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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte FATANEH F. GHODRAT, MICHAEL LEE GROSSFELD, and
KEVIN WARREN FURROW

Appeal 2023-003860
Application 17/084,520
Technology Center 2600

Before JAMES R. HUGHES, JENNIFER L. McKEOWN, and
JOYCE CRAIG, *Administrative Patent Judges*.

McKEOWN, *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, 3, 11, and 13. Claims 2 and 12 have been cancelled. Claims 4–10 and 14–20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Final Act. 5. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE and enter a NEW GROUND OF REJECTION.

¹ “Appellant” refers to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Advanced Micro Devices, Inc. Appeal Br. 3.

CLAIMED SUBJECT MATTER

The claims are directed to

[d]evices, systems, and methods for sampling partially resident texture data. An instruction which includes a residency map descriptor is received. The instruction is executed to retrieve partially resident texture data from a mipmap stored in a memory based on the residency map descriptor. The residency map descriptor includes a residency map.

Abstr.

Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method for sampling partially resident texture data, the method comprising:

receiving an instruction which includes a residency map descriptor, wherein the residency map descriptor comprises a residency map; and

executing the instruction to retrieve partially resident texture data from a mipmap stored in a memory based on the residency map descriptor.

Appeal Br. 12 (Claims App.).

REFERENCE

The prior art relied upon by the Examiner is:

Name	Reference	Date
Kazakov	US 2020/0250877 A1	Aug. 6, 2020

REJECTION

The Examiner rejected claims 1, 3, 11, and 13 under 35 U.S.C. § 102(a)(1) as anticipated by Kazakov. Final Act. 3–5.

OPINION

THE ANTICIPATION REJECTION BASED ON KAZAKOV

Appellant argues that Kazakov fails to disclose “receiving an instruction which includes a residency map descriptor, wherein the residency map descriptor comprises a residency map.” Appeal Br. 5 (emphasis omitted). According to Appellant, the Examiner incorrectly relies on Kazakov’s texture descriptor as the claimed residency map descriptor. Appellant points out that Kazakov’s texture descriptor at least fails to include a residency map. Appeal Br. 8. Instead, Appellant maintains that Kazakov’s texture descriptor “at best, includes ‘. . . pointers to the texture, dimensions of the PRT resource, data encoding formats, numbers of bytes per texel, compression ratios, compression type, and the like’” and, thus, Kazakov does not disclose the texture descriptor comprises “an actual residency map.” Appeal Br. 8 (citing Kazakov ¶ 15).

The Examiner responds that Kazakov discloses receiving an instruction which includes a residency map descriptor, wherein the residency map descriptor comprises a residency map. Ans. 4–6. In particular, the Examiner explains that a residency map “is known in the art as a way to track a partially resident texture and its associated mipmaps; OR a LOD [level of detail] index table that indicates available (i.e., memory resident) tiles of mipmaps that correspond to a mipmap tile of interest.” Ans. 4 (citing Spec. ¶¶ 64–68). According to the Examiner,

given that Kazakov teaches a texture descriptor with information indicating an address of a residency map associated with the partial residential textures, the residency map, as described Kazakov, is within the broadest reasonable interpretation (BRI) of a component (or feature)[] that is intrinsic to the texture map descriptor, because processing of the texture map descriptor

requires knowledge of both the Partially Resident Textures (PRT) and the residency map.

Ans. 6 (emphasis omitted).

We are persuaded of error in the Examiner's rejection. As Appellant points out, the claimed invention recites that the residency map descriptor comprises a residency map itself. Reply Br. 4. Similarly, the Specification describes a single instruction embodiment where the residency map descriptor includes the residency map *values* in contrast to pointing to the residency map location in memory. *See, e.g.*, Fig. 8, Spec. ¶¶ 79–81. For example, the Specification contrasts "the residency map descriptor with an embedded immediate value residency map" with "a residency map descriptor without an embedded immediate value residency map (e.g., which points to the residency map in memory)." Spec. ¶ 81. As such, we agree with Appellant that Kazakov's texture descriptor that provides for means to access a residency map or determine information associated with a residency map does not disclose the claimed residency map descriptor comprises a residency map.

Accordingly, we reverse the Examiner's rejection of claims 1, 3, 11, and 13 under 35 U.S.C. § 102(a)(1) as anticipated by Kazakov.

