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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PEEYUSH JAISWAL and NAVEEN NARAYAN

Appeal 2017-005974
Application 13/017,968
Technology Center 2800

Before TERRY J. OWENS, BRIAN D. RANGE, and
JENNIFER R. GUPTA, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–6, 9–14 and 17–20. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The Appellants claim a method, computer program product and computer system for consumer device acoustic monitoring and fault reporting. Claim 1 is illustrative:

1. A method for consumer device acoustic monitoring and fault reporting, the method comprising:

a computer receiving sounds from a plurality of acoustically monitored consumer devices via a network, wherein the computer is connected to a network of computers and the plurality of acoustically monitored consumer devices via the network, and wherein monitoring of the plurality of acoustically monitored consumer devices uses non-intrusive acoustic monitoring;

the computer identifying a sound received via the network from a consumer device in the plurality of acoustically monitored consumer devices;

responsive to identifying the sound received via the network from the consumer device, the computer converting the sound to an acoustic signal;

responsive to converting the sound to an acoustic signal, the computer converting the acoustic signal using one of predetermined transforms including a Fourier transformation, a digital transformation, and a hash to generate a current acoustic fingerprint as a compact representation of the acoustic signal, wherein the current acoustic fingerprint is a real-time or near-real-time spectral representation of the acoustic signal under current operating conditions of the consumer device;

responsive to generating the current acoustic fingerprint as the compact representation of the acoustic signal using the one of predetermined transforms including the Fourier transformation, the digital transformation, and the hash, the computer identifying, using characteristics of a transformed acoustic signal, whether the current acoustic fingerprint contains an ideal acoustic fingerprint as bounded by a threshold differential that is an amount of statistical variance that the current acoustic fingerprint can differ from the ideal acoustic fingerprint during operation of the consumer device without triggering an event handler, wherein the characteristics of the transformed acoustic signal are isolated from the transformed acoustic signal, and wherein the ideal acoustic fingerprint is a compact representation of an acoustic signal under normal operating conditions of the consumer device;

responsive to identifying that the current acoustic fingerprint does not contain the ideal acoustic fingerprint as bounded by the threshold differential that is the amount of statistical variance that the current

acoustic fingerprint can differ from the ideal acoustic fingerprint during the operation of the consumer device without triggering the event handler, the computer starting a timer included in the event handler that measures a particular time duration and the computer monitoring the current acoustic fingerprint of the consumer device during the particular time duration to identify whether the ideal acoustic fingerprint is contained within the current acoustic fingerprint prior to expiration of the particular time duration of the timer;

responsive to identifying that the ideal acoustic fingerprint is not contained within the current acoustic fingerprint of the consumer device prior to the expiration of the particular time duration of the timer, the computer triggering the event handler to provide notification that the current acoustic fingerprint does not contain the ideal acoustic fingerprint, wherein the event handler provides the notification by triggering an auditory alarm;

further responsive to identifying that the current acoustic fingerprint does not contain the ideal fingerprint, the computer determining an operating condition of the consumer device in a non-acoustic diagnostic;

responsive to determining the operating condition of the consumer device, the computer determining whether the operating condition is contained within a grammar for the consumer device, wherein the grammar is a file that contains a list of acoustic fingerprints, including the ideal acoustic fingerprint and other acoustic fingerprints that an acoustic signature engine recognizes; and

responsive to determining that the operating condition is contained within the grammar for the consumer device, the computer associating the current acoustic fingerprint with the operating condition, wherein the operating condition of the consumer device has one or more associated acoustic fingerprints.

The Rejection

Claims 1–6, 9–14 and 17–20 stand rejected under 35 U.S.C. § 101 as failing to claim patent-eligible subject matter.

OPINION

We affirm the rejection and, under 37 C.F.R. § 41.50(b), enter a new ground of rejection.

Rejection under 35 U.S.C. § 101

“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. The Supreme Court stated in *Bilski v. Kappos*, 561 U.S. 593, 601 (2010) that “[t]he Court’s precedents provide three specific exceptions to § 101’s broad patent-eligibility principles: ‘laws of nature, physical phenomena, and abstract ideas.’ [*Diamond v. Chakrabarty*, [447 U.S. 303,] 309, 100 S. Ct. 2204 [(1980)].” The Court further stated that limiting an abstract idea to a particular technological environment does not make the concept patentable. *See Bilski*, 561 U.S. at 610–611. Determining whether a claimed invention is patent-eligible subject matter requires determining whether the claim is directed toward a patent-ineligible concept and, if so, determining whether the claim’s elements, considered both individually and as an ordered combination, transform the nature of the claim into a patent-eligible application. *See Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014).

