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The Fed. Circ.'s Secret Merger Of Alice Steps 1 And 2

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Under the U.S. Supreme Court's decisions in Alice Corp. v. CLS Bank International and Mayo Collaborative Services v. Prometheus Laboratories Inc., the U.S. Court of Appeals for the Federal Circuit and the district courts employ the well-known two-step inquiry for patent-eligibility: (1) whether the claim is directed to an unpatentable concept such as an abstract idea, law of nature or natural phenomena, and, if it is, (2) whether the claim includes other limitations constituting an "inventive concept" that transforms the invention into a patent-eligible practical application.[1]

A high percentage of challenged patents were found to be patent-ineligible beginning with the 2012 Mayo decision, and the trend accelerated with the 2014 Alice decision.

In early 2018, the Federal Circuit decisions in Berkheimer v. HP Inc. and Aatrix Software Inc. v. Green Shades Software Inc. found that the eligibility inquiry under step two was a factual inquiry on whether the invention contained limitations that were "well understood, routine and conventional." Furthermore, Berkheimer held the "question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact" that "must be proven by clear and convincing evidence."[2]

For those who believed that the Supreme Court's Mayo/Alice decisions had created a patent-eligibility framework which was too vague for consistent application, the Berkheimer and Aatrix Software decisions appeared to provide the potential to make the inquiry under Title 35 of the U.S. Code, Section 101, more objective and predictable. Many expected that the percentage of patents found ineligible would decrease significantly. The U.S. Patent and Trademark Office issued a new set of guidelines for the application of step two in view of the Berkheimer decision.[3]

Unfortunately, while Berkheimer has provided some element of consistency at the trial court level, it has failed to bring a significant change at the Federal Circuit.

At the Federal Circuit: Patents Are Being Found Eligible Exclusively Under Step One

When patents are found statutory at the Federal Circuit, the result is almost invariably determined under step one. Between 2019 and 2020, eight of nine opinions finding a patent statutory did so under step one without significant attention to the step two criteria:

- Uniloc USA Inc. v. LG Electronics USA Inc. (April 2020).

- CardioNet LLC v. InfoBionic Inc. (April 2020).
- Illumina Inc. v. Ariosa Diagnostics Inc. (March 2020).
- Boehringer Ingelheim Pharmaceuticals Inc. v. Mylan Pharmaceuticals Inc. (March 2020).
- Koninklijke v. Gemalto M2M GmbH (November 2019).
- Uniloc USA Inc. v. ADP LLC (May 2019).
- SRI International Inc. v. Cisco Systems Inc. (March 2019).
- Natural Alternatives International Inc. v. Creative Compounds LLC (March 2019).

In only one case, Cellspin Soft Inc. v. Fitbit Inc. (June 2019),[4] did the Federal Circuit find an invention to be directed to an abstract concept but go on to find it statutory under a full step two analysis.

Unlike the Federal Circuit, Berkheimer Is Having a Significant Impact in the District Courts

As noted above, in cases where the Federal Circuit has found a patent statutory it has reached the conclusion under step one nearly 90% of the time. This is not the case in the district courts, where the effect of Berkheimer has been significant. A survey of 50 district court opinions from 2019 to 2020 reveals that decisions favoring eligibility were based on step two at a 55% rate, with the remaining 45% decided under step one without a significant step two inquiry.[5]

Federal Circuit: The Step One Inquiry Is Increasingly Factual and Seems To Subsume Step Two

Abstract ideas have been identified based on whether the idea relates to a practice that is "long-standing," "fundamental" (see Alice),[6] "well-established" (see Cyberfone Systems LLC v. CNN Interactive Group Inc.)[7] or "well known" (see Content Extraction & Transmission LLC v. Wells Fargo Bank).[8]

Respecting computer implemented inventions, the Federal Circuit has more recently been defining abstract ideas based on whether the claim recites a "specific improvement in the capabilities of computing devices" (see Visual Memory LLC v. NVIDIA Corp., Core Wireless Licensing SARL v. LG Electronics Inc.)[9] or an "advance over the prior art" (see The Chamberlain Group Inc. v. Techtronic Industries Co. Ltd.)[10] or other "technological solutions" (see SRI v. Cisco, Data Engine Technologies LLC v. Google LLC).[11]

What is concerning from the standpoint of consistency is these various tests or factors for identifying abstract ideas under step one have all the hallmarks of factual inquiry thought to be the province of the step two inquiry. Obviously, whether a practice is long-standing or fundamental is a question of historical fact. Likewise, whether an invention makes a specific improvement to the capability of a computer is based on a factual inquiry into the merits of the invention's alleged improvement compared to the state of computing at the time of the invention.

