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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/207,013	08/10/2011	Christian Klensch	14291-145-999/2011P00182U	5079

140285   7590   08/18/2017

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ART UNIT	PAPER NUMBER
3687	

MAIL DATE	DELIVERY MODE
08/18/2017	PAPER

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PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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Ex parte CHRISTIAN KLENSCH
_____

Appeal 2016-002390[1]
Application 13/207,013
Technology Center 3600
_____

Before: MURRIEL E. CRAWFORD, MICHAEL W. KIM, and
PHILIP J. HOFFMANN, *Administrative Patent Judges*.

KIM, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal from the final rejection of claims 1, 4, 7, 10, 13, and 16. We have jurisdiction to review the case under 35 U.S.C. §§ 134 and 6.

The invention relates generally to a production cost analysis system. Spec. ¶ 4.

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[1] The Appellant identifies SAP SE as the real party in interest. Appeal Br. 2.

Claim 1 is illustrative:

1. A computer-implemented method of operating a production cost analysis tool, comprising:

storing, through a processing device executing the production cost analysis tool, production cost data in an in-memory database; and

analyzing, through the processing device, the stored production cost data in the in-memory database, wherein the stored production cost data includes information relating to identifying at least one accounting entity responsible for financial inefficiencies, and wherein the analyzing of the stored production cost data includes aggregating the stored production cost data in real-time and assigning production costs to at least one cost center in real-time.

The Examiner rejected claims 1, 4, 7, 10, 13, and 16 under 35 U.S.C. § 101 as being directed to non-statutory subject matter in the form of an abstract idea.

The Examiner rejected claims 1, 4, 7, 10, 13, and 16 under 35 U.S.C. § 103(a) as unpatentable over Philpott (US 2005/0120010 A1, pub. June 2, 2005), P. Kuhlang, T. Edtmayr, and W. Sihn, "Methodical approach to increase productivity and reduce lead time in assembly and production-logistic processes," CIRP journal of Manufacturing Science and Technology, Vol. 4, pp. 24–32, Mar. 24, 2011 (hereinafter "Kuhlang"), and Hector Garcia-Molina, "Main Memory Database Systems: An Overview," IEEE Transactions On Knowledge And Data Engineering, Vol. 4, No. 6, December 1992 (hereinafter "Garcia-Molina").

We AFFIRM.

2

ANALYSIS

Rejection under 35 U.S.C. § 101

We are not persuaded by the Appellant's arguments that the claims recite eligible subject matter, because, due the recitation of an "in-memory database," the claims are tied to a specific and particular machine, and are deeply rooted in computer technology. Appeal Br. 5–7; *see also* Reply Br. 2–4.

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, *Flook*, 437 U.S. at 594–95; and basic tools of scientific and technological work, *Benson*, 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 67.

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.*

Claim 1 recites the steps of storing data in an "in-memory database," analyzing the data, by aggregating data "in real time" and "assigning" cost data to a cost center. Claim 1 is, therefore, directed to storing and organizing information, as asserted by the Examiner. Answer 3 (the claim

4

"amounts to nothing more than a method of storing and analyzing data to identify an accounting entity.")

This is very much like the method found to be an abstract idea in *Cyberfone*, where the Court held that "using categories to organize, store, and transmit information is well-established," and "the well-known concept of categorical data storage, i.e., the idea of collecting information in classified form, then separating and transmitting that information according to its classification, is an abstract idea that is not patent-eligible." *Cyberfone Systems, LLC v. CNN Interactive Group, Inc.*, 558 Fed. Appx. 988, 992 (Fed. Cir. 2014). Here, as in *Cyberfone*, information is stored and organized, and claim 1, therefore, merely recites an abstract idea.

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."). Further, mental processes, e.g., analyzing information, as recited in claim 1, 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)].").

Setting aside the recited requirements to use an "in-memory database" and analyzing "through the processing device," the step of storing information can be done by mentally remembering it, and the analyzing,

5

aggregating, and assigning data to categories, can be done mentally through mere thought. For this additional reason, the claim is also directed to an abstract idea.

Turning to the second step of the *Alice* analysis, because we find that claim 1 is directed to an abstract idea, the claim must include an "inventive concept" in order to be patent-eligible, i.e., there must be an element or combination of elements that is sufficient to ensure that the claim in practice amounts to significantly more than the abstract idea itself.

