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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte EMMANUEL A. GASQUEZ and NICHOLAS J. BYRA

Appeal 2018-007458
Application 14/293,918
Technology Center 3600

Before MURRIEL E. CRAWFORD, TARA L. HUTCHINGS, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner’s decision rejecting claims 1–19. An oral hearing was held on March 4, 2020. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as MDX Medical, Inc. Appeal Br. 1.

ILLUSTRATIVE CLAIM

1. A method for transforming, by a computer system configured to implement a medical service provider data processing engine including a processor and computer-readable medium including computer-executable instructions, received input medical service provider data records from a variety of medical service provider data sources into standardized medical service provider data records for storage on a medical service provider database, the method comprising:

importing, by the data processing engine, a received resource containing multiple data points, wherein during the importing, the received resource is digested to render a mapping between an individually identifiable part of a data point instance of the multiple data points and a corresponding normalized data type of a set of normalized data types handled by a set of data type-specific parsers configured on the data processing engine;

designating, based upon the mapping by the data processing engine during the importing, one of the data type-specific parsers for each individually identifiable part of a data point instance of the multiple data points;

parsing, by the data processing engine after the designating, individually identifiable parts of the data point instances of the multiple data points using corresponding designated ones of the set of data-type specific parsers to render a set of parsed data points;

matching, by the data processing engine, individual ones of the set of parsed data points to multiple listing entries of an authoritative data listing, wherein, during the matching, an algorithmic matching operation is performed for a parsed data point instance of the set of parsed data points, wherein the algorithmic matching operation comprises:

generating a set of transformed data points by applying a set of transformation types to the parsed data point instance, and

identifying a set of algorithmic matches between the set of transformed data points and corresponding listing entries of the authoritative data listing;

rendering a set of transformation match scores by assigning an algorithmic match score to each match between a one of the set of transformed data points and a listing entry of the authoritative data listing, wherein the algorithmic match score for a particular one of the set of transformed data points is based upon a type of transformation performed on the parsed data point instance to render the particular one of the set of transformed data points;

determining, by the data processing engine, a highest match score of the set of transformation match scores; and

exporting the particular one of the set of transformed data points, corresponding to the highest match score, to the medical service provider database.

REJECTION

Claims 1–19 are rejected under 35 U.S.C. § 101 as ineligible subject matter.

FINDINGS OF FACT

The findings of fact relied upon, which are supported by a preponderance of the evidence, appear in the following Analysis.

ANALYSIS

Under 35 U.S.C. § 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. Yet, subject matter belonging to any of the statutory categories may, nevertheless, be ineligible for patenting. The Supreme Court has interpreted § 101 to exclude laws of nature, natural phenomena, and abstract ideas, because they are regarded as the basic tools of scientific and technological work, such that including them within the domain of

patent protection would risk inhibiting future innovation premised upon them. *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013).

Of course, “[a]t some level, ‘all inventions . . . embody, use, reflect, rest upon, or apply’” these basic tools of scientific and technological work. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014). Accordingly, evaluating ineligible subject matter, under these judicial exclusions, involves a two-step framework for “distinguish[ing] between patents that claim the buildin[g] block[s] of human ingenuity and those that integrate the building blocks into something more, thereby transform[ing] them into a patent-eligible invention.” *Id.* (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 88–89 (2012) (internal quotation marks omitted)). The first step determines whether the claim is directed to judicially excluded subject matter (such as a so-called “abstract idea”); the second step determines whether there are any “additional elements” recited in the claim that (either individually or as an “ordered combination”) amount to “significantly more” than the identified judicially excepted subject matter itself. *Id.* at 217–18.

In 2019, the USPTO published revised guidance on the application of § 101, in accordance with judicial precedent. *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 52 (Jan. 7, 2019) (“2019 Revised Guidance”). Under the *2019 Revised Guidance*, a claim is “directed to” an abstract idea, only if the claim recites any of (1) mathematical concepts, (2) certain methods of organizing human activity, and (3) mental processes — without integrating such abstract idea into a “practical application,” i.e., without “apply[ing], rely[ing] on, or us[ing] the

judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” *Id.* at 52–55. The considerations articulated in MPEP § 2106.05(a)–(c) and (e)–(h) bear upon whether a claim element (or combination of elements) integrates an abstract idea into a practical application. *Id.* at 55. A claim that is “directed to” an abstract idea constitutes ineligible subject matter, unless the claim recites an additional element (or combination of elements) amounting to significantly more than the abstract idea. *Id.* at 56.

Although created “[i]n accordance with judicial precedent” (*id.* at 52), the *2019 Revised Guidance* enumerates the analytical steps differently than the Supreme Court’s *Alice* opinion. Step 1 of the *2019 Revised Guidance* addresses whether the claimed subject matter falls within any of the statutory categories of § 101. *Id.* at 53–54. Step 2A, Prong One, concerns whether the claim at issue recites ineligible subject matter and, if an abstract idea is recited; Step 2A, Prong Two, addresses whether the recited abstract idea is integrated into a practical application. *Id.* at 54–55. Unless such integration exists, the analysis proceeds to Step 2B, in order to determine whether any additional element (or combination of elements) amounts to significantly more than the identified abstract idea. *Id.* at 56.

