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SUNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DYLAN J. TYSON

Appeal 2018-007307
Application 13/875,956
Technology Center 3600

Before DEBRA K. STEPHENS, ADAM J. PYONIN, and
PHILLIP A. BENNETT, *Administrative Patent Judges*.

BENNETT, *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 to reject claims 1–20. 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(a). Appellant identifies the real party in interest as The Prudential Insurance Company of America. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claims relate to calculating premium amounts for the generation of an annuity based on a pension plan. Spec., Title. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A system, comprising:
 - a memory;
 - one or more processors communicatively coupled to the memory and operable to:
 - receive data indicative of a plurality of participants in a pension plan;
 - prior to any of the plurality of participants electing to receive a liability payout, wherein the liability payout is an amount of money that satisfies a portion of a benefit of the pension plan, and wherein electing to receive the liability payout terminates the benefit of the pension plan of the participant of the plurality of participants who elected to receive the liability payout:
 - for each participant of the plurality of participants:
 - determine data indicative of a first premium amount for an annuity sufficient to satisfy a benefit of the pension plan that the participant is not eligible to elect to receive as the liability payout; and
 - determine data indicative of a second premium amount for an annuity sufficient to satisfy a benefit of the pension plan that the participant is eligible to elect to receive as the liability payout;
 - determine a first total premium amount for an annuity sufficient to satisfy, for each participant of the plurality of participants, both the benefit of the pension that the participant is not eligible to elect and the benefit of the pension that the participant is eligible to elect, the first total premium amount being based, at least in part, on the first premium amount for each participant of the plurality of participants and the second premium amount for each participant of the plurality of participants; and

communicate the first total premium amount for display;
receive data indicative of a determination that a subset of the plurality of participants elected to not receive the liability payout;
in response to the determination that a subset of the plurality of participants elected to not receive the liability payout, determine a second total premium amount for a second annuity, the second annuity sufficient to satisfy, for each participant of the plurality of participants, the benefit of the pension plan that the participant was not eligible to elect and, for each participant of the subset, the benefit of the pension plan that the participant was eligible to elect, the second total premium amount being based, at least in part, on the first premium amount for each participant of the plurality of participants and the second premium amount for each participant of the subset of the plurality of participants; and
communicate the second total premium amount for display.

Appeal Br. 20–21 (Claims Appendix).

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Fay	US 2002/0188540 A1	Dec. 12, 2002
Lyons	US 2013/0117047 A1	May 9, 2013

REJECTIONS

Claims 1–20 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 3–4, 10–13.

Claims 1–20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lyons and Fay. Final Act. 5–10, 14–15.

REJECTION UNDER 35 U.S.C. § 101

Standard for Patent Eligibility

In issues involving subject matter eligibility, our inquiry focuses on whether the claims satisfy the two-step test set forth by the Supreme Court in *Alice Corp. v. CLS Bank International*, 573 U.S. 208 (2014). The Court instructs us to “first determine whether the claims at issue are directed to a patent-ineligible concept,” *Id.* at 217–18, and, in this case, the inquiry centers on whether the claims are directed to an abstract idea. If the initial threshold is met, we then move to the second step, in which we “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.* (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 79, 78 (2012)). The Court describes the second step 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.* (quoting *Mayo*, 566 U.S. at 72–73).

The USPTO has published revised guidance on the application of § 101 consistent with *Alice* and subsequent Federal Circuit decisions. USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”). Under the 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 activity such as a fundamental economic practice, or mental processes) (referred to Step 2A, prong 1 in the Guidance); and

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)) (referred to Step 2A, prong 2 in the Guidance).

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

(3) adds a specific limitation beyond the judicial exception that is 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 Guidance, 84 Fed. Reg. at 52.