NEW GROUND OF REJECTION

THE SUBJECT MATTER ELIGIBILITY REJECTION

Claims 1 and 11

Pursuant to our authority under 37 C.F.R. § 41.50(b), we reject claims 1 and 11 under 35 U.S.C. § 101 as directed to patent-ineligible subject matter.

PRINCIPLES OF LAW

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 217–218), 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 U.S.C. § 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”),² updated by USPTO, October 2019 Update: Subject Matter Eligibility (available at

² The Manual of Patent Examining Procedure (“MPEP”) now incorporates this Revised Guidance and subsequent updates at § 2106 (9th ed. Rev. 10. 2019, rev. Feb. 2023).

https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf (“October 2019 Guidance Update”).

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 as Step 2A, Prong One 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 Two 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.

Step 2A, Prong One

Under Step 2A, Prong One, we first look to whether the claim recites 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. MPEP § 2106.04; Guidance, 84 Fed. Reg. at 52. The claimed invention here recites a “method for sampling partially resident texture data” including “receiving an instruction which includes a residency map descriptor, wherein the residency map descriptor comprises a residency map” and “executing the instruction to

retrieve partially resident texture data from a mipmap stored in a memory based on the residency map descriptor.” As a whole, these claimed steps receive an instruction including residency map data and execute the instruction to retrieve partially resident texture data based on the residency map data. As such, as presently written, the claimed invention merely receives an instruction and retrieves data based on that instruction.

The Federal Circuit has found similar steps of receiving or collecting data as well as analyzing data to be directed to an abstract idea. *See, e.g., Elec. Power Grp., LLC c. Alston S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016) (finding that “selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.”); *PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1316 (Fed. Cir. 2021) (using a content-based identifier for the claimed data-management functions of marking, retrieving, and delivering copies of data items recited mental processes that can be performed using a pencil and paper); *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1067 (Fed. Cir. 2011) (simply collecting and comparing known data recite mental steps). As such, we determine that the claimed invention recites an abstract idea.

Step 2A, Prong Two

Under Prong Two of revised step 2A, we determine whether the recited judicial exception is integrated into a practical application of that exception by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception; and (b) evaluating those

additional elements individually and in combination to determine whether they integrate the exception into a practical application.

Claims 1 and 11 additionally recites a memory and claim 11 recites a processor. We determine these additional limitations, alone or in combination, merely serve as tools to perform the abstract idea of receiving and executing an instruction to retrieve data. *See, e.g., Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (finding ineligible claims that take two data sets and organize this information into a new form and reasoning that using an algorithm “to manipulate existing information to generate additional information is not patent eligible.”).

We further determine that the claimed receiving step is merely insignificant extra-solution activity. Namely, the claimed invention receives and processes data – this is merely conventional data gathering and analysis. *See MPEP § 2106.05(g); see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (collecting and analyzing data amounted to mere data gathering). As such, based on the record before us, we determine that the claimed invention is not integrated into a practical application.

Step 2B

Under step 2B, we inquire whether the claim recites a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see MPEP § 2106.05(d)*), such that the claim amounts to significantly more than a judicial exception, or simply appends well-understood, routine, conventional activities previously known

to the industry, specified at a high level of generality, to the judicial exception. Guidance, 84 FR at 52.

We determine that the claimed invention does not add significantly more to the claimed abstract idea. Namely, the claimed invention requires no more than a generic computer to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the industry. For example, the Specification identifies that described methods and functional units “may be implemented as a general purpose computer, processor, or a processor core.” Spec. ¶ 83. *See also Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (discussing that data collection, recognition, and storage is well-known).

Accordingly, we enter a new ground of rejection of claims 1 and 11 as directed to patent-ineligible subject matter.

CONCLUSION

We reverse the Examiner’s rejection of claims 1, 3, 11, and 13 under 35 U.S.C. § 102(a)(1) as anticipated by Kazakov. We enter a new ground of rejection of claims 1 and 11 under 35 U.S.C. § 101.

DECISION SUMMARY

In summary:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed	New Ground
1, 3, 11, 13	102(a)(1)	Kazakov		1, 3, 11, 13	
1, 11	101	Eligibility			1, 11
Overall Outcome				1, 3, 11, 13	1, 11

TIME PERIOD FOR RESPONSE

This Decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides that “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Section 41.50(b) also provides:

When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of

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rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

REVERSED; 37 C.F.R. § 41.50(b)