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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte WILLIAM G. O'FARRELL, JANE C. FUNG,
PERRY R. GIFFEN, PAUL J. GOODERHAM, MALIK S. HEMANI,
KARICE L. McINTYRE, and SHU X. TAN

_____

Appeal 2011-011075
Application 11/468,619
Technology Center 2100

_____

Before JEFFREY S. SMITH, BRUCE R. WINSOR,
and LINZY T. McCARTNEY, *Administrative Patent Judges*.

WINSOR, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Final Rejection

of claims 1-16. Claims 17 and 18 are indicated to be directed to allowable

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[1] The Real Party in Interest identified by Appellants is International Business
Machines Corporation. (App. Br. 2.)

subject matter. (Ans. 2-3, 10.) Claims 19-37 are withdrawn from consideration. (App. Br. 4.) We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part and institute a new ground of rejection within the provisions of 37 C.F.R. § 41.50(b) (2011).

STATEMENT OF THE CASE

Appellants' disclosure "relates generally to debugging visual programs, and more specifically relates to . . . debugging visual paradigms and embedded visual or source programs." (Spec. ¶ 0001.) Claim 1, which is illustrative, reads as follows:

> 1.   A system for generating a source map (SMAP) from a visual paradigm that can be used along with an associated code output by a debugging tool to debug the visual paradigm, comprising:
>
>   a visual object ordering system that determines an order number for each of a plurality of visual objects in the visual paradigm; and
>
>   a mapping system that maps the order number of each visual object to a set of line numbers in the associated code output.

Claims 1-12 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. (Ans. 3-4.)

Claims 2, 8, and 14 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite. (Ans. 4-5.)

Claims 1, 3, 4, 7, 9, 10, 13, 15, and 16 stand rejected under 35 U.S.C. § 102(b) as anticipated by Bates (US 2003/0061600 A1, Mar. 27, 2003). (Ans. 5-8.)

Claims 2, 8, and 14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bates and Pugh (US 7,299,454 B2, Nov.20, 2007). (Ans. 5-8.)

The rejection of claims 5, 6, 11, 12, 17, and 18 under 35 U.S.C. § 103(a) is withdrawn (Ans. 2-3) and the claims are indicated to be directed to subject matter that is allowable over the prior art of record (Ans. 9-10).

Rather than repeat the arguments here, we refer to the Briefs ("App. Br." filed Feb. 7, 2011; "Reply Br." filed June 17, 2011) and the Answer ("Ans." mailed Apr. 27, 2011) for the respective positions of Appellants and the Examiner. Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants did not make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

REJECTIONS UNDER 35 U.S.C. § 101

ISSUES

The issues presented by Appellants' contentions are as follows:

Did the Examiner err in finding that claims 1-6 are directed to non-statutory software *per se*?

Did the Examiner err in finding that claims 7-12 are directed to a non-statutory abstract idea?

ANALYSIS

Claims 1-6

Claim 1 is directed to "[a] *system* for generating a source map . . . , comprising: a visual object ordering *system* . . . ; and a mapping *system* . . . " (emphases added). The Examiner finds that because the recited

3

systems do not include any physical components, the broadest reasonable interpretation of the "systems" encompasses software components, i.e., software *per se*, which is non-statutory subject matter. (Ans. 3-4; *see also* Ans. 10-11.)

Appellants contend that the Examiner erred "because the machine-or-transformation test is not the sole test for patent-eligible *processes* under 35 U.S.C. § 101," (App. Br. 10 (citing *Bilski v. Kappos*, 561 U.S. 593, ___ (slip op. at 8), 130 S.Ct. 3218, 3227 (2010) (emphasis added)). Appellants further contend that the Examiner has not "provide[d] rational evidence that the *process* is either directed to a law of nature, a physical phenomenon, or an abstract idea," (*id.* (citing *Bilski*, 561 U.S. at ___ (slip op. at 5), 130 S.Ct. at 3221) (emphasis added)). Additionally, Appellants contend that the systems of claim 1 "relate to specific *processes* that can be performed only on a physical computing system" (Reply Br. 4 (emphasis added)).

Appellants' contentions are unpersuasive because they are not commensurate with the language of claim 1 and do not address the rejection articulated by the Examiner.