The Appellants argue the claims as a group (App. Br. 11–17). We therefore limit our discussion to one claim, i.e., claim 1. Claims 2–6, 9–14, and 17–20 stand or fall with that claim. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2012).

Claim 1 claims the abstract idea of using a computer to receive consumer device sounds during a time period, convert the sounds to an acoustic signal, compress the acoustic signal to form a current acoustic fingerprint, compare the current acoustic fingerprint to an ideal acoustic

fingerprint,¹ trigger an auditory alarm if the current acoustic fingerprint does not include the ideal acoustic fingerprint, determine an operating condition of the consumer device in a non-acoustic diagnostic, determine whether the operating condition is within a grammar that contains a list of acoustic fingerprints, and if the operating condition is within the grammar, associate the current acoustic fingerprint with the operating condition. Those claim elements, as an ordered combination, do not transform the nature of the claim into a patent-eligible application but, rather, merely set forth individual steps for carrying out the abstract idea of using a computer to determine whether a sound from a consumer device is abnormal. *See Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012) (“Simply adding a ‘computer aided’ limitation to a claim covering an abstract concept, without more, is insufficient to render the claim patent eligible.”).

The Appellants argue (Reply Br. 13):

The recited features, when implemented by a computer, provide a particular solution to a problem or a particular way to achieve a desired outcome that was otherwise not available. Therefore, the combination of a generic computer with the recited features provides a nonconventional and non-generic arrangement of elements. Furthermore, this nonconventional and non-generic arrangement, which provides an improvement to an existing technological process, also improves computer-related technology by enabling the computer to perform a function not previously performed by a computer.

Every generic computer programmed with a program that differs from others arguably has a nonconventional and non-generic arrangement of

¹ The ideal acoustic fingerprint is a spectral representation of the acoustic signal under the consumer device’s normal operating condition (Spec. ¶ 45).

elements and enables the computer to perform a function the computer otherwise could not perform. The Appellants' argument "incorrectly assumes that if a process application implements a principle in some specific fashion, it automatically falls within the patentable subject matter of § 101 and the substantive patentability of the particular process can then be determined by the conditions of §§ 102 and 103." *Parker v. Flook*, 437 U.S. 584, 593 (1978).

The Appellants argue that the computer "converts or transforms a sound to an acoustic signal and then converts or transforms the acoustic signal to an acoustic fingerprint as a compact representation of the acoustic signal" (Reply Br. 7) and, therefore, "transforms both the sound and the acoustic signal to a different state or thing" (*id.*), and "[t]he compact spectral representation of the acoustic signal improves the computing environment by using less space in memory and less time to process than raw sounds or acoustic signals previously consumed" (App. Br. 14).

The conversion of sound to an acoustic signal is conventional, as indicated by the Appellants' lack of disclosure of any technique for performing that conversion (Spec. ¶ 45), and the memory space reduction is the result of data compression using standard mathematical techniques (*id.*). The sound conversion and data compression, therefore, do not render the claimed method non-abstract.

Accordingly, we are not persuaded of reversible error in the rejection.

New ground of rejection

Under 37 C.F.R. § 41.50(b) we enter the following new ground of rejection.

Claims 1–6, 9–14, and 17–20 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

A specification complies with the 35 U.S.C. § 112, first paragraph, written description requirement if it conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of the invention. *See Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991); *In re Kaslow*, 707 F.2d 1366, 1375 (Fed. Cir. 1983); *In re Edwards*, 568 F.2d 1349, 1351-52 (CCPA 1978); *In re Wertheim*, 541 F.2d 257, 262 (CCPA 1976).

For written descriptive support of “non-acoustic diagnostic” the Appellants rely upon their Specification’s paragraph 61 and Figure 4, item 440 (App. Br. 5, 8, 10), but that paragraph and figure item do not mention “non-acoustic diagnostic.” Nor does the remainder of the Appellants’ Specification. The Specification, therefore, fails to convey with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of the invention.

DECISION/ORDER

The rejection of claims 1–6, 9–14 and 17–20 under 35 U.S.C. § 101 as failing to claim patent eligible subject matter is affirmed. We enter a new rejection of those claims under 35 U.S.C. § 112, first paragraph.

It is ordered that the Examiner’s decision is affirmed.

In addition to affirming the Examiner's rejection, this decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b) which provides that “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that the appellants, 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. . . .

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

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

AFFIRMED; 37 C.F.R. § 41.50(b)