserting the DOE to a phospholipid upper limit of 94.5% (the accused product's percentage) does not eliminate the upper limit from the claim.

Imprecise Claim Construction Is Sufficient to Address Infringement Issue

A.J. Moss

[Judges: Lourie (author), Mayer, and Dyk]

In *Pickholtz v. Rainbow Technologies, Inc.*, No. 01-1173 (Fed. Cir. Apr. 3, 2002), the Federal Circuit reversed a district court's grant of SJ of noninfringement based on an erroneous claim construction and remanded for reconsideration the issue of infringement under the proper claim construction.

Andrew Pickholtz is the inventor and owner of U.S. Patent No. 4,593,353 ("the '353 patent"), which claims a system for preventing piracy of computer software using authorization codes.

Pickholtz sued Rainbow Technologies, Inc. ("Rainbow"), alleging infringement of the '353 patent by Rainbow's manufacture and sale of computer dongles, small devices externally connected to a computer port. In operation, a driver program detects the presence of the Rainbow dongle and exchanges encrypted information with it, preventing execution of protected software unless the dongle is attached. Pickholtz alleged that a computer with a Rainbow dongle attached and with its driver program executing, infringes claim 1 of the '353 patent. The critical issue on appeal was the claim construction of the term "computer" and the phrase "located in the computer."

Supported by technical literature and expert testimony, Pickholtz proposed a broad construction of "computer" as "one or more processing units and the memory, peripherals and other devices connected electronically to and communicating with the processing units." Rainbow proposed a narrower definition: a central processing unit ("CPU") and main memory, without peripherals.

The district court had adopted Rainbow's construction, citing support from the intrinsic evidence. Specifically, when describing Figure 1, the '353 patent uses the phrase "computer system" to describe a CPU, main memory, a pseudorandom-number ("PRN") generator, and a peripheral disc, whereas claim 1 simply uses the term "computer." From that distinction, the court had concluded that the term "computer" must mean something other than the phrase "computer system." Moreover, the district court had reasoned that the claim limitation "located in the computer" would be superfluous if the term "computer" were construed as broadly as Pickholtz proposed. As a consequence of its construction of the term "computer," the court had construed the phrase "located in the computer" to mean "in the CPU, main memory or on the circuit board, but excluding connected peripherals," and consequently determined on SJ that Rainbow's dongles, being peripherals, do not infringe claim 1 of the '353 patent.

On appeal, Pickholtz argued that "computer system" and "computer" were used synonymously in the patent and should not exclude connected peripherals.

The Federal Circuit agreed that "computer" and "computer system" were used synonymously in the '353 patent, but disagreed that either phrase includes all peripherals. Rather, the Court observed that the '353 patent specification includes one peripheral, a disc "reading means" as part of the "computer system," and concluded that the synonymous claim term "computer" must therefore include at least some peripherals. However, the Court cautioned that the term "computer" cannot be so unbounded as to include all devices connected in any way to a CPU, or else the phrase "located in the computer," and particularly the word "in," would become meaningless. The Court concluded that it could not precisely define which peripherals may be part of the "computer" but found that unnecessary since the accused device is such a peripheral because it undisputedly connects substantially directly to the CPU board and is in close proximity to the CPU. Accordingly, the Court reversed the district court's SJ grant of noninfringement and remanded for reconsideration under the revised claim construction.

Court Remands for Additional Evidence on Claim-Construction Issue

Donald D. Min

[Judges: Clevenger (author), Friedman, and Lourie]

In *NeoMagic Corp. v. Trident Microsystems, Inc.*, No. 01-1631 (Fed. Cir. Apr. 17, 2002), the Federal Circuit affirmed-in-part, vacated-in-part, and remand-

ed a district court's SJ of noninfringement.

NeoMagic Corporation ("NeoMagic") is the assignee of U.S. Patent Nos. 5,650,955 ("the '955 patent") and 5,703,806 ("the '806 patent") directed towards a single-chip design for a graphics controller, including the graphics engine and a dynamic random access memory ("DRAM"). To allow the graphics engine and DRAM to coexist on a single chip, the inventors of the '955 and '806 patents developed a new circuit for logic gates to decouple the voltage sources from the substrate of the graphics controller and designed a reverse-biased n-well to prevent noise. The '955 patent concerns the redesigned logic gate that decouples the voltage source from the substrate while the '806 patent concerns the reverse-biased, n-well invention.

