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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/824,701	06/28/2010	Nithya Rajamani	IN920100053US1(790.068)	1359
89885	7590	11/23/2016	EXAMINER	
FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143			SCHEUNEMANN, RICHARD N	
			ART UNIT	PAPER NUMBER
			3624	
			MAIL DATE	DELIVERY MODE
			11/23/2016	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NITHYA RAJAMANI and ANUPAM SARONWALA

Appeal 2014-006542
Application 12/824,701¹
Technology Center 3600

Before HUBERT C. LORIN, NINA L. MEDLOCK and
MATTHEW S. MEYERS, Administrative Patent Judges.

LORIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Nithya Rajamani, et al. (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1–25. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM-IN-PART and enter a NEW GROUND OF REJECTION.

¹ The Appellants identify International Business Machines Corporation as the real party in interest. App. Br. 3.

THE INVENTION

Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. A method comprising

representing supplier nodes in a machine-generated network representation;

representing client nodes in a machine-generated network representation, the client nodes corresponding to at least one customer of at least one supplier node;

establishing a supplier-client relationship in the network representation;

recording a score from at least one supplier node participating in the supplier-client relationship, the score corresponding to relationship strength of the supplier-client relationship;

calculating a global net orientation score of a client node, corresponding to a general relationship strength of the client node with respect to the supplier nodes in aggregate; and

amending the supplier-client relationship score after a predetermined time period.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Hoffman et al. (hereinafter "Hoffman")	US 2003/0088474 A1	May 8, 2003
Brydon et al. (hereinafter "Brydon")	US 2006/0136419 A1	June 22, 2006
Shastri et al. (hereinafter "Shastri")	US 2008/0147540 A1	June 19, 2008

Mauseth et al. (hereinafter “Mauseth”)	US 2008/0270209 A1	Oct. 30, 2008
Heit	US 7,606,762 B1	Oct. 20, 2009
Ghosh et al. (hereinafter “Ghosh”)	US 2010/0145777 A1	June 10, 2010
Landesmann	US 2010/0211450 A1	Aug. 19, 2010

Willis, Henry H., et al., RAND Infrastructure, Safety, and Environment, Technical Report “*Evaluating the security of the global containerized supply chain,*” RAND Corporation, Santa Monica, CA. 2004, www.rand.org, (hereinafter “RAND”).

The following rejections are before us for review:

1. Claims 14–25 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter.
2. Claims 1, 13 and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon and Ghosh.
3. Claims 2, 3, 15 and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Heit.
4. Claims 7, 8, 20 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Mauseth.
5. Claims 9 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Shastry.
6. Claims 11, 12, 24 and 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and RAND.
7. Claims 4–6 and 17–19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Hoffman.
8. Claims 10 and 23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Landesmann.

ISSUES

Did the Examiner err in rejecting claims 14–25 under 35 U.S.C. §101 as being directed to non-statutory subject matter?

Did the Examiner err in rejecting claims 1, 13 and 14 under 35 U.S.C. §103(a) as being unpatentable over Brydon and Ghosh; claims 2, 3, 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Heit; claims 7, 8, 20 and 21 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Mauseth; claims 9 and 22 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Shastry; claims 11, 12, 24 and 25 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and RAND; claims 4–6 and 17–19 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Hoffman; and, claims 10 and 23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Landesmann?

ANALYSIS

The rejection of claims 14–25 under 35 U.S.C. §101 as being directed to non-statutory subject matter.

The Appellants did not respond to this rejection. Accordingly, it is summarily sustained.

The rejections of claims 1, 13 and 14 under 35 U.S.C. §103(a) as being unpatentable over Brydon and Ghosh; claims 2, 3, 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Heit; claims 7, 8, 20 and 21 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Mauseth; claims 9 and 22 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Shastry; claims 11, 12, 24 and 25 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and RAND; claims 4–6 and 17–19 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Hoffman; and, claims 10 and 23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Landesmann.

All the claims require calculating a global net orientation score of a client node, which client node corresponds to a general relationship strength of the client node with respect to supplier nodes in a machine-generated network representation in aggregate. *See* independent claims 1, 13 and 14.

The Appellants argue that the cited prior art combination of Brydon and Ghosh would not lead one of ordinary skill in the art to calculate said global net orientation score. We agree.

The Examiner takes the position that Bryson discloses representing supplier nodes in a machine-generated network representation but not calculating global net orientation score, for which Ghosh is relied upon. Final Act. 4–5. According to the Examiner, “Ghosh ‘777 discloses **calculating a global net orientation score of a client node corresponding to a general relationship strength of the client node with respect to the supplier nodes in aggregate** (see ¶[0038] and Figs. 1, 4, and 6; influence scores for authors computed in aggregate based on topology of the social graph).” Final Act. 5.

Ghosh, paragraph 38 is reproduced below:

[0038] In some embodiments, pricing and advertising determinations are based at least in part on influence scores computed in aggregate

rather than on individual users. For example, the aggregate influence for visitors to an online newspaper can be estimated by identifying the public citations, recommendations, or other expressions of opinion made by individuals for that online newspaper, indicating that authors of such citations are users of that online newspaper; the influence of such authors can be estimated and the distribution of such influence and topology of the graph (e.g., social graph) of such authors who are also users of that online newspaper can be used as a proxy for the influence of all actual users of that online newspaper, providing for a better refinement and metric for measuring the influence of that online newspapers users than, for example, proxy measures of influence based on readership surveys and demographics.