Claim 1 relies on an "in-memory database" and a "processor." The Specification describes that "although aspects of the present invention are described as being stored in memory, this may include other computer readable media, such as secondary storage devices, for example, solid state drives, or DVD ROM; the Internet or other propagation medium; or other forms of RAM or ROM." Spec. ¶ 26. The Specification, therefore, describes that the claimed "in-memory database" may encompass disk-based traditional databases, or a small, disk-based database able to operate completely in available memory. This means the "in-memory database" is just a computer-based method to store information, which a generic computer is capable of doing.

The Specification also describes

> Processing device 512 may perform computation and control functions of a system and comprises a suitable central processing unit (CPU). Processing device 512 may comprise a single integrated circuit, such as a microprocessing device, or may comprise any suitable number of integrated circuit devices and/or circuit boards working in cooperation to accomplish the functions of a processing device. Processing device 512 may execute computer programs, such as object-oriented computer programs, within memory 513.

6

Id. ¶ 25. The claimed "processor," therefore, is a generic computer.

A generic computer component does not satisfy the inventive concept. "[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible. The bare fact that a computer exists in the physical rather than purely conceptual realm is beside the point." *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (internal citations and quotation marks omitted).

Nothing in claim 1 purports to improve computer functioning or "effect an improvement in any other technology or technical field." *Alice*, 134 S. Ct. at 2359. Nor do claims solve a problem unique to the Internet. *See DDR Holdings*, 773 F.3d at 1257. The claims also are not adequately tied to "a particular machine or apparatus." *Bilski v. Kappos*, 561 U.S. 593, 601 (2010).

Because claim 1 is directed to an abstract idea, and nothing in the claims adds an inventive concept, the claim is not patent-eligible under § 101. Therefore, we sustain the Examiner's rejection of claim 1 under 35 U.S.C. § 101. Dependent claim 4 recites the use of a "user interface" for data use. The Specification is silent on a "user interface," so we broadly construe it to encompass information displayed and manipulated by pen and paper. Therefore, because claim 4 does not alter the analysis, we also sustain the rejection of claim 4 under 35 U.S.C. § 101 as an abstract idea.

We find no meaningful distinction between independent method claim 1 and either independent device claim 7, or independent system claim 13; the claims all are directed to the same underlying invention. Therefore, we sustain the rejection of independent claims 7 and 13 under

§ 101. As the Federal Circuit has made clear "the basic character of a process claim drawn to an abstract idea is not changed by claiming only its performance by computers, or by claiming the process embodied in program instructions on a computer readable medium." *See CyberSource*, 654 F.3d at 1375-76 (*citing In re Abele*, 684 F.2d 902 (CCPA 1982)). Because we find that dependent claims 10 and 16, which recite language substantially identical to that of claim 4, lack additional elements that would render the claims patent-eligible, we also sustain the rejection under § 101 of these dependent claims on the same basis.

Rejection under 35 U.S.C. § 103(a)

The Appellant argues independent claims 1, 7, and 13 together as a group (Appeal Br. 8), so we select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv).

We are unpersuaded by the Appellant's argument of error on the part of the Examiner on the basis that, according to the Appellant, "[n]one of the cited prior art is directed to identifying at least one accounting entity (e.g., a cost center) responsible for financial inefficiencies." Appeal Br. 7–8; *see also* Reply Br. 5–6.

The Appellant's arguments fail because they are directed to language not recited in the claims. Claim 1 does not recite a step to determine a responsible party. Instead, claim 1 recites "cost data includes information *relating to* identifying at least one accounting entity responsible for financial inefficiencies." Emphasis added. The phrase "relating to" is broad terminology, in that many things can be directly and indirectly "relating to" each other, even if, on a high level, they seem disparate.

Kuhlang discloses a "search for the identification and the elimination of waste. This ensures that e.g. movement, transport, rework and other wasteful or non-value-enhancing aspects are removed from or at least minimised within the processes." Kuhlang p. 28. We find that the identification of waste in movement, transport, and rework, for example, includes data "relating to identifying at least one accounting entity responsible" for the movement, transport, and rework, because data about those operations is "relating to" the party that performs them, who would be responsible for them in an accounting system.

Kuhlang, therefore, meets the disputed claim language. For this reason, we sustain the rejection of claims 1, 7, and 13, as well as of dependent claims 4, 10, and 16 that were not separately argued.

DECISION

We AFFIRM the rejection of claims 1, 4, 7, 10, 13, and 16 under 35 U.S.C. § 101.

We AFFIRM the rejection of claims 1, 4, 7, 10, 13, and 16 under 35 U.S.C. § 103(a).

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

AFFIRMED