

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC. and AMAZON WEB SERVICES, INC.,
Petitioner,

v.

SWARM TECHNOLOGY, LLC,
Patent Owner.

IPR2022-00283
Patent 9,852,004 B2

Before MICHAEL R. ZECHER, GREGG I. ANDERSON, and
SCOTT B. HOWARD, *Administrative Patent Judges*.

HOWARD, *Administrative Patent Judge*.

PRELIMINARY GUIDANCE
PATENT OWNER'S MOTION TO AMEND

I. INTRODUCTION

On June 29, 2022, we instituted trial as to claims 1–12 of U.S. Patent No. 9,852,004 B2 (Ex. 1001, “the ’004 patent”). Paper 6 (“Decision” or “Dec.”). After institution, Patent Owner filed a Contingent Motion to Amend. Paper 12 (“Motion” or “Mot.”). Patent Owner proposes replacing originally challenged claims 1 and 2 with respective substitute claims 13 and 14, in the event we find either of claims 1 or 2 unpatentable in a Final Written Decision. *See* Mot. 1, App. A. Patent Owner requests that we provide preliminary guidance concerning the Motion in accordance with the Board’s pilot program concerning motion to amend practice and procedures. Mot. 1; *see also* Notice Regarding a New Pilot Program Concerning Motion to Amend Practice and Procedures in Trial Proceedings under the America Invents Act before the Patent Trial and Appeal Board, 84 Fed. Reg. 9,497 (Mar. 15, 2019) (providing a patent owner with the option to receive preliminary guidance from the Board on its motion to amend) (“Notice”).¹ Petitioner filed an Opposition to the Motion. Paper 20 (“Opposition” or “Opp.”). We have considered Patent Owner’s Motion and Petitioner’s Opposition.

In this Preliminary Guidance, we provide information indicating our initial, preliminary, non-binding views on whether Patent Owner has shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend in an *inter partes* review and whether Petitioner (or the record) establishes a reasonable likelihood that the substitute claims are unpatentable. *See* Notice, 84 Fed. Reg. at 9,497 (“The preliminary guidance . . . provides preliminary, non-binding guidance from the Board to the parties about the [motion to amend]”); *see also* 35 U.S.C. § 316(d) (statutory

¹ The Pilot program has been extended through September 16, 2024. 87 Fed. Reg. 60,134 (Oct. 4, 2022).

requirements for a motion to amend); 37 C.F.R. § 42.121 (regulatory requirements and burdens for a motion to amend); *Lectrosonics, Inc. v Zaxcom, Inc.*, IPR2018-01129, Paper 15 (PTAB Feb. 25, 2019) (precedential) (providing information and guidance regarding motions to amend).

For purposes of this Preliminary Guidance, we focus on the proposed substitute claims, and specifically on the amendments proposed in the Motion. *See* Notice, 84 Fed. Reg. at 9,497. We do not address the patentability of the originally challenged claims. *Id.* Moreover, in formulating our preliminary views on the Motion and Opposition, we have not considered the parties' other substantive papers on the underlying merits of Petitioner's challenges. We emphasize that the views expressed in this Preliminary Guidance are subject to change upon consideration of the complete record, including any revision to the Motion filed by Patent Owner. Thus, this Preliminary Guidance is not binding on the Board when rendering a final written decision. *See id.* at 9,500.

II. PRELIMINARY GUIDANCE

A. Statutory and Regulatory Requirements

For the reasons discussed below, at this stage of the proceeding, and based on the current record, it appears that Patent Owner has not shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend.

1. Reasonable Number of Substitute Claims

Does Patent Owner propose a reasonable number of substitute claims? (35 U.S.C. § 316(d)(1)(B))
Yes. Patent Owner proposes one substitute claim for each of originally challenged claims 1 and 2. Mot. 1, App. A (proposing substitute claims 13 and 14).

2. Respond to Ground of Unpatentability

Does the Motion respond to a ground of unpatentability involved in the trial? (37 C.F.R. § 42.121(a)(2)(i))

Yes. Patent Owner responds to the grounds of unpatentability on which we instituted trial. *See* Mot. 6, 25–30. For example, the Motion contends that the newly added language in the limitation of an “autonomous co-processor . . . configured to . . . proactively interrogate the task pool to retrieve a first task for the task pool without being instructed to do so by the task pool” distinguishes proposed substitute claim 13, and proposed substitute claim 14 depending therefrom, over the grounds asserted in the Petition. Mot. 25–28.

