

## **PATENT DOCS**

### Exergen Corp. v. Kaz USA, Inc. (Fed. Cir. 2018)

*By Kevin E. Noonan -- March 11, 2018*

The tortured path that the Federal Circuit has taken (a path also trodden by the U.S. Patent and Trademark Office and the district courts) of applying the patent eligibility decisions under Mayo Collaborative Services v. Prometheus Laboratories, Inc. and Alice Corp. v. CLS Bank Int'l. is illustrated in a 2-1 decision handed down by the Federal Circuit on March 8th in Exergen Corp. v. Kaz USA, Inc. In comparing the rationales used by the District Court and the majority with the dissenting opinion, this case illuminates a fundamental issue in properly applying subject matter eligibility law that, if adopted could avoid much of the confusion and uncertainty injected into the law by the Supreme Court's recent decisions.

The patents at issue, U.S. Patent No. 6,292,685 and U.S. Patent No. 7,787,938, were directed to body temperature detection apparatus and methods for detecting body temperature, respectively. Representative claims are as follows:

U.S. Patent No. 6,292,685:

*48. A body temperature detector comprising:*

*a radiation detector; and*

*electronics that measure radiation from at least three readings per second of the radiation detector as a target skin surface over an artery is viewed, the artery having a relatively constant blood flow, and that process the measured radiation to provide a body temperature approximation, distinct from skin surface temperature, based on detected radiation.*

*49. The body temperature detector of claim 48 wherein the artery is a temporal artery.*

U.S. Patent No. 7,787,938:

*14. A method of detecting human body temperature comprising making at least three radiation readings per second while moving a radiation detector to scan across a region of skin over an artery to electronically determine a body temperature approximation, distinct from skin surface temperature.*

*24. The method of claim 14 wherein the artery is a temporal artery.*

*The claimed detectors calculate a person's body temperature "by detecting the temperature of the forehead directly above the superficial temporal artery."*

*The device then calculates the body temperature by applying a "constant coefficient" to skin and ambient temperature readings. The temperature is detected by scanning the forehead to detect a peak reading that indicates the location of the temporal artery and hence provides the most reliable temperature reading.*

Kaz sold competing temperature-sensing apparatus; two other defendants, Brooklands Inc. and Thermomedics Inc., were also sued in parallel proceedings, with the District Court consolidating the lawsuits solely for claim construction purposes. Not dispositive here but providing an interesting counterpoint to the decision in this case, certain claims of both the '685 and '938 patents were held to be invalid on the basis of lack of subject matter eligibility under § 101 in these other lawsuits. In this case, a jury found the patents to be infringed and not invalid and assessed damages (in a total amount in excess of \$15 million). The District Court denied Kaz's summary judgment motions and motions for JMOL that the claims were invalid under § 101, as well as that the '685 patent was not infringed and for a new trial on damages, and granted Kaz's summary judgment motion of no willful infringement. Both parties appealed the adverse judgments against them.

The Federal Circuit affirmed the decision on § 101, reversed denial of JMOL on infringement of the '685 patent, vacated judgment for damages as a result of its decision on '685 patent infringement, and remanded for the District Court to

recalculate damages, in a decision by Judge Moore joined by Judge Bryson; Judge Hughes dissented.

The majority set forth the now canonical two-prong test for subject matter eligibility under *Mayo* and *Alice*: the claims need to be "directed to" a law of nature, natural phenomenon or abstract idea, and there must be "something more" amounting to an "inventive concept" that is not merely "routine, conventional, and well-understood" in the prior art. Here, the majority spends little time on the first prong, accepting without comment that the claimed invention is dependent on the "natural law" that body temperature can be measured from skin temperature at the forehead. The District Court had relied on *Diamond v. Diehr*, 450 U.S. 175 (1981), for the principle that claims can recite "additional steps" that "transformed the underlying natural laws into inventive methods and useful devices that noninvasively and accurately detect human body temperature." These steps, which included "(1) moving while laterally scanning ('685 patent claims 7, 14, and 17; '938 patent claims 17, 24, 33, 60, and 66); (2) obtaining a peak temperature reading ('685 patent claim 7; '938 patent claims 60 and 66); and (3) obtaining at least three readings per second ('938 patent claims 17, 24, 39, 40, 46, and 49)" were known in the prior art but that was not enough. According to the District Court "simply being known in the art did not suffice to establish that the subject matter was not eligible for patenting" because "a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made," citing *Diehr*. The distinction (and in some ways *the* distinction missing from much of § 101 jurisprudence post-*Mayo*) is that these methods were used *for a different purpose* in the prior art, in this case detecting "hot spots" indicative of tumors, fractures, or other injuries (and in at least some testimony, used in horses not humans). In addition, the invention here newly provided a "calculated coefficient for translating measurements taken at the forehead into core body temperature readings" which was not routine, well understood or conventional in the prior art.

