UNITED STATES PATENT AND TRADEMARK OFFICE

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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 EARL F. RENNISON, PRAVEEN ARASADA, and JUN LUO
_____

Appeal 2019-003296
Application 13/872,925
Technology Center 3600
_____

Before JAMES B. ARPIN, PHILLIP A. BENNETT, and
IFTIKHAR AHMED, *Administrative Patent Judges*.

ARPIN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's non-final rejection of claims 1, 3–15, 17–28, 35, and 36, all of the pending claims. Non-Final Act. 2.[2] Claims 2 and 16 are cancelled, and claims 29–34 are withdrawn. *Id.* We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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[1] "Appellant" here refers to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party-in-interest as Monster Worldwide, Inc. Appeal Br. 2.

[2] In this Decision, we refer to Appellant's Appeal Brief ("Appeal Br.," filed September 19, 2018) and Reply Brief ("Reply Br.," filed March 22, 2019); the Non-Final Office Action ("Non-Final Act.," mailed April 19, 2018); the Examiner's Answer ("Ans.," mailed January 24, 2019); and the originally-filed Specification ("Spec.," filed April 29, 2013). Rather than repeat the Examiner's findings and determinations and Appellant's contentions in their entirety, we refer to these documents.

STATEMENT OF THE CASE

Appellant's claimed methods relate "generally to identifying educational courses for a user of a job search application." Spec. ¶ 1. In particular, the claimed methods are "for identifying gaps in a user's resume, targeting educational courses to the user, and ranking the user's resume." *Id.* ¶ 22.

As noted above, claims 1, 3–15, 17–28, 35, and 36 are pending.[3] Claims 1 and 15 are independent. Appeal Br. 22–23 (claim 1), 26–27 (claim 15) (Claims App.). Claims 3–14, 35, and 36 depend directly or indirectly from claim 1; and claims 17–28 depend directly or indirectly from claim 15. *Id.* at 23–31.

Claim 1, with disputed limitations emphasized, is representative.

1. A computer-implemented method for identifying gaps in a resume, the method comprising:

storing in a computer system a skill knowledge base comprising a collection of skills;

storing in the computer system a requisition knowledge base comprising a collection of job requisitions, each job requisition associated with one or more skills in the skill knowledge base;

storing in the computer system a resume knowledge base comprising a collection of resumes, each resume associated with one or more skills in the skill knowledge base;

storing in the resume knowledge base a resume of a user received into the computer system, the resume associated with one or more skills in the skill knowledge base that match resume skills in the resume;

receiving an input query from the user;

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[3] We note that, in various papers, the Examiner and Appellant misstate the claims at issue. *See, e.g.*, Appeal Br. 6; Ans. 3; Reply Br. 2.

conducting a search of the requisition knowledge base for job requisitions using the input query as input to the search;

identifying, by the search of the requisition knowledge base, a set of job requisitions matching the input query;

identifying, from each of the job requisitions of the matching set, other skills listed in the job requisition that are desired in users applying for a job;

assigning a distinct weight to each of the other skills based on a frequency of occurrence of the other skill across the collection of job requisitions in the requisition knowledge base;

selecting, based on the assigned weights, other skills from each of the job requisitions in the matching set to be designated as required skills for the input query;

conducting a search of the resume knowledge base using the required skills as input to the search;

identifying, from results of the search, additional skills of other users listed in resumes that are subsumed by the required skills, the additional skills being designated as implied required skills for the input query;

assigning a distinct weight to each of the implied required skills based on a frequency of occurrence of the implied required skills in the collection of resumes in the resume knowledge base;

computing a score, by a processor of the computer system, for each of the implied required skills based on the weights assigned to the implied required skills and the weights assigned to the required skills;

selecting, based on the scores, a subset of the implied required skills;

comparing the resume skills of the user with the subset of implied required skills;

identifying, based on the comparison, gap skills of the user that are skills present in the subset of implied required skills and absent from the resume skills of the user; and

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> providing for display to the user the gap skills, which indicate
> what skills the user is missing and may need to acquire to be hired
> for a job matching the user's input query.

Id. at 22–23 (emphases added).

REFERENCES AND REJECTIONS

The Examiner relies upon the following references in rejecting the pending claims:

Name[4]	Number	Pub'd/Issued	Filed
Pennington	US 2010/0233663 A1	Sept. 16, 2010	Mar. 8, 2010
Rennison '125	US 7,827,125 B1	Nov. 2, 2010	June 1, 2007
Rennison '060	US 7,836,060 B1	Nov. 16, 2010	Apr. 13, 2007
Sweeney	US 2012/0143880 A1	June 7, 2012	Dec. 30, 2011
Zhu	US 2012/0232944 A1	Sept. 13, 2012	Mar. 11, 2011
Megargel	US 2012/0264098 A1	Oct. 18, 2012	Apr. 13, 2011