Section 101 of 35 U.S.C. provides "[w]hoever 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." Appellants' arguments presume that claim 1 is a process claim. However, contrary to Appellants' contentions, on its face claim 1 is not a process claim. Rather, claim 1 recites a "system" made up of two other "system[s]." Although a "system" claim may be construed to encompass a "machine," here the absence of any physical elements in the claim leads us to agree with

the Examiner that even if the claim encompasses a system that is a
"machine" (*see e.g.*, Spec. ¶ 0022) and therefore statutory subject matter, it
also encompasses a system made up of software modules, i.e., software *per
se*. Software *per* se does not fall within any of the four categories of
statutory subject matter. *See Gottschalk v. Benson*, 409 U.S. 63, 72 (1972).
Moreover, "[a] claim that covers <u>both</u> statutory and non-statutory
embodiments . . . embraces subject matter that is not eligible for patent
protection and therefore is directed to non-statutory subject matter," MPEP
§ 2106(I) (9th ed. 2014) (citation omitted). *Cf. In re Lintner,* 458 F.2d 1013,
1015 (CCPA 1972).

 Additionally, contrary to Appellants' contentions (App. Br. 10) the
Examiner does not rely on the machine-or-transformation test in rejecting
claim 1 (*see generally* Ans. 3-4).

 For the foregoing reasons, Appellants have not persuaded us of error
in the rejection of claim 1. Accordingly, we sustain the rejection under
§ 101 of claim 1 and, for substantially the same reasons, dependent claims 2-
6.

Claims 7-12

 In arguing the patentability of claims 7-12 under § 101, Appellants
adopt the arguments made with regard to claims 1-6. (*See* App. Br. 5; Reply
Br. 5). Claim 7, unlike claim 1, recites a "method," which identifies the
claim being directed to a process, which is one of the four statutory
categories of patentable subject matter. *See* 35 U.S.C. § 101.

 In rejecting claim 7 the Examiner relies on the machine-or-
transformation test, stating the following:

> A process claim, to be statutory under § 101, *must pass the machine-or-transformation test* (M-or-T test), which ensures that the process is limited to a particular practical application. In accordance with the M-or-T test, the claimed process must: (1) be tied to a particular machine or apparatus (machine implemented); or (2) particularly transform a particular article to a different state or thing.

(Ans. 4. (emphasis added); *see also* Ans. 11-12.)

As pointed out by Appellants (App. Br. 10) the Supreme Court has held as follows:

> The machine-or-transformation test is not the sole test for patent eligibility under § 101. The Court's precedents establish that although that test may be a useful and important clue or investigative tool, it is not the sole test for deciding whether an invention is a patent-eligible "process" under § 101.

Bilski v. Kappos, 130 S.Ct. at 3227. Accordingly, it was error for the Examiner to base the rejection of claim 7 *only* on application of the machine-or-transformation test. Furthermore, claim 7, like the claims at issue in *Research Corp. Technologies Inc. v. Microsoft Corp.,* 627 F.3d 859, 865 (Fed. Cir. 2010), "presents functional and palpable applications in the field of computer technology" (*id.* at 868). "[I]nventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act." *Id.* at 869.

Accordingly, we do not sustain the rejection under § 101 of claim 7 and claims 8-12, which depend from claim 7.

REJECTIONS UNDER 35 U.S.C. § 112, 2nd ¶

ISSUE

The issue presented by Appellants' contentions is as follows: Does the recitation of the trademark "Java" in claims 2, 8, and 14 render the claims indefinite?

ANALYSIS

The Examiner finds that claims 2, 8, and 14 are indefinite for using the trademark "Java" to identify a programming language. (Ans. 4-5.) The Examiner cites to the decision in *Ex parte Simpson,* 218 USPQ 1020 (Bd. App. 1982), for the proposition that "[a] trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name." (Ans. 5.)

> Appellants contend as follows:

> The Java programming language is a well-known and defined programming language. Moreover, there is no other way to refer to the Java language that [*sic*] to call it by its name. Thus, the claim scope is not uncertain and therefore claims 2, 8, and 14 are not indefinite as asserted by the Examiner

(App. Br. 11-12.)

We agree with Appellants. The present case is more closely analogous to that in *Ex parte Regen*, 2013 WL 6253158 (PTAB 2013) (non-precedential), than to *Simpson.* The *Regen* panel held that the recitation of the trademark "Bluetooth" in a claim did not render the claim indefinite because "[u]nlike the facts in the *Simpson* case, one of ordinary skill in the relevant art would have understood" the meaning of the term "in the context of the claimed invention," *Regen,* 2013 WL 6253158 at *2.