The majority considered these findings, regarding what was routine, conventional and well understood in the prior art, to be findings of fact, and thus entitled to the

deferential "clear error" standard of review. The opinion explains that, although the question of subject matter eligibility is one of law it is (or at least can be; the opinion is careful to state that it isn't always) reliant on underlying facts, analogizing this question to indefiniteness, enablement, and non-obviousness. To illustrate this point, the opinion goes on to say that "[s]omething is not well-understood, routine, and conventional merely because it is disclosed in a prior art reference," setting forth the hoary precedent of *In re Hall* wherein although the presence of a "thesis written in German and located in a German university library" was sufficient to qualify as prior art because it was available to the public, it would not without more be enough to satisfy the requirement that something be routine, conventional and well understood in the prior art. The opinion further distinguishes both *Mayo* and *Ariosa v. Sequenom* on the basis that the methods recited in those claims were undisputedly routine, conventional and well understood.

The opinion states that "[t]his case is different," and it is informative to consider the basis for this determination:

*Following years and millions of dollars of testing and development, the inventor determined for the first time the coefficient representing the relationship between temporal-arterial temperature and core body temperature and incorporated that discovery into an unconventional method of temperature measurement. As a result, the method is patent eligible, similar to the method of curing rubber held eligible in Diehr.*

Finally, the panel refused to consider Kaz's arguments that it had a Seventh Amendment right to have patent eligibility decided by a jury (saying that is "a question which awaits more in-depth development and briefing than the limited discussion in this case"), based on at least three instances ("before, during, and after trial") where Kaz waived the issue.

As to the other questions before the Court, the panel decided that the claims of the '685 patent were not infringed because the accused devices reported the "oral equivalent" temperature rather than the "temperature of the body beneath the forehead" as required

by the claims. Accordingly, the panel vacated the damages below (while affirming the methodology regarding reasonable royalty and lost profits calculations) and remanded for recalculation based on non-infringement of the '685 patent claims. And the panel majority also found that the District Court's grant of Kaz's summary judgment motion that infringement was not willful was not an abuse of discretion and not inconsistent with the Supreme Court's decision in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1934 (2016), setting forth the proper standard to applying the enhanced damages provisions of 35 U.S.C. § 284.

Judge Hughes' dissent was based on his view that the District Court committed clear error in not deciding that the undisputed presence in the prior art of apparatus for detecting "hot spots" was enough for the claimed methods to be routine, conventional and well understood. According to Judge Hughes, a hallmark of a patent-ineligible claim is one that "begins and ends" with a non-eligible judicial exception, citing *Ariosa*. He perceives that this is the case here, because the claim "begins" with the ineligible law of nature (that body temperature can be detected at the forehead due to the presence of the temporal artery), and ends with a determination of body temperature. (On this point, the analysis must be more detailed than that, otherwise any claim for a method of doing something that arises in the natural world would be *per se* ineligible.) As to the equations developed at such a cost that impressed the District Court and the panel majority, Judge Hughes sees these as merely deriving from the "the principle that heat generated by a person's body flows throughout the body and, eventually, into the environment" and that "[t]he prior art recognized long ago that this principle enabled the calculation of core body temperature from skin and air temperature measurements."