NeoMagic filed suit against Trident Microsystems, Inc. ("Trident"), alleging infringement of the '955 and '806 patents. The parties disputed the meaning of the term "coupling" in the '955 patent and the terms "power supply" and "negative with respect to" in the '806 patent.

For the '955 patent, the district court had construed "coupling" to require a voltage potential applied in the substrate that is different from the voltage potential in the logic gates. For the '806 patent, the district court had decided that the term "power supply" referred to a source of electrical energy that required at least two power supply lines to deliver a constant voltage supply of power to an electrical circuit. In addition, the district court had construed the term "negative with respect to" to mean an "absolute" negative voltage, i.e., a voltage that is negative with respect to ground.

Based on its construction of the disputed claim terms, the court had entered a SJ of noninfringement for Trident as to all asserted claims of both patents. NeoMagic then appealed.

On appeal, the Federal Circuit affirmed-in-part, vacated-in-part, and remanded. On the '955 patent, the Court found that the district court's construction for "coupling" was correct. The Court found that both proposed claim constructions for "coupling" by NeoMagic and Trident were consistent with the plain language of the claims. However, Trident argued that "coupling" further required components at two different voltages. The Court found that the specification expressly taught a design in which the two components were at different voltages. Accordingly, the Court agreed with Trident and, thus, affirmed the SJ of noninfringement.

As to the '806 patent, the district court held that the "BIAS" line of Trident's device did not provide a constant voltage and, thus, was not a "power supply." However, no probative evidence was offered to support the "constant voltage" construction for "power supply." The Federal Circuit held that the district court had improperly construed the claims in reference to the accused device and, in effect, had construed the claims to exclude it. Therefore, the Court remanded for further proceedings to determine whether "power supply" required a constant voltage supply of power.

In addition, the Court vacated the district court's construction that "negative with respect to" referred to an absolute negative voltage. The Court agreed with NeoMagic that if the inventors had meant to claim an absolute negative voltage, then the words "with respect to" were unnecessary and "negative" alone would have sufficed. Accordingly, the Court found that the plain language of the claims recited a relative voltage rather than an absolute voltage and vacated.

Prosecution History Estoppel Limits Fantasy-Football Patent

Pedro F. Suarez

[Judges: Lourie (author), Newman, and Friedman]

In *Fantasy Sports Properties, Inc. v. Sportsline.com, Inc.*, No. 01-1217 (Fed. Cir. Apr. 24, 2002), the Federal Circuit affirmed a district court's grant of SJ of noninfringement with respect to Yahoo!, Inc. ("Yahoo") and ESPN/Starwave Partners ("ESPN"). Concerning Sportsline.com, Inc. ("Sportsline"), the Federal Circuit vacated the district court's grant of SJ of noninfringement because a genuine issue of material fact exists as to whether Sportsline's Commissioner.com product infringes U.S. Patent No. 4,918,603 ("the '603 patent").

Fantasy Sports Properties, Inc. ("Fantasy") filed suit against the Defendants alleging that their computerized games infringed the '603 patent, which is directed to playing a "fantasy" football game on a computer. The game permits players to operate fantasy teams with actual football players that are selected by the game players. A game player receives points based on performance, such as when its football players score a touchdown, field goal, or point after touchdown. Claim 1 of the '603 patent also requires that the game players receive bonus points.

The specification of the '603 patent teaches that bonus points may be awarded based on, inter alia, the difficulty of play. However, during prosecution of the '603 patent, Fantasy distinguished over a 1987 article describing a paper-based fantasy-football game that gave points for distance scoring and total yardage. Although Fantasy argued that the 1987 article was not a computer-based game, it still amended claim 1 to overcome the 1987 article by adding the bonus-points limitation. Based on the prosecution history, the district court had construed bonus points to mean additional points, above and beyond standard scoring for plays not typically associated with the position of the scoring player. The district court had interpreted the amendment to

claim 1 as disclaiming bonus points for distance scoring and total yardage, the broader construction sought by Fantasy. The district court's construction effectively narrowed claim 1 to require out-of-position scoring, such as when a quarterback receives a pass or runs for a touchdown.