Here, "Java" is a well-known and widely-used term identifying a particular programming language. For instance, a technical dictionary relevant to the computing arts includes the following definition: "**Java** *n.* An object-oriented programming language developed by Sun Microsystems, Inc." MICROSOFT COMPUTER DICTIONARY 293 (5th ed. 2002); *see also* NEWTON'S TELECOM DICTIONARY 678 (27th ed. 2013). Accordingly, we conclude one of ordinary skill in the relevant art would have understood "Java code" to be code written in the the particular object-oriented programming language known by that name at the time of the Appellants' invention.

Therefore, we conclude that "Java," as used in claims 2, 8, and 14, does not render those claims indefinite. Accordingly, we do not sustain the rejection of claims 2, 8, and 14 under § 112, second paragraph.

REJECTIONS UNDER 35 U.S.C. §§ 102(b) AND 103(a)

ISSUE

The dispositive issue presented by Appellants' contentions regarding the rejections under §§ 102(b) and 103(a) is as follows: Does Bates disclose a system that "maps the order number of each visual object [in a visual paradigm] to a set of line numbers in the associated code output" (herein the "disputed limitation"), as recited in claim 1?

ANALYSIS

The Examiner finds that Bates discloses disputed limitation. (Ans. 6 (citing Bates, Figs. 4-6; ¶ 0048); *see also* Ans. 13-18.) Appellants contend, *inter alia*, as follows:

> Bates teaches a system for "[providing] a graphical representation of source code structure during a debugging session." (Bates, Abstract). (Brief, p. 12). This is in contrast to Appellant's claim which recites a system that "maps the order number of each visual object to a set of line numbers in the associated code output" (Claim 1). Bates does not teach a system which generates a map from visual objects to associated code output. Therefore, Bates does not anticipate Appellant's claimed subject matter as recited in claim 1.

(Reply Br. 6 (bracketed matter in original)).

We agree with Appellants. Claim 1 recites "a visual object ordering system that determines an order number for each of a plurality of visual objects in [a] visual paradigm." Thus the "visual objects" of the disputed limitation are objects in a "visual paradigm." The Specification equates the recited "visual paradigm" with a "visual programming environment." (Spec. ¶ 0002; *see also* Reply Br. 9-10). A pertinent definition from a technical dictionary relevant to the computing arts is: "**visual programming** *n.* A method of programming using a programming language or environment in which basic programming components can be selected through menu choices, buttons, icons, and other predetermined methods." MICROSOFT COMPUTER DICTIONARY at 556. The Specification is consistent with this definition, describing visual paradigms as follows: "Instead of writing lines of code, programmers create programs by linking together transforms that provide predetermined functions (e.g., mapping, business rules, etc.). Transforms are typically represented by boxes in the programming environment that can be linked together with arrows that dictate the flow of the program." (Spec. ¶ 0002.) In the context of claim 1, the components of the visual paradigm encompass "a plurality of visual objects." Accordingly, we conclude that the broadest reasonable interpretation of "visual paradigm"

9

is a programming environment in which programmers create programs by selecting visual representations of program components, i.e., visual objects, to create a visual representation of the program thus created.

Bates discloses a code debugging system that has the capability of generating a control flow graph (CFG) from code to be debugged. (Bates ¶ 0042). During a debugging session, Bates's code debugger displays a CFG structure of interconnected nodes 124-138 (*id*, Fig. 5; ¶ 0046) representing a procedure of a program written in source code (e.g., written in C) (*id.*, Fig. 4, ¶ 0046). Therefore, Bates discloses a code debugger that creates, from preexisting source code, a CFG made up of nodes, rather than a "visual paradigm" in which programmers create programs by selecting visual representations of program components, i.e., visual objects, to create a visual representation of the program thus created. Therefore, Bates's nodes (*id.*, Fig. 5) are not "a plurality of visual objects in [a] visual paradigm, and Bates does not disclose mapping the order number of "visual objects [in a visual paradigm]."

Therefore, Appellants have persuaded us of error in the rejection of claim 1. Accordingly, we do not sustain the rejection as anticipated by Bates of claim 1; claims 7 and 13, which recites substantially the same limitations as claim 1 (*see* App. Br. 14-16); and claims 3, 4, 9, 10, 15, and 16, which depend from claim 1, 7, or 13. Additionally, we do not sustain the rejection as unpatentable over Bates and Pugh of claims 2, 8, and 14, which depend from claim 1, 7, or 13.