3. Scope of Amended Claims

Does the amendment seek to enlarge the scope of the claims? (35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii))

No. The newly added limitations in Patent Owner’s proposed substitute claims 13 and 14 do not broaden the scope of the original claims. *See* Mot., App. A.

4. New Matter

Does the amendment seek to add new subject matter? (35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii))

Yes. On this record, Patent Owner appears to have provided inadequate written description support for proposed substitute claim 13. *See* Mot. 3–6, App. A.

We agree with Petitioner’s contention, with respect to proposed substitute claim 13, that Patent Owner does not demonstrate support for the negative limitation of “dynamically accept[ing] . . . an additional autonomous co-processor into the processing system on a plug-and-play basis *without any communication with the controller.*” Opp. 22 (emphasis added).

“For negative claim limitations . . . there is adequate written description when, for example, ‘the specification describes a reason to exclude the relevant [element].’” *Novartis Pharms. Corp. v. Accord Healthcare, Inc.*,

38 F.4th 1013, 1016 (Fed. Cir. 2022) (quoting *Santarus, Inc. v. Par Pharm., Inc.*, 694 F.3d 1344, 1351 (Fed. Cir. 2012)). Such reason “could be found in ‘statements in the specification expressly listing the disadvantages of using’ that element,” or where “the specification ‘distinguishes among’ the element and alternatives to it.” *Id.* (quoting *Santarus*, 694 F.3d at 1351; *Inphi Corp. v. Netlist, Inc.*, 805 F.3d 1350, 1357 (Fed. Cir. 2015)).

Here, Patent Owner cites to U.S. Patent Application No. 14/340,332 (Ex. 2002, the “’332 application”) and U.S. Patent Application No. 13/750,696 (Ex. 2003, the “’696 application”) for written description support of the negative limitation at issue. Mot. 5 (citing Ex. 2002 ¶¶ 13, 36, 52, 54, 58–62, Figs. 4, 5; Ex. 2003 ¶¶ 8, 10, 14, 18, Fig. 1). The passages relied upon, however, include description of an embodiment in which “the CPU [central processing unit] 11 may recruit cells from other cell systems.” Ex. 2002 ¶ 52; *see also* Ex. 2003 ¶ 18.² This discloses at least some involvement of the CPU in adding cells to the system, contrary to the claimed accepting of co-processors “without any communication with the controller.”

The relied upon applications also describe that “co-processors may be added and removed without reprogramming the CPU 11 to account for the changes to the system 10.” Ex. 2002 ¶ 54; Ex. 2003 ¶ 18. But the absence of reprogramming does not mean there is no communication at all with the CPU.

The applications further provide that co-processors are to operate proactively and autonomously (*see, e.g.*, Ex. 2002 ¶¶ 2, 7, 9, 11, 43, 46, 56, 63, 64, 71, 75, 77, 81, 82; Ex. 2003 ¶¶ 1, 4, 5, 10, 14, 15), in contrast to a “typical multiprocessor system,” which has the disadvantages of “a significant amount of CPU bandwidth [being] consumed by task distribution” and “co-processors often remain[ing] idle while waiting for a new task from the CPU” (Ex. 2002 ¶ 5; Ex. 2003 ¶ 3). We do not see here, however, alternatives to communication with a controller when accepting an additional co-processor, or disadvantages of such communication. Rather, describing co-processors as proactive and autonomous appears to relate to reducing management responsibility of a

² We cite to the native paragraph numbers of the applications, rather than the page numbers of the exhibits, for consistency with Patent Owner’s citations. *See* Mot. 3–6.

CPU in assigning tasks to co-processors, not accepting co-processors into the system.

In short, based on the current record, Patent Owner has not identified disclosure that either expresses a disadvantage of communication with a controller when accepting a co-processor into the system, or discusses alternatives that include the absence of this feature. While written description support for a negative limitation may exist through inherent disclosure, even when the disclosure is silent about the negative limitation (*Novartis*, 38 F.4th, at 1017–18), Patent Owner provides no explanation showing that communication with a controller when accepting a co-processor into the system is necessarily excluded from any embodiment disclosed in the '332 application or '696 application.

Although Petitioner also contends the limitation of “a first autonomous co-processor . . . configured to . . . deliver the first task to the first autonomous co-processor” in proposed substitute claim 13 does not have written description support, we disagree for the following reasons.