Each of the Defendants filed separate motions for SJ of noninfringement, each arguing that it did not infringe the '603 patent because it did not satisfy the bonus-points limitation. The district court agreed and granted the motions.

On appeal, the Federal Circuit reviewed the district court's claim construction of the bonus-points limitation.

The Federal Circuit concluded that Fantasy surrendered any broader interpretation of "bonus points" that includes the distance scoring and total yardage teachings of the 1987 article. To reach that conclusion, the Federal Circuit looked to the Examiner's rejection of claim 10 that included computer and player-grouping limitations with an additional limitation requiring points for yardage, i.e., essentially the broader construction sought by Fantasy on appeal. The Federal Circuit noted that the Examiner's rejection of claim 10 indicated that the use of a computer or a grouping of players was known in the art or obvious therefrom. The Federal Circuit also noted that Fantasy responded by canceling claim 10, allowing claims 13-15 to issue with the bonus-points limitation, which were rewritten by Fantasy as claims 1-3 of the issued '603 patent. The Federal Circuit viewed this as a clear indication that Fantasy had acquiesced in the face of the Examiner's rejection.

Fantasy also argued that the district court had erred because the doctrine of claim differentiation requires a broader construction of claim 1 than the one adopted by the district court. In particular, Fantasy's dependent claim 2 defines bonus points as "complex or difficult plays," and dependent claim 3 further defines claim 2 as including "extra points for a quarterback who receives or runs for a touchdown." The district court's claim construction essentially gave claims 1 and 3 the same scope. The Federal Circuit stated that Fantasy's disclaimer of the subject matter when it cancelled rejected claim 10 overcomes any presumption under the doctrine that claims must have a different scope.

In view of its claim construction, the Federal Circuit agreed with the district court that ESPN and Yahoo did not infringe the '603 patent because neither awards bonus points for out-of-position scoring. However, Fantasy offered a declaration suggesting that Sportsline's Commissioner.com product is customizable to include the same out-of-position, bonus-scoring system claimed in the '603 patent. The Federal Circuit thus concluded that the district court had erred in granting SJ of noninfringement because a genuine issue of material fact exists with respect to the Sportsline's Commissioner.com product.

Court Finds Prior Art "Toxic" to Claims for HIV Vaccine

M. Todd Rands

[Judges: Bryson (author), Rader, and Schall]

In *In re Sastry*, No. 01-1094 (Fed. Cir. Apr. 5, 2002), the Federal Circuit affirmed a decision by the Board that the claims in the patent application of Jagannadha K. Sastry et al., directed to a peptide-based HIV vaccine comprising a combination of two peptides, were unpatentable for obviousness.

In Sastry's claimed invention, the first peptide was designed to induce the body's cell-mediated immune response by stimulating cytotoxic T cells ("CTL"). Sastry broadly claimed this first peptide as one that is "able to stimulate the formation or enhance the activity of cytotoxic T cells that are capable of killing MHC-matched target cells that have the peptide on their surface."

The second peptide was provided to limit the spread of HIV to uninfected T cells (i.e., T-helper cells) to properly assist an immune response against the virus. This second peptide was selected from among four different peptides. Three of these peptides were defined as "HIV infection-inhibiting" that were derived from different portions of the HIV envelope protein. The fourth was defined as a "T helper cell-inducing" peptide having certain structural properties recited in the claims.

During prosecution, the Examiner rejected all of the claims as obvious over U.S. Patent No. 5,128,319 to Arlinghaus and a number of other references (including a 1988 journal article by Takahashi and a 1989 journal article by Javaherian). The Examiner contended that Arlinghaus taught the first peptide and the various other references taught the second peptide. On appeal to the Board, Sastry argued that there was no motivation to make the combination proposed by the Examiner, but the Board sustained the Examiner's rejection.

