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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GREGORY J. BOSS, JAMES R. DORAN,
RICK A. HAMILTON II, and ANNE R. SAND

Appeal 2017-005502¹
Application 12/208,510²
Technology Center 3600

Before NINA L. MEDLOCK, MATTHEW S. MEYERS, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner’s final rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ Our decision references Appellants’ Appeal Brief (“App. Br.,” filed November 8, 2016) and Reply Brief (“Reply Br.,” filed February 15, 2017), and the Examiner’s Answer (“Ans.,” mailed December 15, 2016) and Final Office Action (“Final Act.,” mailed May 19, 2016).

² Appellants identify International Business Machines Corporation as the real party in interest. App. Br. 1.

CLAIMED INVENTION

Appellants' claimed invention relates to "an approach for managing the consumption of energy" (Spec. ¶ 2).

Claims 1, 7, 13, and 19 are the independent claims on appeal. Claim 1, reproduced below with bracketed notations added, is illustrative of the claimed subject matter:

1. A method for policy-based energy management, the method employing at least one computing device programmed to perform the following steps:

[(a)] automatically discovering, by at least one computer device, each of a plurality of entities and devices in an energy system;

[(b)] enrolling, by the at least one computer device, the discovered entities and devices hierarchically in a hierarchy in an energy management system;

[(c)] forming, by the at least one computer device, a hierarchical tree of the hierarchy that reflects connections of the each of the plurality of entities within the energy system;

[(d)] associating, by the at least one computer device, a set of energy management policies with at least a subset of the entities and devices of the hierarchy in the hierarchical tree;

[(e)] initiating an energy conservation request; and

[(f)] traversing, by the at least one computer device, the hierarchy in the hierarchical tree and selecting an optimal energy throttling plan based on the set of policies to satisfy the energy conservation request by first dictating an energy reduction policy that defines an overall energy reduction percentage at a top layer, wherein the top layer determines energy reduction in a set of entities in a layer immediately below the top layer by allocating a non-zero percentage of available energy that is based on the overall energy reduction percentage to a first entity and a different non-zero percentage of available energy that is based on the overall energy reduction percentage to a second entity, each of the set of entities corresponding to a branch of a set of branches in the hierarchy, and then continuing down a series of layers of each of the set of branches of the hierarchy by allocating

a percentage of available energy that is based on an energy reduction percentage of a parent entity until end devices at a bottom of the hierarchy have all received energy throttling instructions, and wherein each entity or device at each of the series of layers of each of the set of branches is delegated by a parent entity or device to dictate energy reduction to the entity or device at a next layer below in the series of layers, wherein an energy management policy for a first device of a particular type that is associated hierarchically with one entity is different from an energy management policy of a second device of the particular type that is associated hierarchically with a different entity.

REJECTIONS³

Claims 1–20 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.⁴

Claims 1–20 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 1–20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Brickfield et al. (US 2007/0255461 A1, pub. Nov. 1, 2007) (“Brickfield,”), Horst (US 2008/0252141 A1, pub. Oct. 16, 2008) (“Horst”), and “Rolling Brownouts,” available at <https://web.archive.org/web/20080702053353/http://www.computerhope.com/jargon/r/rollbrow.htm>, Wayback Machine (July 2, 2008) (“Brownout”).

³ The rejection of claims 1, 7, 13, and 19 under 35 U.S.C. § 112, second paragraph, has been withdrawn. Ans. 3.

⁴ Although the Examiner references independent claims 1 and 39 only, we understand that the rejection also is applicable to dependent claims 2, 3, 7–13, 16–27, 40–51, and 54–59.