It is in Judge Hughes' discussion of whether the invention provides an inventive concept that is not well understood, routine, and conventional that the competing views of the eligibility issue are properly set out. Judge Hughes maintains that:

*[A]side from its use of a newly discovered heat balance coefficient, Exergen's claimed invention amounts to nothing more than using a preexisting temperature detector to take a conventional and routine measurement of*

*forehead skin temperature. Absent the patent-ineligible law of nature, the claimed invention consists entirely of elements already combined by the prior art. Thus, the claimed combination of elements lacks an inventive concept because the combination was well-understood, routine and conventional at the time of invention.*

The District Court's error was that it:

*[N]ever found that the combination of taking multiple measurements while scanning laterally across the forehead to determine peak temperature was not well-understood, routine, and conventional. It only found that there was "no evidence . . . that these steps were 'well-understood, routine, [or] conventional[ly]' used to detect arterial temperature beneath the skin." [alterations in original] (emphasis added). Rather than finding that the claim elements were not routine or conventional, the district court focused on whether those elements were routinely or conventionally used for the purpose of calculating core body temperature. It differentiated the claimed invention from the prior art solely on the basis that the claimed invention "solve[s] a different problem."*

Judge Hughes properly notes that the Federal Circuit "rejected identical reasoning in *Ariosa*," which is not to say that the Court's reasoning in that case was sound, as illustrated by Judge Hughes' synopsis of the *Ariosa* decision:

*Although the claimed methods solved a novel problem, using conventional techniques for a new purpose did not supply an inventive concept that amounted to significantly more than the natural phenomenon to which the claims were directed.*

As applied to this case:

*Despite recognizing that temperature detectors identical to the claimed invention already existed for other purposes, the district court reasoned that these prior detectors never used forehead skin temperature measurements to*

*calculate core body temperature. Like in Ariosa, this reasoning implicitly relies upon the relationship between forehead skin temperature and core body temperature to supply an inventive concept. Although the invention calculates core body temperature from forehead temperature, those calculations merely reflect the natural relationship between forehead and core body temperatures. Accordingly, the district court clearly erred by finding an inventive concept based on the asserted claims' use of well-understood, routine, and conventional temperature-measuring techniques for this new purpose.*

This reasoning sets forth exactly what is wrong with how the USPTO (sometimes), the district courts (too often), and the Federal Circuit (much too often in view of their mandate and purported expertise in patent law) have applied the Supreme Court's *Mayo/Alice* jurisprudence. This application, wherein discovery of a new phenomenon and using conventional means to detect it, when such detection is not possible in the prior art, extends patent ineligibility further than the Court has indicated it needs to go. It is one thing to take conventional activity and prevent it from being subject to patent exclusivity without the elusive "something more" and quite another to preclude beneficial method claims to detect previously unknown phenomena unless a new method for detecting is also provided.

Perhaps Judge Hughes points to a way in which the analysis can be refined to avoid this consequence, focusing on how the first prong of the *Mayo/Alice* test is applied:

*I am not suggesting that considering the integration of a law of nature into the claimed invention is improper at every stage of § 101 analysis. Indeed, step one requires us to examine the claims holistically in order to determine whether they are directed to an ineligible concept. See Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016) ("Rather, the 'directed to' inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether 'their character as a whole is directed to excluded subject matter.'" (quoting Internet Patents Corp. v. Active Network, Inc., 790 F.3d 1343, 1346 (Fed.Cir.2015))). Upon reaching step two, however, we focus more narrowly on the claim elements other than the invention's use of the ineligible concept to*

*which it is directed. Accordingly, the majority's analysis of the claims as a whole belongs at step one.*

But of course, that hope is somewhat dashed in the next sentence:

*At either step, however, for the reasons discussed above, a claimed invention's unconventionality, by itself, is not sufficient to render the claim patent eligible.*

For a statutory regime purportedly aimed at innovation, it is reasonable to ask, "why not"?

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Nonprecedential disposition

Panel: Circuit Judges Moore, Bryson, and Hughes

Opinion by Circuit Judge Moore; dissenting opinion by Circuit Judge Hughes