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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN P. BUFE, DONNA KAREN BYRON,
ALEXANDER PIKOVSKY, and EDWARD E. SEABOLT

Appeal 2017-007705
Application 14/090,152¹
Technology Center 2600

Before LARRY J. HUME, JUSTIN BUSCH, and CARL L. SILVERMAN,
Administrative Patent Judges.

SILVERMAN, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–3 and 7–9, which constitute the only claims pending. Claims 4–6 are cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ The real party in interest is identified as International Business Machines Corporation. App. Br. 2.

STATEMENT OF THE CASE

The claimed invention relates to “disambiguation of dependent referring expression in natural language processing.” Abstract; Spec. ¶¶ 1–

6. Claim 1, reproduced below, is exemplary of the subject matter on appeal:

1. A method for disambiguation of dependent referring expression in natural language processing, the method comprising:

selecting a portion of a document in a set of documents, the portion including a set of dependent referring expression instances;
filtering the portion to identify an instance from the set of dependent referring expression instances by using a linguistic characteristic of the instance, the instance of dependent referring expression referring to a full expression, the full expression occurring in another document in the set of documents;

locating the full expression in one member document in the set of documents by locating where the dependent referring expression is defined to be a stand-in for the full expression; and

resolving, using a processor and a memory, the instance using the full expression such that information about the full expression is available at a location of the instance, wherein the resolving comprises:

modifying the instance by adding data at a location of the instance, such that the data makes the information about the full expression accessible from the location of the instance;

modifying the document to produce a second document, wherein the second document includes a mapping between the instance and the full expression in a metadata section of the second document, the metadata section being distinct from a location of the instance; and

linking the instance to the mapping using a link, wherein the link is usable to make the information about the full expression accessible from the location of the instance.

App. Br. 13.

THE REJECTION

Claims 1–3 and 7–9 are rejected as patent-ineligible under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. Final Act. 3–4.

ANALYSIS

Appellants argue the Examiner fails to establish a prima facie case for rejection and errs in concluding the rejected claims are directed to an abstract idea as the conclusion is based on inadequate reasoning and is conclusory. App. Br. 8–11; Reply Br. 2–7. According to Appellants, the Examiner improperly omits steps from the analysis and these steps, e.g., filtering, are significantly more than merely "**comparing new and stored information and using rules to identify options.**" App. Br. 9–10.

The Examiner determines “claim 1 is directed to a method for selecting a portion of a document, filtering it to identify a dependent expression, locating the corresponding full expression in another document, modifying the document to create a second document to make the full expression accessible and including a mapping link in a metadata section.” Final Act. 3. The Examiner observes:

This is similar to "comparing new and stored information and using rules to identify options" (Smartgene: 17 see Section IV.B.4, Federal Register, Vol. 79, No. 241, dated Tuesday, December 16, 2014, page 74622), "using categories to organize, store, and transmit information" (Cyberfone: 18 see Section IV.B.5, Federal Register, Vol. 79, No. 241, dated Tuesday, December 16, 2014, page 74622), and "organizing information through mathematical correlations" (Digitech: 19 see Section IV.C.1, Federal Register, Vol. 79, No. 241, dated Tuesday, December 16, 2014, page 74622), each of which the courts have

found to be abstract. Therefore, the claims are held to be drawn to an abstract idea.

Id.

the additional elements in the independent claims are a processor and memory, which appear to be "adding the words "apply it" (or an equivalent) with the judicial exception, or mere instructions to implement an abstract idea on a computer;" and "simply appending well-understood, routine and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception" (Federal Register, Vol. 79, No. 241, dated Tuesday, December 16, 2014, page 74624). All of the identified additional elements taken into consideration individually and in combination fail to amount to significantly more than the abstract idea above. See Federal Register, Vol. 79, No. 241, dated Tuesday, December 16, 2014, page 74624, column 2 for considerations for determining whether a claimed elements amounts to significantly more than the judicial exception itself.

Id. at 3–4.

In the Answer, the Examiner addresses Appellants' arguments and presents additional analysis to support the conclusion that the rejected claims are directed to ineligible subject matter. Ans. 3–13.