Each of the eight cases listed above decided under step one involved inquiries that were essentially

factual in character. For example:

- In Uniloc USA v. LG Electronics,[12] the Federal Circuit found that a claimed improvement to wireless technology for exchanging data between fixed and mobile devices was not directed to an abstract idea because the invention brought a "reduction in latency" in communication as compared to "conventional systems."

- In CardioNet v. InfoBionic,[13] the court found that that a claimed improvement to a cardiac monitoring device was not an abstract idea because it more accurately detects the occurrence of atrial fibrillation such that it "improves cardiac monitoring technology."

- In Illumina Inc. v. Ariosa Diagnostics,[14] the court found that a method of preparation of cell free fetal DNA from the maternal bloodstream was not merely a natural phenomenon because it produced material with a fraction of enriched cell free fetal DNA greater than "the naturally-occurring fraction in the mother's blood."

- In Koninklijke v. Gemalto M2M,[15] the court found that an improved method of error detection in data transmissions was not an abstract idea because the invention used data blocks subject to "made in time" permutations which improved upon error detection in "prior art systems."

- In Uniloc USA Inc. v. ADP,[16] the court found that the use of file packets to register software applications was not an abstract idea because the registration initiated from a server which improved upon "prior art application distribution networks."

- In SRI International v. Cisco,[17] the Federal Circuit held that a method of monitoring computer networks for hackers was not an abstract idea because it used a specific technique for "improving computer network security" in "conventional networks."

The Federal Circuit Should Accept the Consequences of Its Changed Jurisprudence and Hold that Step One is a Factual Inquiry as It Did With Step Two in Berkheimer

In Interval Licensing LLC v. AOL Inc. and other cases, the Federal Circuit has recognized that the application of step one and step two to an invention involve "overlapping inquiries."[18] Step one often involves a factual inquiry because it overlaps with fact-based step two.

In CardioNet, the court concluded under step one that the invention was not an abstract idea because it was directed to a cardiac monitoring device that "more accurately detects the occurrence of atrial fibrillation and atrial flutter" as distinct from other arrhythmias and that "allows for more reliable and immediate treatment of these two medical conditions."[19]

In reaching this conclusion, the Federal Circuit evaluated what the specification taught. The court cited to Visual Memory[20] that it should weigh "all factual inferences drawn from the specification."[21] As to the teachings of the specification in CardioNet, the court stated: "[W]e accept those statements as true and consider them important in our determination that the claims are drawn to a technological improvement" under step one.[22]

The court also noted that there was no evidence of record that contradicted the improvements the specification described.[23] The court acknowledged the factual character of its step one inquiry in observing that the trial court has discretion to take judicial notice of a long-standing practice as a fact.[24] The court also stated that step one can include a review of the prior art and "facts outside of the intrinsic evidence" regarding the state of the art at the time of the invention.[25]

Ultimately, the Federal Circuit reversed the district court's finding that the patent was directed to an abstract idea because "[t]he district court's finding is contrary to fact and fails to draw all reasonable inferences in CardioNet's favor."[26]

Cardionet illustrates the thoroughly factual nature of the step one inquiry under Alice/Mayo. The other cases summarized above — Uniloc I, Uniloc II, Illumina, Koninklijke and SRI — confirm that the step one inquiry is now a factual inquiry.

The Federal Circuit can bring some clarity to the confounding Section 101 framework created by Mayo/Alice by acknowledging that step one is a question of fact. There is consensus that the application of the current Section 101 framework for any given case is unpredictable and highly subjective. The problem is largely rooted in the treatment of step one as a pure question of law. Currently, a given judge can deem an invention as abstract or nonabstract almost by fiat. But if the matter is treated a question of fact then more certainty is brought to the inquiry.

Closing Thoughts and Practice Points

Patent owners need to understand and appreciate the merger of what were previously separate and distinct conceptions — step one addressing "abstractness" per se and step two addressing the "conventionality" of the invention.