ANALYSIS

Written Description

Whether a specification complies with the written description requirement of 35 U.S.C. § 112, first paragraph, is a question of fact, and is assessed on a case-by-case basis. *See, e.g., Purdue Pharma L.P. v. Faulding, Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000) (citing *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1561 (Fed. Cir. 1991)). The disclosure, as originally filed, need not literally describe the claimed subject matter (i.e., using the same terms or *in haec verba*) in order to satisfy the written description requirement. But the Specification must convey with reasonable clarity to those skilled in the art that, as of the filing date, Appellants were in possession of the claimed invention. *See id.*

Here, in rejecting claims 1–20 under § 112, first paragraph, the Examiner asserts that the Specification, as originally filed, “fails to disclose with enough specificity the step of automatically discovering each of a plurality of entities and devices in an energy system,” as recited in independent claim 1, and similarly recited in independent claims 7, 13, and 19 (Final Act. 7). The Examiner acknowledges that the Specification discloses that each device or entity is enrolled into the system and that this enrollment may occur “through auto-discovery by policy manager 50,” and that the Specification also discloses exemplary devices (*id.*) (citing Spec. ¶¶ 38, 39). But, the Examiner maintains that the Specification makes no effort to define either how the system automatically discovers the plurality of entities and devices or what the devices are; therefore, according to the Examiner, “it is not clear how the system can automatically discover such a

broad set of entities and devices including all known and unknown power management systems” (*id.*).

The difficulty with the rejection is that the Examiner seemingly confuses the enablement provision of 35 U.S.C. § 112, first paragraph, with the written description requirement, which, as the Examiner acknowledges (Final Act. 7–8), is a separate requirement. To satisfy the written description requirement, Appellants need only demonstrate original descriptive support in the Specification for the subject matter recited in the claims. The Specification, by the Examiner’s own admission, describes that the plurality of devices and entities can be automatically discovered “by policy manager 50” (*id.* at 7). Therefore, we do not sustain the Examiner’s rejection of claims 1–20 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Patent-Ineligible Subject Matter

Under 35 U.S.C. § 101, 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 an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice Corp.*, 134 S. Ct. at 2355. The first step in that analysis is to “determine whether the claims at

issue are directed to one of those patent-ineligible concepts.” *Id.* If the claims are not directed to a patent-ineligible concept, e.g., an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79, 78).

The Court acknowledged in *Mayo*, that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. Therefore, the Federal Circuit has instructed that claims are to be considered in their entirety to determine “whether their character as a whole is directed to excluded subject matter.” *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

Here, in rejecting the pending claims under 35 U.S.C. § 101, the Examiner determined that the claims are directed to “managing the consumption of energy,” which the Examiner determined is an idea similar to “comparing new and stored information to each other and using rules to identify options,” which the court in *SmartGene, Inc. v. Advanced Biological Labs, S.A.*, 555 F. App’x 950 (Fed. Cir. 2014) determined is a patent-ineligible abstract idea (Final Act. 3–4). The Examiner also determined that the claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception (*id.* at 4–5).

The Specification describes that, as energy prices rise, companies and individuals are seeking ways to reduce consumption and manage shortage

situations (Spec. ¶ 3). According to the Specification, current methods for managing power shortage situations are limited; thus, although a few early solutions allow application servers to be tuned down to lower power consumption modes, and although devices may be connected to home appliances that allow the power company to turn off power to the appliance when a shortage occurs, this only enables an on/off situation for selected devices (*id.*). The Specification describes that options for managing individual objects of a system are limited as most products do not provide intelligent options, and that centralized management of heterogeneous devices during a power shortage does not exist (*id.* ¶ 4).

The claimed invention is intended to address this issue by providing a policy-based decision system to manage energy consumption within a complex system, e.g., a municipality, business, or home, for the purpose of conservation or to contend with a shortage situation (*id.* ¶ 5). The Specification, thus, describes that, in accordance with the claimed invention, a hierarchy of entities and/or devices are enrolled in an energy management system, a set of energy management policies are associated with the entities/devices, and, in response to an energy reduction request (e.g., a potential brownout), energy is allocated to the entities and devices in a top-down manner using a hierarchical data structure and the management policies (*see, e.g., id.* ¶¶ 5–11, 25).

