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akhikmat@fkmiplaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GREGORY HOUSE, GENE ROSSI, and
YUECHENG ZHANG

Appeal 2017-009506
Application 12/490,026
Technology Center 3700

Before JOHN C. KERINS, EDWARD A. BROWN, and
ANNETTE R. REIMERS, *Administrative Patent Judges*.

BROWN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Gregory House et al. (Appellants)¹ appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–39. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ The Appeal Brief identifies DISNEY ENTERPRISES, INC. as the real party in interest. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Claims 1, 24, and 28 are independent. Claim 1, reproduced below, illustrates the claimed subject matter:

1. A computer-implemented method of generating information from an athletic event comprising:

analyzing a video stream to determine a first athletic performance-related aspect of a first player in the athletic event;

analyzing the video stream to determine a second athletic performance-related aspect of a second player in the athletic event;

identifying an athletic action of the first player based on a measured relationship between the first aspect of the first player and the second aspect of the second player, wherein the first and second players are separate components in the athletic event;

determining a data representation of the identified athletic action with a processor, the determining the data representation including analyzing one of a play and a formation, the data representation being a qualitative and quantitative assessment of a level of skill in a strategic player contribution to an overall team effort from the athletic action of the first player determined based on the measured relationship, wherein the play comprises an athletic strategy executed by at least the first player and the second player, and further wherein the formation comprises a positioning of at least the first player and the second player relative to one another; and

storing the data representation in a data server.

Appeal Br. 17 (Claims App.).

REJECTIONS

I. Claims 1–39 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

II. Claims 1–39 are rejected under 35 U.S.C. § 101, as being directed to patent-ineligible subject matter.

ANALYSIS

Rejection I—Written Description

Appellants argue for patentability of claims 1–39 as a group. *See* Appeal Br. 4–8; *see also* Reply Br. 2–7. We select claim 1 as representative of this group, and claims 2–39 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Claim 1 recites, *inter alia*, “the data representation being a qualitative and quantitative assessment of a level of skill in a strategic player contribution to an overall team effort.” Appeal Br. 17 (Claims App.). The Examiner finds Appellants’ Specification does not support this claim limitation. Final Act. 17–18.

Appellants contest this finding. Appeal Br. 4; *see also* Reply Br. 2. Appellants submit that the Specification describes a sufficient number of species to satisfy the written description requirement. Appeal Br. 4; *see also* Reply Br. 2. Appellants contend that a “qualitative and quantitative assessment” is based on the recited “athletic action,” and the Examiner concedes a “pose” is disclosed in the Specification as providing a qualitative and quantitative assessment. Appeal Br. 5; *see also* Final Act. 18; Reply Br. 2, 4. According to Appellants, the Specification is clear that the disclosed algorithms are not only based on a pose, but also on a motion or a location of

a player, and an ordinary artisan would understand that the same principles regarding a qualitative and quantitative assessment of a pose apply likewise to a motion and a location. Appeal Br. 6–7 (citing Spec. ¶¶ 71, 105); *see also* Reply Br. 2, 4–5 (citing Spec. ¶ 81).

Appellants also assert that the Specification discloses a quantitative assessment of data from a collision between two players and a quantitative assessment of a rating of the collision. Appeal Br. 7 (citing Spec. ¶¶ 61–65); *see also* Reply Br. 3–4 (arguing that that paragraph 105 of the Specification describes determining players’ location and motions to determine a measure corresponding to a breakaway that includes qualitative and quantitative measures).

Appellants also contend that the Specification sufficiently discloses a computer and an algorithm to satisfy the written description requirement. Appeal Br. 7; *see also* Reply Br. 6. In support, Appellants reference paragraphs 42 and 140 and Figure 14 of the Specification, and argue that an ordinary artisan would understand that a computer device would apply to the “computer-implemented method” of claim 1, including the qualitative and quantitative assessment. Appeal Br. 8. Appellants further argue that the Specification sufficiently describes the required steps with regard to a qualitative assessment and an ordinary artisan would know how to program a device to perform the necessary step. Reply Br. 6–7 (citing Spec. ¶¶ 50–52, 81, 105–106).