Accordingly, patent owners must ensure that their pleadings and briefs addressing step one of Mayo/Alice explain how the invention is not directed to a concept that was well known and conventional as of the date of the invention. The patentee should explain how the invention provides a technological solution that represents an advance over the prior art, including how the invention improves or changes the capabilities of a computer, the human body and so forth.

Although the inquiry under step two as to whether the invention is "well understood, routine and conventional" is very similar to step one factors such as whether the invention is "long-standing," "well-established" or whether it represents an "advance" over conventional "prior art" solutions, these factual elements need to be brought out for step one to ensure the presence of a full record at the appellate level.

Parties must recognize that the reason why the Federal Circuit is deciding many decisions under step one is the court's apparent merger of the step one and step two analyses, and the fact that the appellate court can decide issues of law de novo. The court itself has recognized this merger issue in its Interval Licensing decision. However, to increase the likelihood of prevailing at the Federal Circuit on the "legal issue" of abstractness at step one, parties must make a clear record on what are essentially factual predicates borrowed from step two.

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[1] Alice Corp. Pty. Ltd. v. CLS Bank Intern., 134 S.Ct. 2347, 2355-2357 (2014); Mayo Collaborative Services v. Prometheus Labs., 132 S.Ct. 1289, 1293-1294 (2012).

[2] Berkheimer v. HP Inc., 881 F.3d 1360, 1365, 1368 (Fed. Cir. 2018); Aatrix Software, Inc. v. Green Shades Software, Inc., 882 F.3d 1121, 1125 (Fed. Cir. 2018).

[3] "Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (Berkheimer v. HP, Inc.)" (April 19, 2018), Robert Bahr Deputy Commissioner for

Patent Examination Policy.

[4] Cellspin Soft, Inc. v. Fitbit, Inc., 927 F.3d 1306 (Fed. Cir. 2019)

[5] The analysis is based on a Westlaw search conducted on May 29, 2020.

[6] Alice, 134 S.Ct. at 2355-2356.

[7] Cyberfone Systems LLC v. CNN Interactive Group, Inc., 2014 WL 718153 at *2 (Fed. Cir. February 26, 2014).

[8] Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n, 776 F.3d 1343, 1347 (Fed. Cir. 2014).

[9] Visual Memory LLC v. NVIDIA Corp., 867 F.3d 1253, 1258 (Fed. Cir. 2017); Core Wireless Licensing SARL v. LG Electronics Inc., 880 F.3d 1356, 1361-1362 (Fed. Cir. 2018).

[10] Chamberlain Group v. Techtronic, 935 F.3d 1341, 1346 (Fed. Cir. 2019).

[11] SRI International, Inc. v. Cisco Systems, Inc., 918 F.3d 1368, 1375 (Fed. Cir. 2019); Data Engine Technologies LLC v. Google LLC, 906 F.3d 999, 1008 (Fed. Cir. 2018)

[12] Uniloc USA Inc. et al. v. LG Electronics USA Inc., 957 F.3d 1303 (Fed. Cir. 2020).

[13] CardioNet LLC v. InfoBionic Inc., 955 F.3d 1358, 1368 (Fed. Cir. 2020).

[14] Illumina Inc. v. Ariosa Diagnostics Inc., 952 F.3d 1367, 1372 (Fed. Cir. 2020).

[15] Koninklijke v. Gemalto M2M, 942 F.3d 1143, 1150-1151 (Fed. Cir. 2019).

[16] Uniloc USA, Inc. v. ADP, LLC, 2019 WL 2245938 at *14 (Fed. Cir. May 24, 2019).

[17] SRI International, 918 F.3d at 1375-1376 (Fed. Cir. 2019).

[18] Interval Licensing LLC v. AOL, Inc., 896 F.3d 1335, 1342 (Fed. Cir. 2018) ("While each step involves its own separate inquiry, we have explained that they may 'involve overlapping scrutiny of the content of the claims.'") (cite omitted).

[19] CardioNet, 955 F.3d 1368-1369.

[20] Visual Memory LLC v. NVIDIA Corp., 867 F.3d 1253 (Fed. Cir. 2017).

[21] CardioNet, 955 F.3d at 1369.

[22] Id. at 1370.

[23] Id. at 1371 ("Here, there is no record evidence undermining the statements in the written description concerning the benefits of the claimed device.").

[24] Id. at 1373.

[25] Id. at 1374.

[26] Id. at 1371.