The Examiner determines the mapping between the abstract idea in the claims and the abstract idea of "comparing new and stored information and using rules to identify . . . options" from *Smartgene, Inc. v. Advanced Biological Laboratories, SA*, 555 Fed. Appx. 950, 955 is very clear. *Id.* at 7.

In particular, the Examiner determines:

The abstract idea in the claims is "selecting a portion of a document (**New information**), filtering it to identify a dependent expression (**Comparing new information with stored information (filter)**), locating the corresponding full expression in another document, modifying the document to create a second document to make the full expression accessible from the dependent expression and including a mapping link in a metadata

section (**Using rules to identify options (the remaining steps use rules to identify what to do)**)". Nowhere does the Appellant argue that the claims are not like the abstract ideas cited in the rejection, only that Examiner hasn't proved that they are like the cited abstract ideas. Given current guidance as set forth in the Federal Register & May 4, 2016 memorandum, the Examiner believes that the burden of proof has been met.

Id.

As discussed, *supra*, the Examiner determines the abstract idea in the claims is “selecting a portion of a document, filtering it to identify a dependent expression, locating the corresponding full expression in another document, modifying the document to create a second document to make the full expression accessible from the dependent expression and including a mapping link in a metadata section,” which encompasses all the steps of claim 1 (hereinafter referred to as the “abstract idea” and the “disputed abstract idea”). *Id.* at 8–9. The Examiner reasons that everything in claim 1, other than the processor and memory, is directed to the abstract idea and no claim limitation has been excluded from analysis. *Id.* at 9. The Examiner reasons “[d]ata analysis and manipulation is by its very nature abstract, and the only portions of the claim that are not abstract and thus additional elements beyond the abstract idea are the processor and memory.” *Id.*

The Examiner then discusses court cases to further support the conclusion that the claim is directed to an abstract idea:

“Data recognition and storage” (Content Extraction and Transmission *LLC* v. Wells Fargo Bank, N.A., 776 F.3d 1343, 113 U.S.P.Q.2d 1354 (Fed. Cir. 2014)), “Collecting information, analyzing it, and displaying certain results of the collection” (Electric Power Group, LLC, v. Alstom, 830 F.3d 1350, 119 U.S.P.Q.2d 1739 (Fed. Cir. 2016)) and “Process and Apparatus for Identifying Locations of Probable Malfunctions” (In re Meyer, 792 F.3d 1363, 688 F.2d 789, 215 U.S.P.Q. 193 (CCPA

1982)), as well as the previously cited "comparing new and stored information and using rules to identify options" (Smartgene: 17 see Section IV.B.4, Federal Register, Vol. 79, No. 241, dated Tuesday, December 16, 2014, page 74622), "using categories to organize, store, and transmit information" (Cyberfone: 18 see Section IV.B.5, Federal Register, Vol. 79, No. 241, dated Tuesday, December 16, 2014, page 74622), and "organizing information through mathematical correlations" (Digitech: 19 see Section IV.C.1, Federal Register, Vol. 79, No. 241, dated Tuesday, December 16, 2014, page 74622). Being "similar to" does not mean that the ideas are the same, only that concepts are similar enough to support a finding through the preponderance of the evidence that the claims are drawn to an abstract idea.

Id. at 9.

Regarding the filtering and resolving steps, the Examiner notes these steps are considered steps in the abstract idea analysis and, even if they were additional steps, they do not add significantly more than the underlying abstract idea. *Id.* at 10–11. The Examiner reasons that, "[e]ven if the filtering step, the resolving step and the two modifying steps were additional steps, the Appellant has failed to indicate why they would amount to significantly more than the underlying abstract idea." *Id.* at 10 (citing Federal Register, Vol. 79, No. 241, dated Tuesday, December 16, 2014, page 74624, column 2 for considerations for determining whether a claimed elements amounts to significantly more than the judicial exception itself).