Appellants’ contentions are not persuasive. The test for sufficiency under the written description requirement of § 112, first paragraph, “is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed

subject matter as of the filing date.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). To have “possession,” “the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed.” *Id.* In order to satisfy the written description requirement, the Specification must describe a sufficient number of species to claim the genus. *Id.* at 1349 (“the specification must demonstrate that the applicant has made a generic invention that achieves the claimed result and do so by showing that the applicant has invented species sufficient to support a claim to the functionally-defined genus”).

The specification may fail to satisfy the written description requirement when the invention is claimed and described in functional language, but the specification does not sufficiently identify how the invention achieves the claimed function. *Id.* (“[A]n adequate written description of a claimed genus requires more than a generic statement of an invention’s boundaries.”) (citing *Eli Lilly*, 119 F.3d at 1568). The written description requirement is not met if the specification merely describes a “desired result.” *Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 692 (Fed. Cir. 2015) (citing *Ariad* 598 F.3d at 1349).

The scope of claim 1 encompasses more than Appellants’ original disclosure supports. As the Examiner points out, the Specification does not describe a “qualitative assessment” or “a qualitative and quantitative assessment of a level of skill in a strategic player contribution to an overall team effort,” as claimed. Ans. 2. In fact, the Specification does not mention the term “qualitative.”

Referencing the Cambridge Online Dictionary, the Examiner notes that a definition of “qualitative” is “related to the quality of an experience or situation rather than to facts that can be measured,” and a definition of “quantitative” is “relating to an amount that can be measured.” *Id.* at 3. We agree with the Examiner that Appellants’ rebuttal is based on limited generic statements for an intended result which are vaguely tied to the broad definition of “qualitative.” *Id.* The Examiner explains that the Specification recites formulas which, at most, can be used to derive purely quantitative assessments. *Id.* (citing Spec. ¶¶ 55, 56–58, 61–65). The Specification is silent as to how qualitative assessments are determined from a motion, a location, or a pose. *Id.*; *see also id.* at 5 (explaining “the Examiner’s position [is] that the Specification provides no evidence how to create or measure a qualitative assessment”). Further absent from the Specification is any discussion as to how both a qualitative *and* quantitative assessment can be made of “a level of skill in a strategic player contribution to an overall team effort.” *See id.* at 3.

We further agree with the Examiner that Appellants merely provide what purports to be examples of how well a play is executed as an intended functional result instead of how a qualitative and quantitative assessment is determined. *Id.* at 3–4. Appellants do not direct us to any description, steps or flow charts in the disclosure to show particular hardware or an algorithm, such that an ordinary artisan would understand how a qualitative and quantitative assessment is determined. *Id.* at 4; *see also id.* at 6 (explaining that “a qualitative assessment is not a function that a generic computer would normally perform” and that “[w]ithout any description in the Specification of how the Appellant accomplishes the claimed function[,] one

of ordinary skill in the art could not program the computer to perform the necessary steps and/or flowcharts because no steps are described for determining a qualitative assessment.”). The Specification does not indicate what is necessary beyond a generic computing device. *See* Spec. ¶ 42 (“A computing device can be any type of computing device having one or more processors.”). As such, the disclosure does not reasonably convey possession of the claimed subject matter.

Consequently, we sustain the rejection of claim 1 under 35 U.S.C. § 112, first paragraph, written description requirement. Claims 2–39 fall with claim 1.

Rejection II—Patent-Ineligible Subject Matter

Appellants argue for patentability of claims 1–39 as a group. *See* Appeal Br. 8–15; *see also* Reply Br. 8–13. We select claim 1 as representative of this group, and claims 2–39 stand or fall with claim 1.

The Supreme Court provides “a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice Corp., Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–79 (2012)). According to this framework, we first determine whether the claims at issue are directed to one of those concepts. *Id.* If they are, we secondly “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* The Supreme Court characterizes the second step of the analysis as “a search for an

‘inventive concept’ — *i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (alteration in the original).

The Examiner determines that claim 1 is directed to the concepts of collecting data (analyzing a video stream to determine a first and a second athletic performance), recognizing certain data within a collected data set (identifying an athletic action of a first object based on a measured relationship and determining a data representation), and storing the recognized data in a memory (storing the data representation in a data server), and thus, to an abstract idea. Final Act. 19. The Examiner finds that the abstract idea of claim 1 is similar to organizing human activity, or performing a series of mental steps including analyzing actions of objects and players in a sporting event to make assessments of a player’s performance. *Id.* at 19–20.