Putting aside whether the Examiner erred in finding that the claims are directed to an abstract idea, we are persuaded that even if the claims are directed to an abstract idea, the Examiner has not adequately explained why the claims fail to recite limitations that are “significantly more” than the abstract idea itself. For example, the Examiner does not explain why, in

view of the express claim language read in light of the above-referenced portions of the Specification, the claimed invention would not be considered an improvement in the functionality of computerized energy systems. Instead, the Examiner ostensibly concludes that the claimed invention does not lie with the improvement of a technology because the claimed invention is directed to the abstract idea of managing the consumption of energy and merely utilizes generic computing devices to compare information using rules, i.e., a set of policies (Ans. 10–12). We are persuaded that such reasoning is inadequate to sustain the rejection, when the above-referenced portions of the record are considered as a whole.

The Examiner has not sufficiently established that the claims are directed to patent-ineligible subject matter. Therefore, we do not sustain the Examiner’s rejection of claims 1–20 under 35 U.S.C. § 101.

Obviousness

Independent Claim 1 and Dependent Claims 2–6

We are persuaded by Appellants’ argument that the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 103(a) at least because none of the cited references discloses or suggests “forming . . . a hierarchical tree of the hierarchy that reflects connections of the each [sic] of the plurality of entities within the energy system,” and

traversing . . . the hierarchy in the hierarchical tree and selecting an optimal energy throttling plan . . . by first dictating an energy reduction policy that defines an overall energy reduction percentage at a top layer, wherein the top layer determines energy reduction in a set of entities in a layer immediately below the top layer by allocating a non-zero percentage of available energy that is based on the overall energy reduction percentage to a first entity and a different non-zero percentage of available energy that is based on the overall energy reduction percentage

to a second entity . . . and wherein each entity or device at each of the series of layers of each of the set of branches is delegated by a parent entity or device to dictate energy reduction to the entity or device at a next layer below in the series of layers, i.e., limitations (c) and (f), as recited in claim 1 (App. Br. 16–18).

The Examiner ostensibly acknowledges that Brickfield does not disclose the argued limitations (Final Act. 13–14). And the Examiner cites Horst to cure the deficiency of Brickfield (*id.* at 15–16) (citing Horst ¶ 26). But the best that Horst discloses is that a class-specific energy curtailment signal can be transmitted by an energy controller to a predetermined class of energy-consuming devices based on a priority of the classes. Horst, thus, discloses, for example, that the energy controller, upon detecting an over-energy-consumption condition, can transmit the class-specific energy curtailment signal for the lowest priority device class; then, if the over-consumption condition remains, the energy controller can transmit the class-specific energy curtailment signal for the next lowest priority class, and so on (Horst ¶ 26). Horst clearly establishes a priority among the plurality of energy-consuming devices. But, we agree with Appellants that Horst does not disclose or suggest forming a hierarchy of devices, including a series of parent-child relationships, which dictate how the available energy is allocated, as called for in claim 1.

In view of the foregoing, we do not sustain the Examiner’s rejection of claim 1 under 35 U.S.C. § 103(a). For the same reasons, we also do not sustain the rejection of dependent claims 2–6. *Cf. In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (“dependent claims are nonobvious if the independent claims from which they depend are nonobvious”).

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Independent Claims 7, 13, and 19 and Dependent Claims 8–12, 14–18, and 20

Independent claims 7, 13, and 19 include language substantially similar to the language of claim 1, and stand rejected based on the same rationale applied with respect to claim 1 (*see* Final Act. 26–28, 37–38, 48–49). Therefore, we do not sustain the Examiner’s rejection under 35 U.S.C. § 103(a) of independent claims 7, 13, and 19, and claims 8–12, 14–18, and 19, which depend therefrom, for the same reasons set forth above with respect to claim 1.

DECISION

The Examiner’s rejection of claims 1–20 under 35 U.S.C. § 112, first paragraph, is reversed.

The Examiner’s rejection of claims 1–20 under 35 U.S.C. § 101 is reversed.

The Examiner’s rejection of claims 1–20 under 35 U.S.C. § 103(a) is reversed.

REVERSED