In the Reply Brief, Appellants argue the Examiner's Answer presents for the first time, a "colorable 'explanation'" of the rejection, but it still fails to satisfy the prima facie deficiency of the rejection in the Final Office Action. Reply Br. 4. In particular, Appellants argue the Examiner does not explain why "comparing new information with stored information" is similar

to “filter” and such a finding is the “Examiner’s personal opinion, which is not rooted in any fact.” *Id.* at 4–5. According to Appellants:

What we have here is an assortment of court decisions, each very informed and specific in its own right, but none that addresses any of the issue[s] at hand. Nothing cited here supports Examiner’s opinion that **"filtering"** or **"modifying** the document to create a second document to make the full expression accessible and including a mapping **link** in a metadata section" is in any way similar to "comparing new information with stored information," or **"data analysis and manipulation** is by its **very nature abstract.**"

Id. at 6.

Appellants then present three arguments and refer to support from identified court cases. *Id.* at 6–7. First:

Claim 1 is patentable under *Alice Corporation Pty. Ltd. v. CLS Bank International et al.*, Case No. 13-298 (Supr. Ct., June 19, 2014) because the claimed "method" is directed to devices that implement a specific/particular method that solves a problem unique to NLP (an electronically-implemented technique that facilitates exchange of information between humans and data processing systems (see spec. 0005); such exchanges are not a form of exchange of information that was used prior to the advent of computers), and therefore *DDR* applies Paragraphs 0016-25 of the Specification extensively describe the problems that are addressed by the claimed invention. Thus, claims 1-3 and 7-9 comprise patentable subject-matter under 35 U.S.C. § 101, in view of *Alice Corporation Pty. Ltd.*, as clarified by *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), and as distinct from *Ultrameercial, Inc. v. Hulu, LLC*, 772 F.3d 709, No. 2010-1544 (Fed. Cir. Nov. 14, 2014) and *Synopsys v. Mentor Graphics*, 120 USPQ2d 1473 (Fed. Cir. 2016).

Id. at 6–7.

Second, a prima facie case of judicial exception under 35 U.S.C. § 101 has not been made because, “[b]y the recitation of a NLP in the preamble of original claim 1 and the processor and the memory to perform at

least some steps of the recited method, claim 1 specifically recites an article of manufacture and therefore satisfies the first step of § 101 analysis under *Alice*.” *Id.* at 7. Appellants further argue the Examiner fails to provide sufficient evidence to support the second step of *Alice*. *Id.*

Third, Appellants argue “[c]laim 1 specifically recites a ‘significantly more’ element of ‘**filtering** the portion [of the document],’ ‘**modifying** the instance by adding data at a location,’ and ‘**modifying** the document [includes a mapping between the instance and the full expression].’ *Id.* (brackets in original). According to Appellants:

The above-quoted claim recitation is not directed to subject matter that can properly be considered as "abstract" (within the meaning of U.S. patent eligibility law). This means that: (i) the amended claim, considered as a whole, is not directed to abstract subject matter; and (ii) the amended claim also includes substantially more than abstract subject matter. *See, Enfish, LLC v. Microsoft Corp.*, No. 2015-1244, 2016 WL 2756255 (Fed. Cir. May 12, 2016).

Id.

As discussed below, we are not persuaded by Appellants’ arguments and agree, instead, with the Examiner’s findings and conclusion that the claims are directed to ineligible subject matter in the form of an abstract idea.

The Supreme Court in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014) reiterated the framework set out in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012) for “distinguishing patents that claim . . . abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. The first step in the analysis is to determine if the claim is directed toward a patent-ineligible concept and, if so, the second step is to determine

whether there are additional elements that transform the nature of the claim into a patent eligible application. *Id.* (citing *Mayo*, 566 U.S. at 79, 78). The second step searches for an inventive concept that is sufficient to ensure that the patent amounts to significantly more than a patent on the patent-ineligible concept. *Id.* (citing *Mayo*, 566 U.S. at 72–73).

The question is not whether claims mention a computing environment but what they are “directed to.” The “directed to” inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether “their character as a whole is directed to excluded subject matter.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015); *see Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376, (Fed. Cir. 2016) (inquiring into “[t]he focus of the claimed advance over the prior art”); *Enfish*, 822 F.3d at 1335. “The ‘abstract idea’ step of the inquiry calls upon us to look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)). “In determining the eligibility of respondents’ claimed process for patent protection under § 101, their claims must be considered as a whole.” *Diamond v. Diehr*, 450 U.S. 175, 188 (1981).