Regarding *Alice* step 2, the Examiner determines that claim 1 does no more than use a general purpose computer with basic functionality for comparing input data to stored data and identifying rules, both of which a sport scout, a sport broadcaster, or a spectator would do regularly when viewing an athletic event. *Id.* at 20. As such, the Examiner determines, the additional claim elements of a computer, a processor, and a data server, which are generically recited, perform basic functions that are well-understood, routine, and conventional, e.g., performing repetitive calculations; receiving, processing, and storing data; electronically scanning or extracting data from a physical document; electronic record keeping; automating mental tasks; and receiving or transmitting over a network. *Id.*

The Examiner explains that the additional elements when viewed individually, or in combination, do not add significantly more to the abstract idea because the additional elements represent insignificant extra-solution activity and would be routine in any computer implementation, and, as such, the claim lacks any additional elements to transform the claimed subject matter into a patent eligible application. *Id.* at 20–21.

Appellants contend claim 1 is not directed to an abstract idea. Appeal Br. 8–13; *see also* Reply Br. 8–11. Appellants argue that the Examiner failed to formulate a proper subject matter eligibility rejection under the USPTO’s May 2016 Updated Guidelines (“Updated Guidelines”) because the Examiner failed to explain why a concept in the claims corresponds to a concept the courts have identified as an abstract idea. Appeal Br. 9–10; *see also* Reply Br. 8–9. According to Appellants, the Examiner simply recites the claim language and then concludes that the claim corresponds to former cases. Appeal Br. 10.

Appellants further contend that the subject matter of claim 1 is not abstract based on the *Enfish*² decision because the invention is directed to solving problems arising in the technological area of automation in the field of video analysis. *Id.* at 10–11; *see also* Reply Br. 9–10. Appellants argue that the claimed invention is an improvement in automation that improves processor performance. Appeal Br. 11–12. Appellants also argue that the Examiner describes claim 1 at an unreasonably high level of abstraction because the claim is not simply organizing human activity or collecting data, recognizing certain data within a collected data set, and storing the

² *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016).

recognized data in memory. Appeal Br. 12–13; *see also* Reply Br. 11. Instead, Appellants assert, claim 1 describes a computer-implemented method of processing and analyzing a video stream to determine an athletic play or formation and generate a data representation including a qualitative and quantitative assessment of a level of skill in a strategic player contribution to an overall team effort. Appeal Br. 13.

Appellants further contend that claim 1 amounts to significantly more than an abstract idea. Appeal Br. 14–15; *see also* Reply Br. 11–13. In support, Appellants argue that under the analysis used in the *Bascom*³ decision, claim 1 recites a specific and discrete improvement in the field of video analysis. Appeal Br. 14–15; *see also* Reply Br. 11–12. Appellants contend that an inventive concept exists in the non-conventional and non-generic arrangement of claim 1 because it improves processor performance when automating qualitative and quantitative assessments. Appeal Br. 14–15; *see also* Reply Br. 11. According to Appellants, claim 1 recites specific rules performed in an unconventional manner because prior systems fail to track important elements and fail to generate and utilize the most useful data. Reply Br. 12.

Claim 1 is directed to a computer-implemented method of generating information from an athletic event comprising steps of analyzing a video stream, identifying an athletic action of a first player based on a measured relationship, determining a data representation of the identified athletic action with a processor, and storing the data representation in a data server.

³ *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016).

Appeal Br. 17 (Claims App.). These data manipulation steps of analyzing, identifying, determining, and storing data are performed using a computer system within a computer-implemented method, analyzing a video stream of an athletic event to determine a performance-related aspect, identifying a relationship to determine a data representation, and storing the data representation. *Id.* Thus, claim 1 requires the collection and analysis of data using a machine, that is, generic operations in a method of generating information from viewing an athletic event. In other words, claim 1 is directed to a set of rules performed by a computer (i.e., a mathematical algorithm or a software).