On appeal to the Federal Circuit, Sastry conceded that the prior art references taught both the first and second peptides recited in the claims. However, Sastry again argued that there was no motivation to combine the references. Sastry interpreted Arlinghaus as suggesting that CTL-inducing peptides should not be used if they induce a significant antibody-mediated response. Sastry then contended that Arlinghaus actually taught away from the proposed combination of prior art references since the

HIV infection-inhibiting (i.e., second) peptides described by Javaherian (and several of the other references) would induce a significant antibody response. Accordingly, Sastry argued that the combination of a "CTL inducing peptide" with either a "HIV infection-inhibiting peptide" or a "T helper cell-inducing peptide" was a nonobvious combination.

The Federal Circuit disagreed, noting that Arlinghaus actually provided a roadmap for making the claimed combination. In its analysis, the Court found that Arlinghaus not only taught the first peptide, but also the second. According to the Court, Arlinghaus suggested a "plurality of active peptides," including those with "the capacity to induce cytotoxic T cell activation to the native HIV protein," thus disclosing Sastry's first peptide. As for the second peptide, the Court noted that Arlinghaus clearly contemplated the use of more than one type of active peptide and identified two such peptides taught by Arlinghaus. These two peptides disclosed by Arlinghaus were identical to two HIV infection-inhibiting (i.e., second) peptides that were listed in Sastry's application.

Given the significant overlap between Sastry and Arlinghaus, the Court opined that the Board could have based its rejection of Sastry on anticipation rather than obviousness. To not do so, however, did not constitute error on the part of the Board. Accordingly, the Federal Circuit affirmed the Board's rejection of Sastry's application as being obvious in view of the cited prior art.

Applicant Loses Priority Given Nonenabling Disclosure of Interference Count

Aaron M. Raphael

[Judges: Linn (author), Gajarsa, and Friedman]

In *Adang v. Fischhoff*, No. 01-1169 (Fed. Cir. Apr. 10, 2002), the Federal Circuit reversed the Board's construction of count 1 of U.S. Patent Application No. 06/848,733, filed by Dr. Michael J. Adang and Dr. John D. Kemp (collectively "Adang"). The Court also affirmed the Board's determination that the application is nonenabling, even under the correct count construction, and, thus, is not determinative of priority.

This interference concerns tomato plants that have been genetically modified to incorporate a bacterial gene derived from the bacterium *Bacillus thuringiensis* ("*Bt*") that confers insect resistance. The bacterium produces proteins as a protoxin, or inactive form, with a molecular weight of 130 kD. The activated toxin form of the protein, which is toxic to certain insects, has a molecular weight of 67 kD. The procedure for modifying the tomato plants is as follows: The *Bt* gene is isolated from the bacterium and inserted in a modified plasmid derived from a separate bacterium, *Agrobacterium tumefaciens*. (Plasmids are small loops of DNA that can be used to transfer a gene of interest between biologic systems.) After the modified plasmid bearing the *Bt* gene has been produced, it is returned to the *Agrobacterium*, and this modified bacteria is then brought into contact with tomato cells. The cells are incubated together with the bacteria to produce transformed cells, which are cultured to create regenerated tomato plants that produce a *Bt* crystal protein.

On June 10, 1991, Adang filed Application No. 07/713,624 ("Adang '91") entitled "Insect Resistant Plants" and directed to the above invention, claiming benefit of the October 21, 1988, filing date of CIP Application No. 07/260,574 ("Adang '88"); the April 4, 1986, filing date of CIP Application No. 06/848,733 ("Adang '86"); and the September 26, 1983, filing date of Application No. 06/535,354 ("Adang '83").

On December 23, 1991, Dr. David A. Fischhoff and Dr. Stephen G. Rogers (collectively "Fischhoff") filed Application No. 07/813,250 ("Fischhoff '91") entitled "Insect Resistant Tomato Plants," claiming benefit of the November 20, 1986, filing date of Application No. 06/932,818 ("Fischhoff '86").

An APJ declared this interference between the subject matter claimed in Adang '91 and Fischhoff '91. Count 1 of the interference reads as follows:

> A tomato plant which has been regenerated from a tomato plant cell transformed to comprise a full length *Bacillus thuringiensis* crystal protein gene capable of encoding a *Bacillus thuringiensis* crystal protein of about 130 kD under control of a promoter such that said gene is expressible in said plant in amounts insecticidal to Lepidopteran insects.