The Appellant’s arguments focus on independent claim 1. *See* Appeal Br. 8–19. The Appellant submits that the arguments presented for independent claim 1 apply to the other independent claims — claims 10 and 15. *Id.* at 19. No separate argument is provided for any other claim. Therefore, according to the Appellant, claims 2–19 stand or fall with independent claim 1.

With regard to inquiries relating to Step 2A, Prong One, the Examiner determines that all the limitations of claim 1 together recite a judicial exception that the Examiner regards as “analogous” to the concepts held to be abstract ideas in *Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (“organizing information through mathematical correlations”) and *In re TLI Communications LLC Patent Litigation*, 823 F.3d 607, 611 (Fed. Cir. 2016) (“classifying and storing digital images in an organized manner”). Final Action 3–4. Viewed through the lens of the *2019 Revised Guidance*, 84 Fed. Reg. at 52–53 & nn. 14–15, the Examiner’s determination amounts to a conclusion that claim 1 recites a mental process — a judicial exception in the form of an abstract idea.

The Appellant argues that claim 1 is not directed to an abstract idea (*see* Appeal Br. 10–13); however — as discussed below — the Appellant’s arguments correspond to the inquiries of Step 2A, Prong Two, rather than Prong One. Therefore, the Appellant does not persuade us of error, as to the Examiner’s analysis corresponding to Step 2A, Prong One.

Turning to Step 2A, Prong Two, unless a claim that recites a judicial exception (such as an abstract idea) “integrates the recited judicial exception into a practical application of that exception,” the claim is “directed to” the judicial exception. *2019 Revised Guidance*, 84 Fed. Reg. at 53. The analysis of such an “integration into a practical application” involves “[i]dentifying . . . any additional elements recited in the claim beyond the judicial exception(s)” and “evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application.” *Id.* at 54–55. Among the considerations “indicative

that an additional element (or combination of elements) may have integrated the exception into a practical application” is whether “[a]n additional element reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field.” *Id.* at 55 (footnote omitted). “[W]hether an additional element or combination of elements integrate[s] the exception into a practical application should be evaluated on the claim as a whole.” *Id.* at 55 n.24.

The Appellant contends that claim 1 is not directed to an abstract idea, in the manner of subject matter addressed in *Thales Visionix, Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017). Appeal Br. 10–12. According to the Appellant:

Similar to the unique *input* aspect of *Thales*, Appellants’ specifically claimed method/system includes an “importing” operation that *takes data input from multiple sources*. After a set of intermediate processing operations, Appellants’ claimed method includes a “matching” operation that specifically recites “algorithmic matching” that differs from the typical “list-based” matching. The combination of input and matching operations, which results in a unique output, that addresses known technological problems of prior art automated systems that failed to identify and properly remove redundant data point instances in a resulting combined database. Appellants’ specifically claimed matching operation facilitates (through the recited subsequent “rendering” and “determining” operations) generating an identifiable output (set of parsed data points) that is thereafter provided, during the “exporting” operation, to a medical service provider database. The unique combination of input and subsequent processing of the input is analogous to the claiming pattern of *Thales*’ claim 22.

Appeal Br. 12.

However, the Federal Circuit determined that, above and beyond the mathematical relationships involved (features regarded as a judicial

exception by the Court of Federal Claims), the claims at issue in *Thales* recited a unique arrangement of inertial sensors that gave rise to particular improvements. *See Thales*, 850 F.3d at 1348–49 (“[T]he claims are directed to systems and methods that use inertial sensors in a non-conventional manner to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame.”) By contrast, the Appellant’s reliance on claim 1’s “importing” data and “algorithmic matching” features, in order to assert the creation of a technological improvement, employs — instead of any “additional elements” — subject matter that the Examiner regards as part of the judicial exception itself, as discussed above. *See 2019 Revised Guidance*, 84 Fed. Reg. at 54–55.

In addition, the Appellant argues that the “claimed invention provides a more efficient way . . . of consolidating massive data record sources comprising data instances that are too numerous to process manually — thereby providing a technological problem to which the claimed invention is directed.” Appeal Br. 12. According to the Appellant:

The claimed invention, is directed to an improved computer system that, when programmed to operate in accordance with the claimed invention, operates in a quantifiably more efficient and reliable manner when incorporating massive quantities of data from a variety of data recourses [sic]. Notably, Appellants’ claimed invention causes fewer “fault” instances where the programmed system cannot handle particular types of incoming data that cannot properly be matched merely by comparing the data points (without modification) to lists of data in an authoritative database.

Id. at 13.