Examiner’s Findings and Conclusion

The Examiner rejects claim 1 as being directed to a judicial exception without significantly more under *Alice*. Final Act. 2–4. Under the first step of the *Alice* inquiry, the Examiner determines:

[T]he claims describe concepts that the courts have deemed abstract. For example, administration of financial accounts (Intellectual Ventures), budgeting (Int. Ventures), managing a stable value protected investment plan (Bancorp), mitigating settlement risk (*Alice*), hedging (*Bilski*), advanced payments based on future retirement benefits (*Retirement Benefits v. Bancorp*), creating a contractual relationship (*BuySAFE*), implementing rules based tasks for processing insurance claims (*Accenture*), processing loan information (*Dealertrack*), collecting information, analyzing it, and displaying certain results of the collection and analysis (*Electric Power Group*), collecting and analyzing information to detect misuse and notifying a user when misuse is detected (*FairWarning*), receiving, screening, and distributing e-mail (*Int. Ventures*). Calculating premiums for pension annuity is a fundamental

economic practice. Hence, the claims are directed to an abstract idea. The dependent claims merely list premium risk factors, age, gender, etc., which are also abstract.

Final Act. 3–4. The Examiner further explains:

The Specification (Para [0001] - [0005]) discloses that the invention relates to the calculation of premium amounts for the generation of an annuity based on a pension plan. Hence, the invention deals with fundamental economic practice.

Final Act. 11.

Under *Alice* step 2, the Examiner determines that the claim does not include additional elements that are sufficient to amount to significantly more than the judicial exception because:

Here, Examiner finds that the technological environment recited in the claims invokes or contains no more than purely functional, routine and generic components for receiving, data, calculating amounts and communicating for display, without any meaningful limitations. Viewed as a whole, the claims simply recite the concept of calculating premium for different types participants in a pension plan based on their eligibility. The claims do not purport to improve the functioning of a computer or effect an improvement in any other technology or technical field. Instead, the claims at issue do not amount to any significantly more than an instruction to apply the abstract idea of calculating premium for pension plan on generic computers. Stating an abstract idea while adding the words "apply it on a computer" is not sufficient for patent eligibility. Thus, the claims also fail the second part of the two part *Alice* analysis.

Final Act. 12.

Appellant's Contentions

Appellant argues that there are several deficiencies in the rejection.

Appeal Br. 12–18. Appellant first argues the Examiner's characterization of the claims is flawed:

The claims are not directed to “calculating premiums for pension annuities” as alleged by the Examiner, see Final Office Action, p. 4, but are instead directed to unique and unconventional systems and methods of reducing or preventing burdens on an annuity issuer and/or a pension plan, which . . . are not abstract. Additionally, the pending claims are not directed to any of the abstract ideas identified by the Examiner.

Appeal Br. 12–13. Appellant further argues the claims are not directed to an abstract idea because:

The unconventional method claimed in Claim 14 recites a particular manner of reducing or preventing the imposition of burdens on annuity issuers and/or pension plans. As recited in Claim 14, this outcome is achieved by determining a first total premium amount (corresponding to a preliminary premium amount) and a second total premium amount (corresponding to a final premium amount). Accordingly, Claim 14 does not attempt to cover every possible way of reducing or preventing the imposition of burdens on annuity issuers and/or pension plans and instead covers a specific and limited way of doing so.

Appeal Br. 14.

Appellant also challenges the Examiner’s determination under the second step of the *Alice* inquiry. Specifically, Appellant argues the claims provide a technological improvement “by performing the series of steps in the claimed manner, computing resource (e.g., processor, memory, and network resources) waste is reduced and/or prevented over prior, more conventional ways of generating an annuity.” Appeal Br. 15. Appellant further argues the claims recite an inventive concept because:

The claims here recite a unique method and system of reducing or preventing the imposition of burdens on annuity issuers and/or pension plans. As explained in the Specification, conventional systems and methods of generating an annuity do not generally clarify how the cost of the generation of the annuity

will be determined. This can be problematic during annuity negotiations as the goals of the pension plan and the annuity issuer may differ.

App. Br. 16.

*Revised Guidance, Step 2A, Prong One*²
The Judicial Exception

Applying the Guidance, we are not persuaded the Examiner has erred in rejecting claim 1 as being directed to patent-ineligible subject matter. The Guidance instructs us first to determine whether any judicial exception to patent eligibility is recited in the claim. The Guidance identifies three judicially-expected groupings: (1) mathematical concepts, (2) certain methods of organizing human activity such as fundamental economic practices and commercial interactions, and (3) mental processes. We focus our analysis on the second grouping—certain methods of organizing human activity such as fundamental economic practices and commercial interactions.³

Claim 1 recites the following limitations: (1) “prior to any of the plurality of participants electing to receive a liability payout, wherein the