The APJ accorded Adang benefit of the October 21, 1988, filing date of Adang '88, and the April 4, 1986, filing date of Adang '86, and accorded Fischhoff benefit of the November 20, 1986, filing date of Fischhoff '86.

In its final decision in the interference, the Board construed Count 1 to require that "the tomato plants must produce *Bt* crystal protein having a molecular weight of ~130 kD in amounts sufficient to destroy or control Lepidopteran insects." The Federal Circuit noted that, under the Board's construction, the toxic effects must be directly attributable to "*Bt* crystal protein protoxin of about 130 kD" that is actually produced by the transformed plants in "amounts . . . which destroy or control Lepidopteran insects in any way."

In light of this construction, the Board considered whether Adang should be accorded the benefit

of the April 4, 1986, filing date of Adang '86. In answering this question, the Board considered both the adequacy of the written description of Adang '86 and whether that disclosure was enabled. The Board found that Adang '86 contained an adequate written description, but lacked an enabling disclosure. Relying on several sources of evidence, the Board found that transforming tobacco plant cells, which were the subject of the embodiments of Adang '86, to express a full-length *Bt* crystal protein gene was so rare and unpredictable that the skilled artisan would not reasonably have expected to be able to successfully transform tomato-plant cells, which were merely listed in the patent disclosure along with numerous other plants, in a similar fashion.

Lastly, the Board found that Adang had not established a priority date earlier than November 20, 1986, the filing date of Fischhoff '86, based either on actual reduction to practice or prior conception plus diligence in reduction to practice.

The Federal Circuit held that the Board had erred in its construction of Count 1 requiring that the transformed tomato plants of the count "must produce amounts of *Bt* crystal protein protoxin *of about 130 kD* which destroy or control Lepidopteran insects in any way" (emphasis added). The Court then stated the proper count construction of Count 1. According to the Court, tomato plants encompassed by Count 1 (1) must have been regenerated from a tomato-plant cell transformed by a full-length, *Bt* crystal protein gene that encodes *Bt* crystal protein of about 130 kD under control of a promoter that directs expression of said structural gene in said tomato-plant cell; and (2) must produce amounts of a *Bt* crystal protein of any size that destroy or control Lepidopteran insects in any way.

However, the Federal Circuit affirmed the Board's conclusion that Adang '86 did not enable Count 1, even under the Court's correct count construction, and that Adang was, therefore, not entitled to claim priority to the April 4, 1986, filing date of that application. Examining the references relied upon by the Board, the Court agreed that the disclosure of a successful transformation of tobacco plants using a full-length *Bt* crystal protein gene and insect toxicity of those plants would not have enabled the skilled artisan at the time to successfully conduct a similar transformation of an entirely different species, such as tomato, without undue experimentation.

The Federal Circuit noted that since Adang '86 is nonenabling, Adang's case for priority of invention of Count 1 rests on an ability to show either actual reduction to practice of an embodiment of the count prior to November 20, 1986, the filing date of Fischhoff '86, or conception of an embodiment of the count prior to that date and diligence in reducing the embodiment to practice. The Court remanded this matter to the Board for further consideration of the issue of priority since the factual findings of the Board were insufficient to determine whether Adang had sustained his burden of proof on this issue.

Court Revises Claim Construction for Patents on Recombinant DNA Technology

David P. Frazier

[Judges: Rader (author), Michel, and Schall]

In *Genentech, Inc. v. Amgen, Inc.,* No. 01-1098 (Fed. Cir. Apr. 29, 2002), the Federal Circuit vacated a district court's SJ of noninfringement and remanded for a determination of infringement under a revised claim construction. The Court also ruled that the district court properly denied a motion for discovery relating to the accused product and did not abuse its discretion by precluding Genentech, Inc. ("Genentech") from pursuing a theory of infringement under the DOE after Genentech had failed to explicitly include such a theory in its pretrial claim-construction charts.