Petitioner contends that “[n]one of [Patent Owner’s] cited passages (Mot. 4) describe a co-processor delivering a task to itself.” Opp. 21. Rather, Petitioner argues, “[t]he passages that describe co-processor operation jump directly from retrieving a task to processing it, without delivering it.” *Id.* at 22. This argument, however, is not consistent with the disclosure in the relied upon applications. Specifically, the '332 application describes a co-processor (or cell) acquiring a task by “sending an agent 30 to interrogate (search for) the task pool and retrieve an available task 22 that requires completion.” Ex. 2002 ¶ 44; *see also* Ex. 2003 ¶ 14. The agent then “return[s] to its cell with a task 22.” Ex. 2002 ¶ 44; *see also* Ex. 2003 ¶ 14. Accordingly, based on the current record, we find that the '332 application sufficiently shows possession of the disputed “deliver[ing] the first task to the first autonomous co-processor” limitation because, at least in one embodiment, the described agent—which is a part of its co-processor (*see, e.g.*, Ex. 2002 ¶ 8 (“each co-processor *includes* an agent”) (emphasis added))—returns to the co-processor with a task, i.e., it delivers the task.

Petitioner’s argument that, “[a]t best, [the applications] describe that an ‘agent 30A delivers the *descriptor* of the matching task 22 to the cell’” (Opp. 21–22) is unavailing. First, as noted above, the '332 application describes an agent “returning to its cell with a task 22” (Ex. 2002 ¶ 44), which supports the claimed “deliver[ing]” of a task. Second, even if we

consider the embodiment Petitioner points to with respect to delivering a descriptor, the '332 application defines a descriptor as containing “one or more of a specific instruction to be executed, a mode of execution, the location (e.g., address) of the data to be processed, and the location for placement of the task results, if any.” Ex. 2002 ¶ 40; *see also* Ex. 2003 ¶ 12. In other words, the task descriptor is the essence of the task. Indeed, the portion of the '332 application Petitioner relies upon for its argument describes that “the agent 30A delivers the descriptor of the matching task 22 to the cell 12A, *whereupon the cell 12A begins to process the task 22.*” Ex. 2002 ¶ 49 (emphasis added); *see also* Ex. 2003 ¶ 16. The descriptor allows the co-processor to process the task because “[t]he descriptor informs the cell 12A which instruction to execute, the location in memory units 15 where the data to be processed may be found, and the location in memory 15 where the results are to be placed.” Ex. 2002 ¶ 49; *see also* Ex. 2003 ¶ 16. Accordingly, based on the current record, we find that the '332 application's disclosure of delivering the descriptor also provides sufficient support for “deliver[ing]” the task, as claimed.

Overall, at this stage of the proceeding, based on the negative limitation discussed above, Patent Owner does not appear to have shown a reasonable likelihood that proposed substitute claim 13 has written description support in the '332 application or '696 application.

B. Patentability

For the reasons discussed below, at this stage of the proceeding, and based on the current record,³ it appears that Petitioner (or the record) has shown a reasonable likelihood that proposed substitute claims 13 and 14 are unpatentable.

³ We express no view on the patentability of originally challenged claims 1–12 in this Preliminary Guidance.

Does the record establish a reasonable likelihood that the proposed substitute claims are unpatentable?

Yes. Based on the current record, it appears that there is a reasonable likelihood that proposed substitute claims 13 and 14 are unpatentable for the reasons discussed below.

We note that Patent Owner will have the opportunity to respond to the evidence cited in Petitioner’s Opposition and this Preliminary Guidance in a Reply or in a Revised Motion in this proceeding.

Indefiniteness

No. On this record, it does not appear that there is a reasonable likelihood of establishing that proposed substitute claims 13 and 14 are indefinite.

Petitioner contends that the proposed substitute claims are indefinite because “neither the claim language nor the specification informs a [person having ordinary skill in the art], with reasonable certainty, what it means to be ‘autonomous.’” Opp. 19. In particular, Petitioner argues that “the specification provides multiple inconsistent definitions” of “autonomous,” and that “[t]he claim language compounds this ambiguity by separately requiring that the co-processor 1) be ‘autonomous,’ 2) act ‘without being instructed to do so by the task pool,’ and 3) act ‘without any communication’ with ‘the controller.’” *Id.* at 19–20. We are not persuaded by Petitioner’s arguments.