² Throughout this opinion, we give the claim limitations the broadest reasonable interpretation consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

³ Appellant’s arguments are made to claim 14. However, Appellant indicates that the independent claims 1 and 8 are substantially similar. Appeal Br. 14 (“The implementation details of Claim 14 are also incorporated in independent Claims 1 and 8.”). Therefore, we select claim 1 as representative. 37 C.F.R. § 41.37(c)(iv) (“When multiple claims subject to the same ground of rejection are argued as a group or subgroup by Appellant, the Board may select a single claim from the group or subgroup and may decide the appeal as to the ground of rejection with respect to the group or subgroup on the basis of the selected claim alone.”).

liability payout is an amount of money that satisfies a portion of a benefit of the pension plan, and wherein electing to receive the liability payout terminates the benefit of the pension plan of the participant of the plurality of participants who elected to receive the liability payout,” (2) “for each participant of the plurality of participants,” (3) “determine data indicative of a first premium amount for an annuity sufficient to satisfy a benefit of the pension plan that the participant is not eligible to elect to receive as the liability payout,” (4) “determine data indicative of a second premium amount for an annuity sufficient to satisfy a benefit of the pension plan that the participant is eligible to elect to receive as the liability payout,” (5) “determine a first total premium amount for an annuity sufficient to satisfy, for each participant of the plurality of participants, both the benefit of the pension that the participant is not eligible to elect and the benefit of the pension that the participant is eligible to elect, the first total premium amount being based, at least in part, on the first premium amount for each participant of the plurality of participants and the second premium amount for each participant of the plurality of participants,” and (6) “in response to the determination that a subset of the plurality of participants elected to not receive the liability payout, determine a second total premium amount for a second annuity, the second annuity sufficient to satisfy, for each participant of the plurality of participants, the benefit of the pension plan that the participant was not eligible to elect and, for each participant of the subset, the benefit of the pension plan that the participant was eligible to elect, the second total premium amount being based, at least in part, on the first premium amount for each participant of the plurality of participants and the second premium amount for each participant of the subset of the plurality of

participants.” Appeal Br. 27 (Claims Appendix). These limitations, under their broadest reasonable interpretation, recite a fundamental economic practice and commercial interaction of calculating annuity premium amounts to satisfy pension obligations.

For example, limitation (1) recites information about the legal framework of a pension plan, including how liability payouts are offered within the plan, which would be typical of most pension plans, and necessary information for calculating an annuity premium based on the plan. Limitations (2)–(5) which recite the calculations needed for determining an initial annuity premium based on initial assumptions, are also operations that are used in connection with a commercial activity. Limitation (6), which recites updating the premium amount in response to real world deviations from the initial assumptions, is similarly abstract, as it is another commercial activity. Like the concept of intermediated settlement in *Alice*, and the concept of hedging in *Bilski* (which like the instant claims involve evaluating and managing risk in a financial transaction), Appellant’s claimed concept of calculating annuity premium amounts to satisfy pension obligations “is a fundamental economic practice long prevalent in our system of commerce.” *Alice*, 134 S. Ct. at 2356 (internal quotation marks omitted); *see also Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Canada*, 687 F.3d 1266 (Fed. Cir. 2012) (finding patents tracking value of insurance policies and calculating amounts that underwriters must guarantee and pay should the policy be paid out prematurely were ineligible abstract ideas). Accordingly, we conclude the location-based, targeted advertising method set forth in claim 1 *recites* a judicial exception of a fundamental

economic practice and commercial interaction, which is a certain method of organizing human activity under the Guidance.

Revised Guidance, Step 2A, Prong Two
Integration of the Judicial Exception into a Practical Application

Having determined claim 1 recites a judicial exception, our analysis under the Memorandum turns now to determining whether there are “additional elements that integrate the judicial exception into a practical application.” *See* Guidance, 84 Fed. Reg. at 54–55 (citing MPEP § 2106.05(a)–(c), (e)–(h)).

Under the Guidance, limitations that are indicative of “integration into a practical application” include:

1. Improvements to the functioning of a computer, or to any other technology or technical field — *see* MPEP § 2106.05(a);
2. Applying the judicial exception with, or by use of, a particular machine — *see* MPEP § 2106.05(b);
3. Effecting a transformation or reduction of a particular article to a different state or thing — *see* MPEP § 2106.05(c); and
4. Applying or using the judicial exception in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception — *see* MPEP § 2106.05(e).