Genentech sued Amgen, Inc. ("Amgen") for infringement of three patents based on Amgen's production and sale of Neupogen®, a recombinant methionyl-human-granulocyte-colony-stimulating factor ("met-hGCSF") that stimulates replication of white blood cells. The patent claims at issue concerned cloning vehicles and recombinant DNA processes for producing polypeptides in microbial cells. Amgen makes Neupogen® by producing the recombinant protein from a plasmid expressed in bacterial cells.

Genentech's appeal centered on construction of the terms "ribosome binding site" and "control region" as used in DNA plasmid vectors that express recombinant proteins in microbial cells. The district court had construed the term "ribosome binding site" to contain effectively three parts, a "Shine-Dalgarno" ("S-D") sequence, a start codon, and intervening linker DNA separating the two. Genentech argued that the term properly construed would encompass only the S-D sequence and the start codon. Acknowledging that none of the patents explicitly defined the term, the Federal Circuit considered arguments in the prosecution history of the patents as well as declaration testimony of expert witnesses before concluding that Genentech was correct. Neither intrinsic nor extrinsic evidence established that the linker sequence made up part of the ribosome-binding site.

Regarding the term "control region," the Federal Circuit found that the district court had erred by fail-

ing to appreciate the difference between the content (sequence) of the control region and the manner in which it was constructed. Relying on the specification and the prosecution history, the Court held that the "control region" limitation could be met regardless of how the DNA sequence of the region was assembled. In view of its revisions to the claim construction, the Federal Circuit vacated the lower court's SJ of noninfringement and remanded for an infringement determination based on the proper claim construction.

Genentech also appealed the district court's denial of its motion seeking discovery of the sequence of Amgen's entire control region and its method for assembling that region. The Federal Circuit held that the district court did not abuse its discretion by denying the motion since Genentech already had enough information about the control region to determine the issue of infringement.

The Federal Circuit also found that the district court had not abused its discretion by precluding Genentech from pursuing a theory of infringement under the DOE. Under the local rules of the Northern District of California, Genentech was required to submit a pretrial claim chart explicitly reciting its theories of infringement. Genentech contended only literal infringement. Genentech argued that it had reasonably believed that it was required by the local rule to chose between either literal infringement or infringement under the DOE in the claim charts. The Federal Circuit was not persuaded and upheld the district court's decision, noting that the appellate court defers to lower courts' local rules to allow those courts to properly manage the cases before them. The Court added that even though the record provided grounds for the district court to allow Genentech to amend its infringement contentions, the district court did not abuse its discretion by refusing to do so.

Mere Identification of Some Aspects of Count Fails to Prove Priority of Overall Count

Courtney B. Meeker

[Judges: Lourie (author), Michel, and Dyk]

In *Griffin v. Bertina*, No. 01-1399 (Fed. Cir. Apr. 2, 2002), the Federal Circuit affirmed a decision of the Board awarding judgment in an interference to the senior party, Rogier M. Bertina and Pieter H. Reitsma (collectively "Bertina"), because the junior party had failed to show that it reduced the invention to practice before Bertina's priority date.

John H. Griffin and Judith Greengard (collectively "Griffin") filed a patent application on March 23, 1995, claiming an invention directed to diagnosing thrombosis, and Bertina filed a patent application on June 6, 1995, claiming a similar invention. The Board declared an interference between the two applications. Bertina's application was accorded the benefit of the filing dates of a PCT Application filed on February 14, 1995, and a European Patent Application filed on February 14, 1994. Griffin offered testimony that the inventors identified the relevant mutation in the gene before a December 2, 1993, meeting and contended that this discovery constituted a reduction to practice of the invention. The Board concluded that there was no indication that the Griffin inventors appreciated the significance of the mutation and, therefore, ruled that they had not reduced the invention to practice. Thus, the Board awarded priority to Bertina.

On appeal, the Federal Circuit concluded that the Board did not err in construing the count to be limited by the preamble because the preamble has the import that the claim as a whole suggests for it. In this case, the preamble was directed to diagnosing an increased risk for thrombosis or a genetic defect causing that disease, which was again stated in the body of the count. The Court found that "diagnosis" is the "essence" of the invention and gives meaning to the first step of the body of the count, obtaining test nucleic acid from a "test subject," and the second step of "assaying for the presence of a point mutation."