We do not see in this passage or in Figs 1, 4 and 6 of Ghosh disclosure of calculating a global net orientation score of a client node, which client node corresponds to a general relationship strength of the client node with respect to supplier nodes. The Examiner states that “global net orientation” is never explicitly defined in the specification, it appears as though the term describes an aggregate evaluation of relationship strength between members of a social network.” Ans. 2. But that is not entirely true. Paragraph 29 of the Specification, which discusses Fig. 2, explains that “a global net orientation [is] represented inside the boxes with dotted lines. Each global net orientation has a ‘+’ or ‘-’ (positive or negative) sign followed by a number.” In light of the Specification, the global net orientation score of a client node that is calculated as claimed is reasonably broadly construed to be a value corresponding to a client node which itself corresponds to a general relationship strength of the client node with respect to supplier nodes in a machine-generated network representation in aggregate. To construe said global net orientation score more broadly as “an aggregate evaluation of relationship strength between members of a social network” (Ans. 2) is not reasonable in light of the Specification.

Furthermore, we do not see how Ghosh’s disclosure of “an aggregate evaluation of relationship strength between members of a social network” (Ans. 2) would lead one of ordinary skill to make a calculation a global net orientation score of a client node that corresponds to a general relationship strength of the client node with respect to supplier nodes in a machine-generated network representation in aggregate, notwithstanding Bryson may disclose representing supplier nodes in a machine-generated network representation.

For the foregoing reasons, we find that a prima facie case of obviousness for the subject matter of the independent claims has not been made out in the first instance by a preponderance of the evidence. We reach the same conclusion as to the rejections of the dependent claims.

NEW GROUND OF REJECTION

Claims 1–25 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Alice Corp. Pty. Ltd. v. CLS Bank International, 134 S. Ct. 2347 (2014) identifies a two-step framework for determining whether claimed subject matter is judicially-excepted from patent eligibility under § 101.

According to *Alice* step one, “[w]e must first determine whether the claims at issue are directed to a patent-ineligible concept,” such as an abstract idea. *Alice*, 134 S.Ct. at 2355.

Taking claim 1 as representative of the claims on appeal, the claimed subject matter is directed to relationship representation. Relationship representation is a fundamental building block of human ingenuity. As such it is an abstract idea.

Step two is “a search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289, 1294 (2012)).

We see nothing in the subject matter claimed that transforms the abstract idea of relationship representation into an inventive concept.

The method of claim 1 sets out six steps whereby: (a) supplier nodes are represented in a network representation; (b) client nodes are represented in a network representation; (c) a supplier-client relationship is established in the network representation; (d) a score from a supplier node corresponding to the relationship strength of the supplier-client relationship is recorded; (e) a score (“global net orientation score”) corresponding to a relationship strength of the client node with respect to the supplier is calculated; and, (f) “the supplier-client relationship score after a predetermined time period” is amended. All these steps are known operations for creating a relationship representation, albeit performed in the context of a supplier-client environment. The use of known operations distinguished only by context adds little to patentably transform the relationship representation abstract idea. *Cf. CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371 (Fed. Cir. 2011) (“The Court [*Parker v. Flook*, 437 U.S. 584 (1978)] rejected the notion that the recitation of a practical application for the calculation could alone make the invention patentable.”). Also, many of the recited steps are not linked to any device and thus could be practiced mentally. Adding mental steps cannot patentably transform an otherwise abstract idea into an inventive concept. *In*

re Comiskey, 554 F.3d 967, 979 (Fed. Cir. 2009) (“[M]ental processes—or processes of human thinking—standing alone are not patentable even if they have practical application.”).

Finally, we note that claim 1 calls for “machine-generated network representation[s].” But any general-purpose computer available at the time the application was filed would have satisfied these limitations. The Specification supports that view. *See Spec.*, e.g., para. 56 (“a process such as that broadly illustrated in FIG. 6 can be carried out on essentially any suitable computer system or set of computer systems.”) “[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea ‘while adding the words “apply it”’ is not enough for patent eligibility.” *Alice*, 134 S.Ct. at 2358.

For the foregoing reasons, we find that claim 1 covers claimed subject matter that is judicially-excepted from patent eligibility under § 101. The other independent claims — apparatus claims 13 and 14 parallel claim 1 — similarly cover claimed subject matter that is judicially-excepted from patent eligibility under § 101. The dependent claims describe various relationship representing schemes which do little to patentably transform the abstract idea.

Therefore, we enter a new ground of rejection of claims 1–25 under 35 U.S.C. § 101.

For the foregoing reasons, the rejections are affirmed-in-part but the claims are newly rejected under § 101.

CONCLUSIONS

The rejection of claims 14–25 under 35 U.S.C. §101 as being directed to non-statutory subject matter is affirmed. The rejections of claims 1, 13 and 14 under 35 U.S.C. §103(a) as being unpatentable over Brydon and Ghosh; claims 2, 3, 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Heit; claims 7, 8, 20 and 21 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Mauseth; claims 9 and 22 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Shastry; claims 11, 12, 24 and 25 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and RAND; claims 4-6 and 17-19 under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Hoffman; and, claims 10 and 23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brydon, Ghosh and Landesmann are reversed.

Claims 1–25 are newly rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

DECISION

The decision of the Examiner to reject claims 1–25 is affirmed-in-part.

Claims 1–25 are newly rejected.

NEW GROUND

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[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

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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. . . .

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-IN-PART; 37 C.F.R. § 41.50(b)