In contrast, limitations that are not indicative of “integration into a practical application” include:

1. Adding the words “apply it” (or an equivalent) with the judicial exception, or merely include instructions to implement an

- abstract idea on a computer, or merely uses a computer as a tool to perform an abstract idea – *see* MPEP § 2106.05(f);
2. Adding insignificant extra-solution activity to the judicial exception — *see* MPEP § 2106.05(g); and
 3. Generally linking the use of the judicial exception to a particular technological environment or field of use — *see* MPEP 2106.05(h).

See Guidance, 84 Fed. Reg. at 54–55 (“Prong Two”).

Appellant’s claim 1 recites elements additional to those identified above. These limitations include computer hardware components such as (a) “a memory,” and (b) “one or more processors communicatively coupled to the memory.” Appeal Br. 20 (Claims Appendix). We conclude that these generic hardware limitations are insufficient to integrate the recited judicial exception into a practical application because they amount only to “instructions to implement an abstract idea on a computer, or merely use[] a computer as a tool to perform an abstract idea.” MPEP § 2106.05(f).

Claim 1 additionally recites (c) “receive data indicative of a plurality of participants in a pension plan,” (d) “communicate the first total premium amount for display,” (e) “receive data indicative of a determination that a subset of the plurality of participants elected not to receive the liability payout,” and (f) “communicate the second total premium amount for display.” Like the computer-based limitations above, we conclude these limitations (c)–(f) also are insufficient to integrate the abstract idea into a practical application because they constitute data gathering and data output operations which are well-established as the types of computer operations fairly characterized as insignificant extra-solution activity. MPEP

§ 2106.05(g) (“Extra-solution activity includes both pre-solution and post-solution activity. An example of pre-solution activity is a step of gathering data for use in a claimed process.”) Viewed as an ordered combination, the analysis stays the same. These additional limitations merely describe the use of generic computers and standard data gathering and output operations which use computers as a tool to carry out the abstract concept.

As noted above, Appellant argues claim 1 provides a technical improvement in that processor, memory, and network resources are conserved. Appeal Br. 15–16; Reply Br. 5. We disagree. Appellant does not identify any evidence that practicing the claimed invention conserves resources over prior art annuity administration processes. The improvement asserted by Appellant is merely an improvement to the annuity generation process—an improvement to the abstract idea itself.

Accordingly, we conclude claim 1 is *directed to* a judicial exception.

The Inventive Concept – Step 2B

Having determined the claim is directed to a judicial exception, we proceed to evaluating whether the claim adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)) or simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. *See* Guidance, 84 Fed. Reg. at 56.

Our review of the Examiner’s rejection under Step 2B is guided by the revised examination procedure published online by the USPTO on April 19, 2018, entitled “Changes in Examination Procedure Pertaining to Subject

Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)” (“*Berkheimer Memorandum*”), which imposed a new fact finding requirement for Examiners, as applicable to rejections under § 101. Based on the record before us, we agree with the Examiner that the claim does not add specific limitations beyond what is well-understood, routine, and conventional.

Even if it could be shown that the claim provides Appellant’s asserted benefit that “the annuity generation process may continue to completion rather than terminating at some point during the process,” it would not provide the technological improvement Step 2B demands. *See* Appeal Br. 16. Step 2B requires that an improvement be beyond the mere automation benefits provided by computers in general. The claim limitations Appellant asserts as not well-understood, routine, and conventional are themselves abstract. Appeal Br. 11 (asserting all elements of claim 1 are not well-understood, routine, and conventional). In Step 2B, however, our analysis focuses on the additional elements—those beyond what is abstract. Pursuant to the Guidance, we agree with the Examiner that the additional elements, individually and as an ordered combination, do not provide significantly more than the identified abstract concept. *See* Ans. 11–12.