We note that “[s]oftware can make non-abstract improvements to computer technology just as hardware improvements can, and sometimes the improvements can be accomplished through either route.” *Enfish*, 822 F.3d at 1335. We are instructed to determine if “the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis.” *Id.* Here, the limitations at issue are not directed to an improvement of a computer’s functionality. There is no language recited in claim 1 to suggest that, once a data representation is determined, the computer used to implement the steps will be improved functionally. Instead, similar to the claims at issue in *Electric Power Group*, claim 1 is a purported advance in uses for existing computer capabilities, not new or improved computer capabilities. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016); *see also id.* at 1353–1354 (explaining that an invention directed to the collection, manipulation, and display of data is an abstract process). Accordingly, claim 1 is directed to an abstract idea. *See also* Ans. 10 (“[The steps of the

claimed invention] do no more than call on a general purpose computer with the basic function of comparing stored and new (e.g., inputted data) information to identify rules to assess the performance of athletes to do what athletic scouts, sports broadcasters, coaches, and spectators do regularly when viewing athletic events.”).

We thus are not persuaded by Appellants’ contention that the subject matter of claim 1 is not abstract based on *Enfish* because Appellants’ invention is directed to solving problems arising in the technological area of automation in the field of video analysis. Appeal Br. 10–11; *see also* Reply Br. 10. Appellants do not provide evidence to show the claimed invention is an improvement in automation that improves processor performance in determining a data representation. *See* Appeal Br. 11–12

Regarding Appellants’ contention that the Examiner describes claim 1 at an unreasonably high level of abstraction (Appeal Br. 12–13; *see also* Reply Br. 11), the Examiner’s explanation evidences the contrary. *See* Ans. 9, 1. 9–10, 1. 2.

Similarly, we are not persuaded claim 1 recites a specific and discrete improvement in the field of video analysis, which, according to Appellants, would amount to significantly more when analyzed using the rationale in the *Bascom*. Appeal Br. 14–15; *see also* Reply Br. 11–12. Claims must include additional features that are significantly beyond “well-understood, routine, conventional activity” or a simple “instruction to implement or apply the abstract idea on a computer.” *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (quoting *Mayo*, 566 U.S. 79–80); *Bascom* at 1349 (quoting *Alice*, 134 S. Ct. at 2358). Appellants do not demonstrate with evidence there is an *improvement in processor performance* when

automating qualitative and quantitative assessment because of a purported “non-conventional and non-generic arrangement” of claim 1. Appeal Br. 14–15; *see also* Reply Br. 12. Appellants’ contention that prior systems “failed to track important elements” and “failed to generate and utilize the most useful data” is not supported by evidence of record, such as a disclosure in the Specification that such data had not previously been analyzed and processed. *See* Reply Br. 12.

Although claim 1 recites certain data to be collected (a video stream in an athletic event), and implies that an algorithm is used to manipulate the collected data (analyzing the video stream, identifying an athletic action, determining a data representation, and storing the data representation), we find correct the Examiner’s determination that claim 1 does not include additional elements sufficient to amount to significantly more than the judicial exception, because the claimed functionality can be carried out on commonly-known hardware, such as a computer with the basic function of comparing stored and new information, without producing any improvement in the functioning of the computer itself. *See* Ans. 10; *see also* Spec. ¶ 42. Further, the specific features of claim 1 reiterated by Appellants relate to data processing steps, such as the analyzing, identifying, and determining steps, which merely implement the abstract idea. *See* Ans. 10–11. Thus, claim 1, at most, requires only “mathematical algorithms to manipulate existing information to generate additional information.” *Digitech Image Techs., LLC v. Elecs. For Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014). As such, the limitations of claim 1 do not transform the abstract idea embodied in the claim, but rather, simply implement the idea. Accordingly, we agree with the Examiner that “there is no inventive concept sufficient to

transform the claimed subject matter into a patent-eligible application.”
Final Act. 21.

Accordingly, claim 1, considered “both individually and ‘as an ordered combination,’” amounts to nothing more than an attempt to patent the abstract idea embodied in the steps of the claim. *See Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79–80). Thus, the limitations of claim 1 fail to transform the nature of the claim into patent-eligible subject matter. *See id.* (citing *Mayo*, 566 U.S. at 77, 79–80); *see also* Ans. 11–13.

For these reasons, we sustain the Examiner’s decision rejecting claim 1, and claims 2–39 which fall therewith, as being directed to patent-ineligible subject matter.

DECISION

We affirm the rejections of claims 1–39.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED