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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte J. ANDREW MACDONALD, JARED D. MCNEILL,
AND MARTIN C. BECKWITH¹

Appeal 2017-003251²
Application 14/525,969
Technology Center 2400

Before JEFFREY S. SMITH, JOSEPH P. LENTIVECH, and
SHARON FENICK, *Administrative Patent Judges*.

FENICK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner’s final rejection of claims 1–6, 10–18, and 21. App. Br. 5. Claims 7–9, 19, and 20

¹ Appellants indicate the real party in interest is Alcatel Lucent, “which is now part of Nokia.” Appeal Br. 3.

² Our Decision references Appellants’ Appeal Brief (“Appeal Br.,” filed Sept. 19, 2016) and Reply Brief (“Reply Br.,” filed Jan. 3, 2017), and the Examiner’s Answer (“Answer,” mailed Nov. 2, 2016), Final Office Action (“Final Action,” mailed Jan. 1, 2016), and Advisory Action (“Adv. Action,” mailed June 20, 2016).

are canceled. *Id.* We have jurisdiction under 35 U.S.C. § 6(b)(1). We REVERSE.

Exemplary Claim

Exemplary claim 1 under appeal reads as follows:

1. A method, comprising:

obtaining, from a plurality of high bandwidth programming subscribers to which programming can be delivered via a high bandwidth network, cumulative statistics of recordings initiated by said subscribers for programming delivered during a period of time via the high bandwidth network, wherein the cumulative statistics provide a ranking of programs from a most recorded program to a least recorded program;

determining a programming schedule for a period ‘T’ in response to the obtained statistics; and

periodically broadcasting, after every said period ‘T’, programming to constrained bandwidth programming subscribers via a constrained bandwidth network having less bandwidth assets than the high bandwidth network, according to the programming schedule, wherein the constrained bandwidth network comprises ‘n’ channels where ‘n’ is an integer, and wherein determining a programming schedule comprises:

populating the first of the ‘n’ channels with programs in successive order of most recorded through least recorded, including as many programs as will temporally fit within the period ‘T’ and

populating successive channels by resuming at the beginning of the temporal period ‘T’, with the next program in successive order of most through least recorded programs, after the last one that was able to temporally fit within the period ‘T’ on the previous of the ‘n’ channels, wherein each respective channel is populated with as many programs from the respectively continuing successive order of most through least recorded programs that will temporally fit within the period ‘T’ on each channel.

Rejections

1. The Examiner rejected claims 1–6, 10–18, and 21³ under 35 U.S.C. § 101 as not directed to statutory subject matter. Final Action 4–5
2. The Examiner rejected claims 1–6, 10–18, and 21⁴ under 35 U.S.C. § 112(a) as failing to comply with the written description requirement. Final Action 5–6.

³ We select claim 1 as representative. The Examiner does not present separate findings or conclusions relating to non-statutory subject matter for any individual claim, nor do the Appellants address the claims separately. Except for our ultimate decision, the § 101 rejection of claims 2–6, 10–18, and 21 is not discussed further herein.

⁴ We select claim 1 as representative. The Examiner does not present separate findings or conclusions relating to written description for any individual claim, nor do the Appellants address the claims separately. Except for our ultimate decision, we do not discuss further herein the § 112(a) rejection of claims 2–6, 10–18, and 21.

Issues on Appeal

- I. Did the Examiner err in rejecting claim 1 as being directed to non-statutory subject matter?
- II. Did the Examiner err in finding claim 1 fails to comply with the written description requirement?

ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellants’ arguments (Appeal Brief and Reply Brief) that the Examiner has erred.

- I. Did the Examiner err in rejecting claim 1 as being directed to non-statutory subject matter?

A. Section 101

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g., Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, i.e., the use of a third party to mitigate settlement

risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 192 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *see also id.* at 192 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now

commonplace that an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

The PTO recently published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance* (“Memorandum”). Under that guidance, we first look to whether the claim recites:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human interactions such as a fundamental economic practice, or mental processes); and

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that are not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum.

B. Examiner’s Rejection - Alice/Mayo - Steps 1 and 2

Applying step 1 of the *Alice/Mayo* analysis, the Examiner determines claim 1 is directed to an abstract idea because:

The gathering of data or obtaining of data – the cumulative statistics where the statistics are ranking of programs (the most recorded versus to the least recorded). The combining of data is the obtained data of cumulative statistics (cumulative is defined as formed by or resulting from accumulation or addition of successive parts or elements). There is comparing of data as obtained cumulative statistics are used to determine most recorded to least recorded. Also, there is organization of information through mathematical relationships or correlations (mutual relation of two or more things) as the addition of data of most recorded to least recorded statistics are used to be compared – cumulative statistics (new and stored information) and using rules to identify options for the determined schedule (what is most recorded and what is least recorded that fits the time T). Further the organization is further provided by populating of data for a schedule by entering data in the schedule in successive order of most to least by a period of time T (a schedule for an [electronic programming guide] is provided for a time period i.e.

two hours or three hours). Therefore, there is gathering of data, combining data, comparing data, organizing data to manipulate existing information to generate additional information in the form of a programming schedule. These steps describe the concept of determining [] programming schedules, which corresponds to concepts identified as abstract ideas by the courts, such organizing data in *Dietgoal [Innovations LLC v. Bravo Media LLC]*, 599 Fed. App'x 956 (Fed. Cir. 2015)], processing information through a clearinghouse in *Dealertrack, [Inc. v. Huber]*, 674 F.3d 1315, 1333 (Fed. Cir. 2012),] comparing new and stored information and using rules to identify options in *SmartGene, [Inc. v. Advanced Biological Labs.]*, 555 Fed. Appx. 950 (Fed. Cir. 2014),] using categories to organize, store and transmit information in *Cyberfone [Systems, LLC v. CNN Interactive Group, Inc.]*, 558 Fed. App'x 988 (Fed. Cir. 2014)], organizing information through mathematical correlations in *Digitech [Image Techs., LLC v. Electronics for Imaging, Inc.]*, 758 F.3d 1344 (Fed. Cir. 2014)], managing a game of bingo [in *Planet Bingo [, LLC v. VKGS LLC]*, 576 Fed. App'x 1005 (Fed. Cir. 2014)]. Therefore, the claim is directed to an abstract idea.

Advisory Action 2 (italicization added); Final Action 4–5; Answer 9.

The Examiner then concludes that additional elements of the claim “do not provide meaningful limitation(s) to transform the abstract idea into a patent eligible application of the abstract idea such that the claim(s) amounts to significantly more than the abstract idea itself.” Final Action 5; Advisory Action 2; Answer 11–12. “[B]roadcasting programming over a network to subscribers according to a schedule is well understood and routine in the art.” Answer 10.

The claims merely amount to the application or instructions to apply the abstract idea (i.e. facilitating a financial transaction) using computers, and is considered to amount to nothing more than requiring generic computer systems (e.g. a computer system comprising a generic database; a generic element for providing a network based communications; a generic element for receiving

and transmitting information; and a generic element to allow the parties to complete a transaction after authentication) to merely carry out the abstract idea itself. As such, the claims, when considered as a whole, are nothing more than the instruction to implement the abstract idea (i.e. facilitating a financial transaction) in a particular, albeit well-understood, routine and conventional technological environment.

Final Action 4; *see also* Answer 4.

C. Appellants' Arguments and Our Findings and Conclusions

Appellants contend the Examiner erred in the § 101 rejection of claim 1 by failing to identify additional elements of the claim, to consider whether the additional elements amount to significantly more than non-statutory subject matter, and that Examiner's assertions that the additional elements of the claim do not amount to significantly more than the purported abstract idea were general and did not take into account the specifics of the additional elements. Appeal Br. 21–26; Reply Br. 5–7.

We conclude that the additional elements of the claim, including at least “periodically broadcasting . . . programming to constrained bandwidth programming subscribers via a constrained bandwidth network having less bandwidth assets than the high bandwidth network, according to the programming schedule,” integrate the elements identified by the Examiner as a judicial exception into a practical application. The additional element of periodically broadcasting programming according to the determined programming schedule to a subset of subscribers does not merely apply the Examiner-identified abstract idea to one technological environment or field of use. Instead, we conclude that claim 1's additional element imposes a meaningful limit on the identified judicial exception, such that it is more

than a drafting effort designed to monopolize the exception. *See Diamond*, 450 U.S. at 192. Thus, we do not sustain the § 101 rejection.

Appellants raise additional arguments with respect to this rejection. Because the practical application issue is dispositive of the appeal, with respect to this rejection, we do not address the merits of those additional arguments.

II. Did the Examiner err in finding claim 1 fails to comply with the written description requirement?

A. Examiner's Rejection - 35 U.S.C. § 112(a)

The Examiner rejects the claims, apparently finding that “periodically broadcasting, after every said period ‘T’, programming to constrained bandwidth programming subscribers” fails to comply with the written description requirement. Final Action 6. The Examiner finds that the specification supports the broadcasting of programming but only supports “periodically broadcasting” the programming schedule. Final Action 6.

In the Answer, the Examiner finds that the claim limitation relating to periodic broadcasting of a programming implies recurring broadcasting of a program during a time period ‘T.’ Answer 18–19. The Examiner determines that “[p]eriodically means to be sent every period or interval” and since the programs may not be repeated “these programs are not periodically sent[,] as the next programs that may be sent [on a given

channel] will not be the same two program [that have just been sent] but rather the programs that fit [in the next time slot].” Answer 19.

B. Appellants’ Arguments and Our Findings and Conclusions

Appellants contend the Examiner erred in the rejection of claim 1 because the specification supports broadcasting of programming in accordance with the programming schedule. Appeal Br. 27–28; Reply Br. 10–11. Appellants argue that according to the specification “programming identified in the programming schedule may be broadcasted periodically based on the period ‘T’ of the programming schedule.” Reply Br. 11. Appellants contend that the specification and claims “do not require that the same set of programs are broadcast within each period ‘T’.” *Id.* at 10.

We note that the claim includes references to individual programs (e.g. “a most recorded program”) and indicates that successive periods could include different programs, based on the “ranking of programs” provided in the “cumulative statistics.”

We agree with Appellants that that no requirement for repeated programs be broadcast within a period ‘T’ appears in the specification, and that “periodically broadcasting . . . programming,” in its broadest reasonable interpretation, would not require such repetition. Thus, we do not sustain the § 112 rejection.

DECISION

We reverse the Examiner’s decision rejecting claims 1–6, 10–18, and 21 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

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We reverse the Examiner's decision rejecting claims 1–6, 10–18, and 21 under 35 U.S.C. § 112 as failing to comply with the written description requirement.

REVERSED