In the context of a motion to amend, we apply the same test for indefiniteness as applied in district courts, namely, whether the “claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014); *see also* USPTO Memorandum on the Approach to Indefiniteness Under 35 U.S.C. § 112 in AIA Post-Grant Proceedings (Jan. 6, 2021) (“Indefiniteness Memorandum”), *available at* <https://www.uspto.gov/sites/default/files/documents/IndefinitenessMemo.pdf>.

Although the ’004 patent describes several variations of autonomous behavior by a co-processor (*see, e.g.*, Ex. 1001, 2:20–22, 2:36–40, 8:17–19), we do not conclude that the recitation of the term “autonomous” renders proposed substitute claim 13 indefinite. Rather, the ’004 patent simply sets forth different degrees of autonomy that a co-processor may

have vis-à-vis the CPU, the task pool, and the other co-processors in different embodiments, rather than a single explicit definition. *See id.* If anything, where the term “autonomous” would otherwise permit a broader construction encompassing varying levels of autonomy on the part of a co-processor, the language Petitioner identifies as problematic (*see* Opp. 20)—“without being instructed to do so by the task pool” and “without any communication between the first autonomous co-processor and the controller”—further refines the meaning of “autonomous” in proposed substitute claim 13, and, we conclude, based on the current record, provides reasonable certainty as to the scope of the claim.

Petitioner also contends that proposed substitute claim 13 is indefinite because of “the phrase ‘a . . . co-processor . . . configured to successively . . . retrieve a first task . . . [and] deliver the first task to the . . . co-processor.’” Opp. 20. In particular, Petitioner argues that the term “deliver” “cannot mean that the co-processor takes possession of the task, as that is already covered by the ‘retrieving’ step,” and so one of ordinary skill in the art would be “unable to determine with reasonable certainty whether a co-processor has ‘deliver[ed]’ a first task to itself.” *Id.* at 21. Based on the current record, we are not persuaded by Petitioner’s arguments.

The ’004 patent describes a co-processor using an agent to acquire tasks, where the agent retrieves a task from the task pool, and then returns to the co-processor with the task, i.e., it “deliver[s]” the task. *See* Ex. 1001, 8:24–40. In light of this description in the ’004 patent, we conclude that a person having ordinary skill in the art would be able to ascertain, with reasonable certainty, the scope of proposed substitute claim 13. In particular, such a person would have understood that the co-processor performs at least the two recited steps of retrieving a task from the task pool and delivering the task to itself, for example, by using an agent, prior to the step of processing the task.

Accordingly, on the current record, Petitioner has not established a reasonable likelihood that proposed substitute claims 13 and 14 are indefinite.

Patent Ineligibility

Yes. On this record, it appears that there is a reasonable likelihood of establishing that proposed substitute claims 13 and 14 are patent ineligible under 35 U.S.C. § 101.

Petitioner contends that proposed substitute claims 13 and 14 are patent ineligible. *See* Opp. 2–19. Patent Owner alerts us (Mot. 8) to an order in the parallel litigation in the U.S. District Court for the District of Arizona in which the court concludes, with respect to the '004 patent, that there are “sufficient factual allegations to survive dismissal under § 101 at the Rule 12(b)(6) stage.” Ex. 2006, 2. We agree with Petitioner, however, that a district court’s analysis for whether to dismiss a patent infringement complaint under § 101 is different than that performed in the context of an *inter partes* review. *See* Opp. 10.

We consider proposed substitute claims 13 and 14 under the 2019 Revised Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (Revised Guidance), which is now incorporated in the Manual of Patent Examining Procedure (“MPEP”) at Section 2106 (9th ed. Rev. 10.2019, rev. June 2020).

Under MPEP § 2106, if the claimed invention falls within one of the statutory categories under 35 U.S.C. § 101 (Step 1), 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) (“Step 2A, Prong One”); and
- (2) additional elements that integrate the judicial exception into a practical application (“Step 2A, Prong Two”).

MPEP § 2106.04(a) and (d).

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

- (3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional activity” in the field; 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.

MPEP § 2106.05(d).

Step 1

Proposed substitute claim 13 relates to “[a] processing system, comprising” certain hardware such as “a controller,” “a first autonomous co-processor,” and “a second autonomous co-processor,” and so at least nominally fits within one of the statutory categories of patent eligible subject matter, namely, “a machine.” 35 U.S.C. § 101.

Step 2A, Prong One

Proposed substitute claim 13 (including limitations in original claim 1) recites the following functionality: “populat[ing] the task pool with a plurality of first tasks having indicia of a first task type and a plurality of second tasks having indicia of a second task type”; “perform[ing] tasks of the first type”; “proactively interrogat[ing] the task pool to retrieve a first task from the task pool without being instructed to do so by the task pool”; “deliver[ing] the first task”; “process[ing] the first task”; “generat[ing] first resulting data”; “update[ing] the task pool to reflect completion of the first task”; performing similar functions with respect to tasks of the second type; “after . . . updat[ing] the task pool to reflect completion of the first task, . . . send[ing] a notification . . . that the first task is completed”; and “after . . . updat[ing] the task pool to reflect completion of the second task, . . . send[ing] a notification . . . that the second task is completed.” Mot., App. A.

Based on the current record, we find that these limitations in proposed substitute claim 13 are analogous to a way of managing a project by posting a number of tasks and then having people separately perform the tasks. In other words, these limitations are akin to a “scrum board,” which “works by first having a project manager list tasks on sticky notes and post them on one side of a board,” and then having “team members collect and perform each task,” after which point they move the notes to the other side of the board. A scrum board can be completely performed by humans using pen and paper. Based on the current record, proposed substitute claim 13 does no more than apply the features of a scrum board to computer components. Accordingly, at this stage, we determine that the limitations identified above are directed to the abstract ideas category of “certain methods of organizing human activity,” namely, “managing personal behavior or relationships or interactions between people (including . . . following rules or instructions),” as well as the category of “mental processes.” MPEP § 2106.04(a); *see also Broadcom Corp. v. Netflix Inc.*, 598 F.Supp.3d 800, 808 (N.D. Cal. 2022) (finding claim

patent ineligible where it “does not teach any specific improvement to computer functionality, but instead teaches using general, abstract resource allocation principles to pick the best computer device to perform a job”).

Based on the current record, we are not persuaded by Patent Owner’s argument that proposed substitute claim 13 is not directed to a judicial exception. *See* Mot. 9–14. At Step 2A, Prong One, we consider only whether the claim at issue recites a judicial exception, such as an abstract idea. *See* MPEP § 2106.04.II.A.2 (“The mere inclusion of a judicial exception . . . in a claim means that the claim ‘recites’ a judicial exception under Step 2A Prong One. However, mere recitation of a judicial exception does not mean that the claim is ‘directed to’ that judicial exception under Step 2A Prong Two.”). Further, the color-annotated classification of the elements of proposed substitute claim 13 that Patent Owner’s declarant provides “to illustrate the specific structure, organization, and behavior of the components (i.e., architecture) of the claimed multiprocessor system” (Mot. 12–14) does not correspond to the analytical framework for Step 2A, Prong One of the Revised Guidance, in which we simply determine whether the claim recites a judicial exception. *See* MPEP § 2106.04.II.A.1. Accordingly, at this stage of the proceeding, Patent Owner has not persuasively rebutted Petitioner’s contention that proposed substitute claim 13 recites an abstract idea. *See* Opp. 3–11.

Step 2A, Prong Two

Based on the current record, we find the additional limitations in proposed substitute claim 13 fail to integrate the abstract idea into a practical application. The additional limitations in proposed substitute claim 13 include “a controller,” “a first autonomous co-processor,” “a second autonomous co-processor,” “an additional autonomous co-processor,” and the function of “dynamically accept[ing] the first autonomous co-processor, the second autonomous co-processor, and an additional autonomous co-processor into the processing system on a plug-and-play basis without any communication with the controller.” Mot., App. A. At this stage of the proceeding, we find that limiting proposed substitute claim 13 to the particular environment of a parallel processing computing architecture does not make the claims patent eligible, and that nothing in proposed substitute claim 13 defines an improvement in how such computing architecture operates so as to lend eligibility to an otherwise patent-ineligible abstract idea. We see nothing in proposed substitute claim 13 “[a]pplying or using the [abstract idea] in some other meaningful

way beyond generally linking the use of the [abstract idea] to a particular environment, such that the claim as a whole is more than a drafting effort designed to monopolize the [abstract idea].” MPEP § 2106.04(d). Instead, proposed substitute claim 13 does no more than “[g]enerally linking the use of [an abstract idea] to a particular technological environment or field of use.” *Id.*

At this stage of the proceeding, we are not persuaded by Patent Owner’s argument that proposed substitute claim 13 integrates the judicial exception into a practical application. *See* Mot. 14–23. In particular, Patent Owner argues that proposed substitute claim 13 provides an improvement in multiprocessor systems (*see id.* at 16–23), specifically by including “a controller configured to populate the task pool with a plurality of first tasks having indicia of a first task type” (*id.* at 19). But the improvement in “configuring the CPU to deposit tasks into a task pool (instead of managing co-processors directly)” (*id.* (quoting Ex. 2004 ¶ 38)) is attributable to the use of a scrum board, where computer components are only used as tools to execute an abstract idea. Similarly, other alleged multiprocessor system improvements Patent Owner asserts, for example, “configuring co-processors to autonomously and proactively retrieve tasks from the task[] pool” and “configuring the multiprocessor system to dynamically accept additional co-processors on a plug-and-play basis” (Mot. 21, 23 (quoting Ex. 2004 ¶¶ 70, 68)), are also part and parcel of the use of a scrum board. That is, proactively retrieving tasks and adding resources such as additional workers when needed are all features of a scrum board. Patent Owner has not identified limitations in proposed substitute claim 13 that specifically define how the claimed computer components perform the alleged abstract idea in a way that is different than how humans would perform it. *Cf. McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (determining that “[t]he computer here is employed to perform a distinct process to automate a task previously performed by humans,” unlike other cases “where the claimed computer-automated process and the prior method were carried out in the same way”).

Step 2B

The ’004 patent describes implementing the claimed system with generic computer components. For example, the ’004 patent provides that “[t]he CPU 11 may be *any* single or multi-core processor, applications processor or microcontroller, used to execute a software program,” and that “[a] cell

12 may be a *general* or special purpose co-processor.” Ex. 1001, 5:17–19, 5:66–67 (emphases added). Therefore, at this stage of the proceeding, we find that the additional limitations cover merely conventional activity and do not provide an inventive concept. *See* MPEP § 2106.05(d).

We are not persuaded by Patent Owner’s argument that the computer components in proposed substitute claim 13 operate in an unconventional manner. *See* Mot. 24–25. In particular, Patent Owner argues that the “co-processors are configured to act in an unconventional manner by autonomously and proactively retrieving tasks from the task pool without waiting for an instruction from the CPU or Task Pool.” *Id.* at 25. But this simply describes the use of a scrum board, only with generic computer components performing the functions of human workers.

Accordingly, at this stage of the proceeding, we find that Petitioner has established a reasonable likelihood that proposed substitute independent claim 13 is patent ineligible because it is directed to an abstract idea without significantly more. We also find that Petitioner has established a reasonable likelihood that proposed substitute dependent claim 14 is patent ineligible, for the same reasons provided above, and because it only introduces additional limitations that further define the abstract idea.

Obviousness

No. On this record, it does not appear that there is a reasonable likelihood of establishing that proposed substitute claims 13 and 14 would have been obvious.

Petitioner contends that proposed substitute claims 13 and 14 are unpatentable as obvious over Lurie (Ex. 1007) alone or Lurie in combination with Ethernet Specification (Ex. 1009) (Opp. 23–30), which were the same grounds asserted against originally challenged claims 1 and 2, respectively. *See* Pet. 2.

Proposed Substitute Independent Claim 13

Proposed substitute independent claim 13 recites the following newly added limitations (as underlined):

a controller configured to populate the task pool with a plurality of first tasks having indicia of a first task type and a plurality of second tasks having indicia of a second task type;

a first autonomous co-processor configured to perform tasks of the first type and configured to successively: proactively

interrogate the task pool to retrieve a first task from the task pool without being instructed to do so by the task pool; . . .
a second autonomous co-processor configured to perform tasks of the second type and configured to successively: proactively interrogate the task pool to retrieve a second task from the task pool without being instructed to do so by the task pool;
. . .
wherein after the first autonomous co-processor updates the task pool to reflect completion of the first task, the task pool is configured to send a notification to the controller indicating that the first task is completed;
wherein after the second autonomous co-processor updates the task pool to reflect completion of the second task, the task pool is configured to send a notification to the controller indicating that the second task is completed; . . .

Mot., App. A.

With respect to the “indicia” of first and second task types in proposed substitute claim 13, Petitioner contends that Lurie teaches determining the appropriate technical computing worker for a task “‘based on [which] version of MATLAB is installed’” (Opp. 25 (quoting Ex. 1007 ¶ 81)), and asserts that one of ordinary skill in the art would have understood that “‘because different MATLAB versions will be capable (or incapable) of performing different functions, Lurie’s tasks may have a string or other value indicating the required MATLAB version necessary to perform it’” (*id.* at 25–26 (citing Ex. 1007 ¶¶ 81, 182–183; Ex. 1040 ¶ 123–128)). Alternatively, Petitioner argues that, “[t]o the extent these indicia are not expressly disclosed in Lurie, it would have been obvious to include them to implement Lurie’s teaching that ‘the operational and/or performance characteristics’ of each TCW [technical computing worker] are utilized when determining which tasks it takes.” *Id.* at 26 (citing Ex. 1007 ¶ 81; Ex. 1040 ¶¶ 126–129).

With respect to the “notification to the controller” upon completion of each of the first and second tasks in proposed substitute claim 13, Petitioner contends that Lurie teaches “[w]hen a task is complete, the ATD mechanism ‘notifies . . . the [TCC (technical computing client)] . . . that the result is available,’ indicating to the TCC that the task is complete.”

Id. at 27 (quoting Ex. 1007 ¶ 86) (citing Ex. 1007, Figs. 5B–5D; Ex. 1040 ¶¶ 130–131).

We find insufficient evidence or argument in the present record regarding the newly added “indicia” and “notification to the controller” limitations in proposed substitute claim 13 that persuasively rebuts Petitioner’s obviousness contentions. In particular, Patent Owner does not specifically explain why Lurie fails to teach or suggest the “notification to the controller” limitations. *See* Mot. 25–30. As to the “indicia” limitations, Patent Owner points to our statement in the Decision that “Patent Owner has not proposed a construction of first tasks or second tasks *that would preclude such an arbitrary grouping*” as proposed by Petitioner, and contends that “the amendments made to Substitute Claims now preclude Petitioner’s arbitrary grouping.” Mot. 28–29 (quoting Dec. 19). We agree that the “indicia” limitations require the tasks within each group to be of the same task type, thus precluding arbitrary types from being included within each group. But, as Petitioner contends (Opp. 25–26), Lurie at least suggests grouping tasks based on task type. For example, Lurie describes “a technical computing worker 270A may work on a task based on the version of the MATLAB®-based distributed computing application that is installed on the workstation 170A.” Ex. 1007 ¶ 81. So, grouping tasks by type provides a way to ensure that technical computing workers can obtain tasks that they are capable of completing. *See* Ex. 1040 ¶ 128 (“Lurie acknowledges that not every TCW will be able to perform every task (or it may not be desirable to have every TCW perform every task.).”) Accordingly, we are persuaded by Petitioner’s obviousness contentions regarding the “indicia” and “notification to the controller” limitations.

We are not persuaded, however, by Petitioner’s contention that Lurie teaches the “autonomous” and “proactively” limitations in proposed substitute claim 13. *See* Opp. 27–29. Petitioner points to a number of paragraphs in Lurie and asserts that rather than “sit[ting] and wait[ing] for a notification before attempting to retrieve each task,” “once the ATD sends an initial notification that ‘one or more tasks’ are available, each of the registered TCWs repeatedly takes a task, performs it, deposits the results—and then, having freed up, takes another suitable task, and repeats that cycle—until the ATD has no more tasks.” *Id.* at 28 (citing Ex. 1007 ¶¶ 86–88, 95–97, 128; Ex. 1040 ¶¶ 144–145). We do not see the purported disclosure in the cited paragraphs of Lurie of technical computing workers repeatedly taking tasks to perform after an initial

notification. Instead, Lurie describes, for example, that “[t]he automatic task distribution mechanism 260 provides notification (step 538) to the technical computing worker 260 of the availability of the task,” and, “[i]n response to receiving the notification (step 540), the technical computing worker obtains (step 544) the task provided (step 540) from the automatic task distribution mechanism 260.” Ex. 1007 ¶ 86. Here, the technical computing worker obtains only the task for which it was notified by the automatic task distribution mechanism. The other cited portions of Lurie similarly fail to teach a technical computing worker “proactively” retrieving a task from the automatic task distribution mechanism.

Petitioner argues that Lurie’s “‘notification’ is not an ‘instruction,’” and that the “‘notification’ simply provides the information that tasks may be available; it does not instruct, or obligate, a TCW to take any action.” Opp. 28. But Petitioner has not shown, at this stage of the proceeding, any disclosure in Lurie where a technical computing worker obtains a task without first being notified that the task is available. Accordingly, Lurie’s technical computing worker appears to be dependent upon notification from the automatic task distribution mechanism for obtaining and performing each task, contrary to proposed substitute claim 13, which recites “proactively interrogate the task pool to retrieve a first task from the task pool without being instructed to do so by the task pool.”

Petitioner relies on its declarant and asserts that, “[t]o the extent not already disclosed, it would have been obvious to implement Lurie using the common, tried-and-true bag-of-tasks technique,” specifically, so that “[o]nce notified, each TCW retrieves a task, processes it, and when done, retrieves another task, until the bag is empty and all tasks are complete.” *Id.* at 29. At this stage of the proceeding, however, we are not persuaded by Petitioner’s obviousness argument because its declarant points to no evidence in Lurie to support this argument, but rather states that Lurie “does not (and does not need to) explain how the TCW then retrieves its next task.” Ex. 1040 ¶ 146. Petitioner’s declarant relies instead on Andrews (Ex. 1011) to meet the missing element of proactively interrogating the task pool to retrieve tasks. *See* Ex. 1040 ¶ 146. But Andrews is not included in Petitioner’s asserted grounds for the proposed substitute claims (*see* Opp. 23), and so the testimony of Petitioner’s declarant that “it would have been obvious to implement Lurie [as claimed], using the bag of tasks scheme as taught by, for example,

Andrews,” does not suffice to show that proposed substitute claim 13 would have been obvious over Lurie, or Lurie and Ethernet Specification. Accordingly, based on the current record, it appears that Petitioner has not shown a reasonable likelihood that proposed substitute claim 13 would have been obvious based on the asserted grounds.

Proposed Substitute Dependent Claim 14

Proposed substitute dependent claim 14 recites the following newly added limitation:

wherein the task pool is configured to simultaneously contain the plurality of first tasks having indicia of the first task type and the plurality of second tasks having indicia of the second task type.

Mot., App. A.

Petitioner contends that “Lurie discloses that any number of tasks, Task1 through TaskN-M, can reside in the ATD Mechanism at the same time,” and that “Lurie imposes no limitation on multiple ‘types’ of tasks simultaneously existing in the task pool,” where a task’s type could correspond to “the ‘job’ it is a part of, or the function class, MATLAB version, MATLAB library, or software environment it requires.” Opp. 29–30 (citing Ex. 1007, Figs. 3B–3D; Ex. 1040 ¶ 150).

We find insufficient evidence or argument in the present record with respect to the newly added limitation in proposed substitute claim 14 that persuasively rebuts Petitioner’s obviousness contentions. In particular, Patent Owner has not specifically explained why Lurie fails to teach or suggest the feature of the task pool simultaneously containing multiple groups of tasks of different types. See Mot. 29–30. Rather, Patent Owner simply points to the statement in our Decision that “[t]here is nothing in claim 1 that requires both the plurality of first tasks and the plurality of second tasks to be in the task pool *at the same time*.” Mot. 29–30 (quoting Dec. 20). Our prior statement, however, does not imply a determination that Lurie fails to teach or suggest the automatic task distribution mechanism simultaneously containing multiple groups of tasks of different types. That statement related to a particular batch mode embodiment in Lurie on which we commented that “the job manager does not process the second job and its second plurality of tasks until after the first job and its first plurality of tasks have been completed.” Dec. 20. We also stated in the Decision, with respect to a different embodiment in Lurie, that

“Petitioner has sufficiently shown that a person having ordinary skill in the art would have understood that the tasks could be divided in various ways, including ‘a plurality of first tasks (*e.g.*, Task1 and Task2) and a plurality of second tasks (*e.g.*, Task3 and Task 4, or TaskN and TaskM).’” *Id.* at 19 (quoting Ex. 1003 ¶ 128). On the current record, we see no reason to disturb this determination. Additionally, we are persuaded by Petitioner that it would have been obvious for different groups of tasks simultaneously contained in Lurie’s automatic task distribution mechanism to have indicia of different task types. *See* Opp. 25–26, 29–30.

Nevertheless, because proposed substitute claim 14 depends from proposed substitute independent claim 13, at this stage of the proceeding, it appears that Petitioner has not shown a reasonable likelihood that proposed substitute claim 14 would have been obvious over Lurie, or Lurie and Ethernet Specification, for the same reasons discussed above with respect to proposed substitute claim 13.

IPR2022-00283
Patent 9,852,004 B2

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