We agree with the Examiner’s determination that the claims are directed to the disputed abstract idea, discussed *supra*. Ans. 8–9. Moreover, we determine the claims can be performed by a human using a pen and paper because it is the organization and comparison of data and is similar to other concepts that have been identified as abstract by the courts, such as

using categories to organize, store and transmit information or comparing new and stored information using rules to identify options. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“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*”); *Cyberfone Systems, LLC v. CNN Interactive Group, Inc.*, 558 F. App’x 988 (Fed. Cir. 2014); *SmartGene, Inc. v. Advanced Biological Laboratories, SA*, 555 F. App’x 950 (Fed. Cir. 2014)). Further, merely combining several abstract ideas does not render the combination any less abstract. *RecogniCorp, LLC v. Nintendo Co., Ltd.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract.”); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1094 (Fed. Cir. 2016) (determining the pending claims were directed to a combination of abstract ideas).

We conclude the claims are distinguishable from the type of claim recently considered by the court in *Enfish*, 822 F.3d 1327, and further conclude the claims are not “directed to an improvement in the functioning of a computer,” as was found by the court regarding the subject claim in *Enfish* (*id.* at 1338), because the pending claims recite conventional computer elements without addressing improvements to the functioning of a computer.

Appellants’ reliance on *DDR* is misplaced as the recited claims do not improve the computer or underlying technology. In *DDR*, the claims at issue involved, *inter alia*, “web page[] displays [with] at least one active link associated with a commerce object associated with a buying opportunity of a selected one of a plurality of merchants” (claim 1 of US 7,818,399). The

Federal Circuit found the claims in *DDR* to be patent-eligible under step two of the *Mayo/Alice* test because “the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR Holdings*, 773 F.3d at 1257.

Specifically, the Federal Circuit found the claims addressed the “challenge of retaining control over the attention of the customer in the context of the Internet.” *Id.* at 1258. The rejected claims are dissimilar to *DDR*’s web page with an active link, and the Specification does not support the view that the computer related claim elements are unconventional. *See Spec.* ¶¶ 32–42, 54, 86–89.

Although the Examiner indicates the claims are not unpatentable over cited prior art (Final Act 4–5), this is unpersuasive, as it is directed to a separate statutory requirement under 35 U.S.C. § 103. Our reviewing court guides that “[e]ligibility and novelty are separate inquiries.” *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1340 (Fed Cir. 2017); *see also Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 (Fed. Cir. 2016) (holding that “even assuming” that a particular claimed feature was novel does not “avoid the problem of abstractness”). “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of **no relevance** in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.” *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (emphasis added). Moreover, “a claim for a *new* abstract idea is still an abstract idea.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016).

The Examiner notified Appellants of the reasons for the rejection “together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.”

35 U.S.C. § 132(a). In doing so, the Examiner set forth a prima facie case of unpatentability such that the burden shifted to Appellants to demonstrate that the claims are patent-eligible. On the record before us, Appellants have not met this burden.

We note the introduction of a “processor of a computer system” into the claims to implement an abstract idea is not a patentable application of the abstract idea. *Alice*, 134 S. Ct. at 2357–58. The computer implementation here is purely conventional and performs basic functions. *See id.* at 2359–60. Appellants do not adequately show how the claimed steps are done technically such that they cannot be done manually or that they are not routine and conventional functions of a generic computer. *See Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1334 (Fed. Cir. 2015) (“the limitations of claim 17 involve arranging a hierarchy of organizational and product groups, storing pricing information, retrieving applicable pricing information, sorting pricing information, eliminating less restrictive pricing information, and determining the price. All of these limitations are well-understood, routine, conventional activities previously known to the industry.”).

In view of the above, we sustain the rejection of claim 1, and dependent claims 2, 3, and 7–9, as the Examiner’s findings and conclusions regarding these claims have not been separately rebutted. *See* 37 C.F.R. § 41.37(c)(1)(iv).

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Application 14/090,152

DECISION

We affirm the Examiner's decision rejecting claims 1–3 and 7–9 under 35 U.S.C. § 101.

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED