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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RAJESH M. BHAGAT, REDHA M. BOURNAS, VISHWANATH
NARAYAN, DAVID NOLLER, PAUL D. PETERS, and
DAVID J. SALKELD

Appeal 2016-006266
Application 11/081,898
Technology Center 3600

Before MURRIEL E. CRAWFORD, BIBHU R. MOHANTY, and
MEREDITH C. PETRAVICK, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the Examiner's final decision rejecting claims 1–26 and 28. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

BACKGROUND

Appellants' invention is directed to systems, methods, and computer program products for configuring an assembly line. Spec. 1.

Claim 1 is illustrative:

1. A system for dynamically configuring an assembly line having process points where events are triggered, the system comprising:
 - a processor;
 - a memory communicatively coupled to said processor; said memory comprising executable code stored thereon such that said processor is configured to execute said executable code to implement:
 - a service configurator to define a service catalog comprising a listing of Web Services;
 - a process configurator to configure processes implemented in response to triggered events at the process points, wherein each of the processes comprises a sequenced list of the services to be invoked in response to the triggered event; and
 - a tree configurator to define where each of the processes fit into a hierarchy of categories displayed to a user, in which each process point is defined as a category node within the hierarchy of categories, in which said hierarchy of categories of the tree configurator represents:
 - the assembly line;
 - the process points along the assembly line;
 - the services that are invoked in response to triggering events at the process points; and
 - a number of processes invoked as a result of the events at the process points.

The Examiner relies on the following prior art references as evidence of unpatentability:

Klerk et al.	US 2006/0225032 A1	Oct. 5, 2006
DiLena et al.	US 2002/0143653 A1	Oct. 3, 2002
Feyereisen et al.	US 6,289,277 B1	Sep. 11, 2001

Appellants appeal the following rejections:

- 1) The rejections of claims 1–26 and 28 under 35 U.S.C. § 101.
- 2) The rejection of claim 26 under 35 U.S.C. § 101.
- 3) The rejections of claims 1–26 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Klerk, in view of DiLena, and Feyereisen, and in further view of Applicant's allegedly admitted prior art .

PRINCIPLES OF LAW

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014).

In determining whether a claim falls within the excluded category of abstract ideas, we are guided in our analysis by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012)). In accordance with that framework, we first determine whether the claim is “directed to” a patent-ineligible abstract idea. *See Alice*, 134 S. Ct. at 2356 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”); *Diamond v. Diehr*, 450 U.S. 175, 184 (1981) (“Analyzing

respondents' claims according to the above statements from our cases, we think that a physical and chemical process for molding precision synthetic rubber products falls within the § 101 categories of possibly patentable subject matter.”); *Parker v. Flook*, 437 U.S. 584, 594–595 (1978) (“Respondent’s application simply provides a new and presumably better method for calculating alarm limit values.”); *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972) (“They claimed a method for converting binary-coded decimal (BCD) numerals into pure binary numerals.”).

The patent-ineligible end of the spectrum includes fundamental economic practices, *Alice*, 134 S. Ct. at 2357; *Bilski*, 561 U.S. at 611; mathematical formulas, *Parker*, 437 U.S. at 594–95; and basic tools of scientific and technological work, *Gottschalk*, 409 U.S. at 69. On the patent-eligible side of the spectrum are physical and chemical processes, such as curing rubber, *Diamond*, 450 U.S. at 184 n.7, “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores,” and a process for manufacturing flour, *Gottschalk*, 409 U.S. at 69.

In addition, the Federal Circuit has held that if a method can be performed by human thought alone, or by a human using pen and paper, it is merely an abstract idea and is not patent-eligible under § 101. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011) (“[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101.”). Accordingly, the mental processes recited in independent claim 1, e.g., assimilating information, creating a hypothetical resource, mapping hypothetical and actual resources, determining a minimum parameter increase and reconciling a parameter increase with a scheduling policy, remain unpatentable, even when

automated to reduce the burden on the user of what once could have been done with pen and paper. *Id.* at 1375 (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*, [409 U.S. 63 (1972)].”).

Claims involving data collection, analysis, and display are directed to an abstract idea. *Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (holding that “collecting information, analyzing it, and displaying certain results of the collection and analysis” are “a familiar class of claims ‘directed to’ a patent ineligible concept”); *see also In re TLI Communication LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016). Claims that use generic computer technology to perform data collection, analysis, and display and do not recite an improvement to a particular computer technology are directed to an abstract idea. *See, e.g., McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314–15 (Fed. Cir. 2016) (finding claims not abstract because they “focused on a specific asserted improvement in computer animation”).

If the claim is “directed to” a patent-ineligible abstract idea, we then consider the elements of the claim—both individually and as an ordered combination—to assess whether the additional elements transform the nature of the claim into a patent-eligible application of the abstract idea. *Alice*, 134 S. Ct. at 2355. This is a search for an “inventive concept”—an element or combination of elements sufficient to ensure that the claim amounts to “significantly more” than the abstract idea itself. *Id.*

ANALYSIS

Rejections under 35 U.S.C. §101

The Examiner rejects the appealed claims as being directed to patent ineligible subject matter, i.e. to graphically configuring a graph/map in response to triggered events, and alternatively to a method of organizing human activities and a mathematical relationship or formula. Fin. Act. 12. The Examiner determines that claim 1 is directed to obtaining existing information, manipulating the existing information, and generating additional information. Fin. Act. 12–13

We agree. In essence, the claims are directed to the collection, analysis, and display of data.

The Examiner finds that the other recitations in the claim of a processor and memory are recitations of generic computer structure that perform generic computer functions that are well-understood, routine and conventional activities previously known to the pertinent industry. Fin. Act. 16. The Examiner further finds that the claims at issue amount to nothing significantly more than an instruction to apply the abstract idea of managing a business by various data processing mechanism using some unspecified generic computer. Fin. Act. 19. The Examiner also finds that the storage device merely stores the data and the computer system performs conventional and routine steps (e.g. configuring, receiving and conjuring a graph/map etc.) and that these activities do not impose meaningful limits on the scope of the claim. Fin. Act. 19.

We note that the only aspects of claim 1 that is not included in the abstract idea of the collection, analysis, and display of data is the recitation

of a processor, a memory, a service configurator, a process configurator, and a tree configurator. As such, in the second part of the *Alice* analysis, we consider whether the processor, the memory, the service configurator, process configurator, and tree configurator amount to significantly more than the abstract idea of the collection, analysis and display of data.

The service configurator, process configurator, and tree configurator are part of the configuration computer. [Spec. 38, Fig. 2]. The configuration computer may be any type of computer that is capable of carrying out the functions of the invention and may be a desktop computer, a laptop, or a workstation. [Spec. 38]. We agree with the Examiner that the recitations other than the abstract idea do not amount to significantly more than the abstract idea.

We are not persuaded of error on the part of the Examiner by Appellants' argument that claim 1 as a whole does not seek to tie up any judicial exception. While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015), cert. denied, 136 S. Ct. 701, 193 (2015) (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”). And, “[w]here a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.” *Ariosa*, 788 F.3d at 1379.

We are not persuaded of error on the part of the Examiner by Appellants' argument that the claims are not related to a mathematical formula and thus are not directed to an abstract idea because even if we agree with the Appellants that the claims are not directed to a mathematical formula, the claims are still directed to the collection, analysis and display of data and are directed to an abstract idea on that basis.

We are not persuaded of error on the part of the Examiner by Appellants' argument that the claims apply the exception in a meaningful way, solve a problem in computer technology, improve the computer capability and improve the dynamic configuration of an assembly line. We agree with the Examiner's response to these arguments found on pages 4–6 of the Answer and adopt these responses as our own. Specifically, we agree that it is not clear what Appellants refer to a the problems or improvements to computer technology or configuration of the assembly line. Appellants argue that claim 1 improves the dynamic configuration of an assembly line having process points where events are triggered but Appellants do not explain how the configuration is improved. We agree with the Examiner that nothing in the claims deals with the improvement of the operation of the assembly line. In addition, the Appellants have not shown what improvements are disclosed in the Specification. Likewise, it is unclear what problem is overcome by claim 1 or how such a problem is related to computer technology.

We have considered all of the other arguments Appellants made in the Appeal Brief in response to this rejection and find them unpersuasive of error on the part of the Examiner. We find untimely Appellants' arguments regarding patent eligibility made for the first time in the Reply Brief that are

not in response to a new issue brought up by the Examiner in the Answer.

Appellants are reminded that:

[T]he purpose of a reply brief is to ensure the Appellant the opportunity to have the last word on an issue raised by the Examiner. The reply brief enables the Appellant to address any new grounds of rejection the Examiner may have raised in the answer, or to address changes or developments in the law that may have occurred after the principal brief was filed. The reply brief is *not* an opportunity to make arguments that could have been made during prosecution, but were not. Nor is the reply brief an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner's rejections, but were not. Giving cognizance to belated arguments in a reply would vitiate the force of the requirement in Board Rule 37(c)(1)(vii) that “[a]ny arguments or authorities not included in the brief... will be refused consideration by the Board, unless good cause is shown.” The reference in that section to the “reply brief filed pursuant to § 41.41” does not create a right for the Appellant to raise an argument in the reply brief that could have been raised in the principal brief but was not. Rather, that reference merely puts Appellants on notice that arguments that could be made in the reply brief, but are not, are waived.

Ex parte Borden, 93 USPQ2d 1473, 1474 (BPAI 2010).

In view of the forgoing, we will sustain this rejection as it is directed to claim 1 and claims 2–13, dependent therefrom.

We are not persuaded of error on the part of the Examiner by Appellants’ argument that claim 14 recites significantly more than an abstract idea because of the recitation of a display device because this is a recitation of a generic computer element performing generic computer functions. Appellants have advanced other arguments for the patent eligibility of claims 14 and 26, which are similar to the arguments made in regards to the patent eligibility of claim 1. Therefore, we will sustain the

rejection of claims 14 and claims 15– 24, dependent therefrom and claim 26 as well.

Claim 26 is rejected as being directed to a signal.

Rather than follow the Examiner's invitation to amend the claim to cover only statutory embodiments by reciting a *non-transitory* computer readable storage device, Appellants' argue that the rejection of claim 26 under 35 U.S.C. §101 is improper because claim 16 is directed to computer readable storage "device" and thus is directed to an article of manufacture. Appellants' Specification describes at paragraph 39 that various the memory *may* comprise various data storage such as magnetic media, optical media, etc., the Specification also discloses that the memory may also be *transmission* media. Thus, the Specification does not exclude employing non-statutory subject matter such as signals. Including the terms "tangible" and "device" in claim 26 does not remedy this issue. *See Ex parte Mewherter*, 107 USPQ2d 1857, 1862 (PTAB 2013) (precedential). We find that the phrase "computer-readable storage device" does not exclude non-statutory subject matter, such as transitory signals. We thus affirm the Examiner's rejection of claim 26 under 35 U.S.C. §101 as covering non-statutory subject matter.

Obviousness

We will not sustain this rejection because we agree with the Appellants that the prior art does not disclose a tree configurator to define where each of the processes fit into a hierarchy of categories displayed to a user in which each process point is defined as a category node within the hierarchy of categories as recited in claim 1. The Examiner relies on DiLena

at paragraphs 101–103 for teaching this subject matter. We find that these paragraphs of DiLena relate to a hierarchy of product features not a hierarchy of processes in which each process point is defined as a category node with a hierarchy of categories as claimed. Although the Examiner may be correct that all that is necessary to meet this recitation in claim 1 is that the prior art includes a tree configurator that is capable of defining the hierarchy of processes, the Examiner has failed to establish that DiLena teaches this capability. Therefore, we will not sustain this rejection as it is directed to claim 1 and claims 2–13, dependent thereon. We will also not sustain this rejection as it is directed to claim 14 and claims 15–25 dependent therefrom and claim 26 because each of these claims includes the subject matter we found lacking in DiLena.

DECISION

We affirm the Examiner’s § 101 rejections.

We do not affirm the Examiner’s § 103 rejection.

TIME PERIOD

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) (2009).

ORDER

AFFIRMED