The Federal Circuit also held that the Board was correct in construing the "wherein" clauses of the count as an effective limitation, ruling that both "wherein" clauses give purpose and meaning to the manipulative steps of the count by placing them within the context of the diagnosis of an increased risk of developing thrombosis. In this case, the correlation between the mutation and the increased risk of disease appeared to be material to the patentability of the count, and Griffin had offered no evidence to show that prior to December 2, 1993, the inventors appreciated this correlation. The Court stressed that Griffin did not demonstrate reduction to practice because the inventors did not appreciate the utility of their findings; rather, they merely identified one data point in their pursuit to correlate a genetic mutation to increased risk of disease.

Thus, the Court held that the Board properly construed the count by including the preamble and the "wherein" clauses and that, in so construing the count, the Board did not err in concluding that Griffin failed to show that it had reduced the invention to practice before Bertina's priority date.

Court Remands Summary Judgment for Findings on Doctrine of Equivalents

Vince Kovalick

[Judges: Rader (author), Clevenger, and Bryson]

In *Leggett & Platt, Inc. v. Hickory Springs Manufacturing Co.*, No. 01-1255 (Fed. Cir. Apr. 2, 2002), the Federal Circuit reversed a district court's SJ

that Hickory Springs Manufacturing Company ("Hickory") did not infringe claims 3 and 4 of Leggett & Platt, Inc.'s ("L & P") U.S. Patent No. 5,052,064 ("the '064 patent") and that Hickory did not misappropriate L & P's trade secrets, given genuine issues of material fact concerning infringement under the DOE and trade-secret violations.

The '064 patent claims a stackable bedding foundation, often known as a box-springs assembly. In particular, the patent claims box springs that are "nestably stackable" for transportation so that no compression is necessary. Hickory's accused product is known as the PowerStack.

The district court had construed the term "support wire" to mean a wire having only two ends, regardless of the number of welds in between. Hickory then moved for SJ of noninfringement, while L & P moved for SJ of misappropriation of trade secrets. The district court granted the former and denied the latter.

On appeal, L & P argued that the term "support wire" includes an assembly of separate wires welded together. The Federal Circuit observed that the specification distinguishes support wires from other types of wires, including border wires and connector wires. The figures show the support wires stretching from one border wire to the other. Accordingly, the Federal Circuit affirmed that the district court had correctly construed the term "support wires" to mean a continuous strand of wire with only two ends.

Concerning literal infringement, the Federal Circuit ruled that Hickory's PowerStack device does not have support wires that fit the proper claim construction. Rather, the PowerStack product features support cups, which are wire baskets welded to longitudinal, end-to-end wires. The Court remanded the infringement issue, however, because the district court must determine whether the PowerStack product is equivalent to the support wires in the '064 patent, given several factual issues concerning the substantial differences between the PowerStack and the claim.

Concerning the trade-secret misappropriation issue, the district court had found genuine issues of material fact regarding misappropriation, but granted SJ in favor of Hickory because L & P had not shown sufficient evidence that Hickory had used L & P's trade secret, as required by Illinois law. The Federal Circuit found genuine issues of material fact on the use element as well as misappropriation and, noting that the final decision may ultimately turn on the credibility of witnesses, determined that SJ was not appropriate.

In **Last month at The Federal Circuit**, certain terms, titles, and names of federal agencies that are frequently referred to in text, appear in abbreviated forms or as acronyms. These abbreviated forms and acronyms are listed below.

ALJ	Administrative Law Judge
APJ	Administrative Patent Judge
Board	Board of Patent Appeals and Interferences
Commissioner	Commissioner of Patents and Trademarks
CIP	Continuation-in-Part
DJ	Declaratory Judgment
DOE	Doctrine of Equivalents
IP	Intellectual Property
ITC	International Trade Commission
JMOL	Judgment as a Matter of Law
MPEP	Manual of Patent Examining Procedure
PCT	Patent Cooperation Treaty
PTO	United States Patent and Trademark Office
SEC	Securities and Exchange Commission
SM	Special Master
SJ	Summary Judgment