NEW GROUND OF REJECTION WITHIN 37 C.F.R. § 41.50(b)

Claims 13-18 are rejected on a new ground of rejection under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Our reviewing court has found transitory, propagating signals are not within any of the four statutory categories. Therefore, a claim directed to a transitory propagating signal is not statutory under 35 U.S.C. § 101. *In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007). "A transitory propagating signal . . . is not a 'process, machine, manufacture, or composition of matter.' [These] four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C § 101; thus, such a signal cannot be patentable subject matter." *Nuijten*, 500 F.3d at 1357. According to U.S. Patent & Trademark Office (USPTO) guidelines:

> The broadest reasonable interpretation of a claim drawn to a computer readablle [sic] medium . . . typically covers forms of non-transitory tangible media and transitory propagating signals per se in view of the ordinary and customary meaning of computer readable media . . . . When the broadest reasonable interpretation of a claim covers a signal per se, the claim must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter.

David J. Kappos, *Subject Matter Eligibility of Computer Readable Media*, 1351 Off. Gaz. Pat. Office 212 (Feb. 23, 2010) (citation omitted). Moreover, "[a] claim that covers <u>both</u> statutory and non-statutory embodiments . . . embraces subject matter that is not eligible for patent protection and therefore is directed to non-statutory subject matter," MPEP § 2106(I) (9th ed. 2013) (emphasis added); *cf. Lintner,* 458 F.2d at 1015 ("Claims which are broad enough to read on obvious subject matter are unpatentable even though they also read on nonobvious subject matter.").

Claim 13 recites "[a] computer program product stored on a computer usable storage medium." Appellants' Specification states that "[t]he computer-usable or computer-readable medium may be, for example but not limited to, an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, device, or *propagation* medium." (Spec. ¶ 0020 (emphasis added).)

Appellants have contended that, in view of the term "storage" in claim 13, "no energy *per se* or other form of nonstatutory subject matter can be reasonably interpreted as a 'computer readable *storage* medium,' as the transitory nature of such nonstatutory subject matter is not amenable to the static nature of computer-readable storage." (Amendment 13 (filed Aug. 30, 2010)). The Examiner appears to have accepted Appellants' proposed claim construction. (*Compare* Non-Final Office Action 6 (mailed June 3, 2010) *with* Final Office Action (mailed Oct. 22, 2010).) However, claim construction is an issue of law that we review *de novo*. *Cordis Corp. v. Boston Scientific Corp.*, 561 F.3d 1319, 1331 (Fed. Cir. 2009).

"[T]hose of ordinary skill in the art would understand the claim term 'machine-readable[2] storage medium' would include signals *per se*." *Ex parte Mewherter*, 107 USPQ2d 1857, 1862 (PTAB 2013) (precedential). The *Mewherter* panel explained, "a signal with embedded data [is a storage medium] . . . , for data can be copied and held by a transitory recording medium, albeit temporarily, for future recovery of the embedded data." *Id*.

We conclude nothing in the Specification or the claims precludes "[a] computer program product stored on a computer usable storage medium"

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[2] We note "machine-readable" and "computer readable" are equivalent terms. *See Mewherter,* 107 USPQ2d at 1859 n.2.

from encompassing a transitory signal. Accordingly, giving the phrase its

broadest reasonable interpretation in light of the Specification, *see In re*

Morris, 127 F.3d 1048, 1054 (Fed. Cir. 1997), we construe the recited

"computer program product stored on a computer readable storage medium"

to encompass a transitory signal, which is non-statutory subject matter. We

therefore conclude that claim 13 and claims 14-18, which depend from claim

13, are directed to non-statutory subject matter under 35 U.S.C. § 101.

We note that in accordance with guidance given by the Office,

Appellants are not precluded from amending claims 13-18 to avoid a

rejection under 35 U.S.C. § 101 by adding the limitation 'non-transitory' to

the claim. *See* Kappos, 1351 Off. Gaz. Pat. Office at 212.

DECISION

The decision of the Examiner to reject claims 1-6 is affirmed.

The decision of the Examiner to reject claims 7-16 is reversed.

We enter a new ground of rejection for claims 13-18 under 35 U.S.C.

§ 101.

This decision contains new grounds of rejection pursuant to 37 C.F.R.

§ 41.50(b). Section 41.50(b) provides that "[a] new ground of rejection . . .

shall not be considered final for judicial review."

Section 41.50(b) also provides that 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 proceeding
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.

37 C.F.R. § 41.50(b).

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). *See* 37 C.F.R.
§ 1.136(a)(1)(iv).

<p style="text-align:center">AFFIRMED-IN-PART
37 C.F.R. § 41.50(b)</p>

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