Appellant also challenges the evidentiary basis of the Examiner’s finding in Step 2B of the Guidance (*Alice* step 2). Reply Br. 3–4. We are not persuaded of Examiner error. Appellant again asserts that evidence is required which demonstrates that all claim limitations are well-understood, routine, and conventional. As we noted above, this analysis applies to the additional claim elements, and not to those that form the abstract idea itself. *SAP Am. Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018)

(“What is needed is an inventive concept in the non-abstract application realm.”).

To the extent Appellant challenges the Examiner’s findings with respect to the additional elements, we find the Examiner’s determination that the additional limitations in claim 1 are well-understood, routine, and conventional sufficiently supported in this record. The *Berkheimer Memorandum* provides that the Examiner may support a finding that an additional element or combination of elements may be supported by “[a] citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s).” *Berkheimer Memorandum* at 4, § III(A)(2).

Here, the Examiner cites the recognized computer functions in MPEP § 2106.05(d)(II), and notes that the limitations of claim 1 are similar types of computer operations. Ans. 11–12. Appellant does not provide any argument or explanation as to how or why this evidence is insufficient. Accordingly, we are not persuaded the Examiner erred in the Step 2B analysis. *See* Spec. 17:6–21:19; *Alice*, 573 U.S. at 226 (“Nearly every computer will include a ‘communications controller’ and ‘data storage unit’ capable of performing the basic calculation, storage, and transmission functions required by the method claims”).

Accordingly, we do not discern in claim 1 any specific limitation beyond the judicial exception that is not “well-understood, routine, conventional,” and instead agree with the Examiner that the claims do not provide an inventive concept sufficient to transform the judicial exception into patent-eligible subject matter.

Because the Examiner correctly concluded claim 1 is directed to a judicial exception, and because Appellant does not identify any error in the Examiner's determination under step 2B of the Guidance, we sustain the rejection of representative claim 1 under 35 U.S.C. § 101, as well as of claims 2–20 which fall therewith.

REJECTION UNDER 35 U.S.C. § 103

The Examiner rejects claim 1 as being obvious over Lyons and Fay. Final Act. 5–10, 14–15. The Examiner finds the limitation “determine data indicative of a first premium amount for an annuity sufficient to satisfy a benefit of the pension plan that the participant is not eligible to elect to receive as the liability payout,” is taught by Lyons. Final Act. 5 (citing Lyons ¶¶ 15, 19, 38, 39, and 42–46).

Appellant argues that the cited portions of Lyons are deficient because “cited portions of Lyons do not disclose determining data indicative of a premium amount for an annuity sufficient to satisfy a benefit of a pension plan that a participant is, or is not, eligible to elect to receive as a liability payout as required by Claim 1.” Appeal Br. 10. Appellant further asserts that the Examiner's analysis does not account for the distinction between election choice (which reflects a choice made by an eligible participant to elect a liability payout) and election eligibility (which goes to whether the participant is permitted to make such a choice). Reply Br. 3–4. Appellant argues “at most, the relied-upon portions of *Lyons* disclose election choice but not election eligibility.” Reply Br. 4. We agree with Appellant.

The cited portions of Lyons describe scenarios in which a premium for a buy-out of selected pension scheme benefits is calculated. *See, e.g.*, Lyons ¶¶ 18–19. However, Lyons does not contemplate any evaluation of a

premium that considers whether a particular plan participant is *eligible* to elect a liability payout. As such, Lyons does not teach or suggest “determine data indicative of a first premium amount for an annuity sufficient to satisfy a benefit of the pension plan that the participant is not eligible to elect to receive as the liability payout,” as recited in claim 1.

Accordingly, we are persuaded Lyons fails to teach the disputed limitation, and, therefore, we reverse the rejection of claim 1 under 35 U.S.C. § 103(a) and its dependent claims. For the same reasons, we also reverse the rejections of independent claims 8 and 14 which recite similar limitations, as well as of the remaining claims which depend therefrom.

CONCLUSION

Because we have affirmed at least one ground of rejection for each claim on appeal, we affirm the Examiner's decision to reject the claims. 37 C.F.R. § 41.50(a)(1).

More specifically,

We affirm the Examiner’s decision to reject claims 1–20 under 35 U.S.C. § 101.

We reverse the Examiner’s decision to reject claims 1–20 under 35 U.S.C. § 103.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–20	101	patent eligibility	1–20	
1–20	103	Lyons, Fay		1–20
Overall Outcome			1–20	

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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