Aside from relying on features that the Examiner regards as part of the judicial exception, as discussed above, the Appellant, here, relies upon

features — e.g., “massive data record sources” and “massive quantities of data” (*id.* at 12, 13) — that are not set forth in claim 1. *See Answer 8* (“[T]here are no massive amounts of data records recited in the claim and thus the claimed invention cannot be solving such a problem.”) Even insofar as the claimed “medical service provider data records from a variety of medical service provider data sources” might reflect a type of technological improvement, the claim language does not adequately specify the qualities of “data records” or “data sources” that might invoke such an improvement.

Therefore, we are not persuaded of error in the rejection, with regard to analyses corresponding to Step 2A, Prong Two.

Under Step 2B of the *2019 Revised Guidance* (84 Fed. Reg. at 56), a claim that recites a judicial exception (such as an abstract idea) might, nevertheless, be patent-eligible, if the claim contains “additional elements amount[ing] to significantly more than the exception itself” — i.e., “a specific limitation or combination of limitations that [is] not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present.” *See Alice*, 573 U.S. at 223 (“[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.”)

According to the Examiner:

When viewed as a whole, the claims do not include additional limitations that are sufficient to amount to significantly more than the judicial exception because the claims recite processes that are routine and well-understood in the art of healthcare communication systems and simply implement the process or processes on a computer(s), which is not enough to qualify as “significantly more” as described herein. The claim(s) do not include additional elements that are sufficient to amount to significantly more than the judicial

exception because the additional computer elements . . . , which are recited at a high level of generality, provide conventional computer functions that do not add meaningful limits to practicing the abstract idea.

Final Action 4–5.

The Appellant argues:

Appellants’ claim 1 recites elements that, when taken as a whole, constitute “significantly more than the abstract idea” identified in the analysis spanning pages 4–5 of the final Office action. The final Office action’s analysis at pages 4–5 seeks to disassociate the *combination* of elements recited in Appellants’ independent claims. The final Office action’s analysis does not take into consideration the *combination* of elements, including specific elements of an operation for “rendering a set of transformation match scores” that are assigned to results of “algorithmic matches” associated with particular transformation types that render Appellants’ claimed invention non-obvious over the teachings of the prior art — i.e. functions that are NOT well-understood, routine and conventional activities previously known in the pertinent industry. Rather than merely seeking to “computerize” a generally known concept, Appellants’ claimed invention recites a combination of operations that define a particular way of improving the yield (both percentage of successfully processed data points AND reliability of such resulting data points that are subsequently incorporated into a database).

Appeal Br. 13–14.

The Appellant’s arguments corresponding to the issues of Step 2B of the *2019 Revised Guidance* face obstacles similar to those, discussed above, with regard to Step 2A, Prong Two. Fundamentally, both the Step 2A, Prong Two , and the Step 2B analyses involve the identification of “additional elements.” *2019 Revised Guidance*, 84 Fed. Reg. at 54–56. Such “additional elements” might, for example, effect a technological

improvement (in Step 2A, Prong Two) or amount to “significantly more” than the identified judicial exception (in Step 2B). *Id.* at 55–56. Yet, as in the instance of the Step 2A, Prong Two, inquiries discussed above, the Appellant relies upon claim features (particularly, the “algorithmic matching operation” of claim 1) that are part of the judicial exception identified by the Examiner — rather than any “additional elements” — in order to argue that claim 1 recites significantly more than a judicial exception (under Step 2B). Such limitations cannot impart patent-eligibility to claim 1. “It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018).

In addition, in a manner similar to that discussed above (regarding Step 2A, Prong Two), the Appellant also contends that claim 1 amounts to significantly more than the judicial exception, based upon unclaimed features — i.e., the capacity to accommodate “massive” databases involving “several millions of data entries”:

Moreover, Appellants’ claims recite a particularized (and admittedly unique/nonobvious) solution to a technological problem in the area of building and maintaining massive healthcare-related databases. The claimed invention does not preclude alternative, albeit less-desirable, solutions for consolidating heterogeneous data points within a single database comprising several millions of data entries. Appellants’ independent claim 1 recites a detailed series of particular operations driven by unique input data (i.e., data points from multiple data sources having differing formats) that are processed by a sequence of admittedly unique processes to render an identifiable output. The claims do not preclude the many alternative ways of carrying out the claimed invention.

As such Appellants' claimed invention amounts to "significantly more" than the final Office action's specified abstract idea.

Appeal Br. 14. Regardless of whether features that could accomplish the handling of such "massive" databases might constitute "additional elements" amounting to "significantly more" than the Examiner's identified judicial exception, such features are not set forth in claim 1. *Cf. In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) ("Many of appellant's arguments fail from the outset because . . . they are not based on limitations appearing in the claims.") (addressing obviousness issue).

In view of the foregoing, we are not persuaded of error in the rejection of claim 1, with regard to the inquiries corresponding to Step 2B.

Therefore, because the Appellant relies upon the arguments presented for claim 1, in regard to independent claims 10 and 15 (Appeal Br. 19), and because no separate argument is provided for any other claim, we are not persuaded of error in the rejection, such that we sustain the rejection of claims 1–19 under 35 U.S.C. § 101.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–19	101	Eligibility	1–19	

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TIME PERIOD FOR RESPONSE

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

AFFIRMED