The Examiner rejects claims 1, 3–15, 17–28, 35, and 36 under 35 U.S.C. § 101 as directed to patent ineligible subject matter. Non-Final Act. 3–7. The Examiner also rejects claims 1, 5, 6, 9–15, 19, 20, and 23–28 under 35 U.S.C. § 103 as obvious over the combined teachings of Rennison '125 and Pennington (*id.* at 7–15); claims 7 and 21 under 35 U.S.C. § 103 as obvious over the combined teachings of Rennison '125, Pennington, and Zhu (*id.* at 15–16); claims 3, 4, 17, and 18 under 35 U.S.C. § 103 as obvious over the combined teachings of Rennison '125, Pennington, and Megargel (*id.* at 16–18); claims 8 and 22 under 35 U.S.C. § 103 as obvious over the combined teachings of Rennison '125, Pennington, and Sweeney (*id.* at 19); claim 35 under 35 U.S.C. § 103 as

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[4] All reference citations are to the first named inventor only.

obvious over the combined teachings of Rennison '125, Pennington, and
Rennison '060 (*id.* at 19–20); and claim 36 under 35 U.S.C. § 103 as
obvious over the combined teachings of Rennison '125, Pennington,
Rennison '060, and Sweeney (*id.* at 21–22).[5]

We review the appealed rejections for error based upon the issues
identified by Appellant, and in light of the arguments and evidence produced
thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential).
Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). For the
reasons given below, we reverse the rejections of the pending claims.

ANALYSIS

I. *Patent Eligible Claims*

A. *Section 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.
However, the U.S. Supreme Court has long interpreted 35 U.S.C. § 101 to
include implicit exceptions: "[l]aws of nature, natural phenomena, and
abstract ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573
U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we
are guided by the Court's two-part framework, described in *Mayo* and *Alice*.
Id. at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*,
566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first

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[5] The Examiner also rejected claims 1, 3–15, 17–28, 35, and 36 under 35
U.S.C. § 112, ¶ 2, as indefinite (Non-Final Act. 2–3), but withdrew that
rejection (Ans. 3).

determine what concept the claim is "directed to." *See Alice*, 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.,* the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk."). According to the Court, concepts determined to be abstract ideas and, thus, patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)).

In *Diamond v. Diehr*, the claim at issue recited a mathematical formula, but the Court held that "a claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diamond v. Diehr*, 450 U.S. 175, 187 (1981). Having said that, the Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* at 191 (citing *Benson* and *Flook*). Nevertheless, the Court noted that "[i]t is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." *Id.* at 187; *see also BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1352 (Fed. Cir. 2016) (Even if the individual components were known, "an inventive concept can be found in the ordered combination of claim limitations that transform the

abstract idea of filtering content into a particular, *practical application* of
that abstract idea" (emphasis added).).

   If the claim is "directed to" an abstract idea, we next "must examine
the elements of the claim to determine whether it contains an 'inventive
concept' sufficient to 'transform' the claimed abstract idea into a patent-
eligible application." *Alice*, 573 U.S. at 221 (quotation marks omitted). "A
claim that recites an abstract idea must include 'additional features' to
ensure 'that the [claim] is more than a drafting effort designed to
monopolize the [abstract idea].'" *Id.* (alterations in original) (quoting *Mayo*,
566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[]
fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

   B. Office Patent Eligibility Guidance

   In an effort to achieve clarity and consistency in how the Office
applies the Court's two-part test, the Office published revised guidance on
the application of § 101. *2019 Revised Patent Subject Matter Eligibility
Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019).[6] In Step One of our analysis, we
look to see whether the claims, as written, fall within one of the four
statutory categories identified in § 101. *Id.* at 53 ("Examiners should
determine whether a claim satisfies the criteria for subject matter eligibility
by evaluating the claim in accordance with the criteria discussed in

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[6] "All USPTO personnel are, as a matter of internal agency management,
expected to follow the guidance." *2019 Revised Patent Subject Matter
Eligibility Guidance*, 84 Fed. Reg. at 51; *see also October 2019 Update:
Subject Matter Eligibility*, 2 (Oct. 17, 2019) ("Note, the feedback received
was primarily directed to examination procedures and, accordingly, this
update focuses on clarifying practice for patent examiners. However, all
USPTO personnel are expected to follow the guidance.").

MPEP[7] § 2106, *i.e.*, whether the claim is to a statutory category (Step 1) and the *Alice/Mayo* test for judicial exceptions (Steps 2A and 2B)") (emphasis added).

> Under the guidance, we then look to whether the claim recites:
>
> (1) Step 2A – Prong One: any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity, such as a fundamental economic practice, or mental processes); and
>
> (2) Step 2A – Prong Two: additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)).

See 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. at 54–55 ("Revised Step 2A").

> Only if a claim (1) recites a judicial exception *and* (2) does not integrate that exception into a practical application, do we then look to whether the claim:
>
> (3) adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)); or
>
> (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See id. at 56 ("*Step 2B: If the Claim Is Directed to a Judicial Exception, Evaluate Whether the Claim Provides an Inventive Concept.*").

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[7] All Manual of Patent Examining Procedure ("MPEP") citations herein are to MPEP, Rev. 08.2017, January 2018.

C. Step One – Claims Directed to Statutory Categories

Appellant's independent claims 1 and 15 and their associated dependent claims are directed to methods (i.e., a "process"). Non-Final Act. 3; *see* Appeal Br. 22–31 (Claims App.). Thus, the pending claims are directed to a recognized statutory category.

D. Two-Part Alice/Mayo Analysis

1. Independent Claims 1 and 15

a. Step 2A, Prong One – Claims Recite Abstract Ideas

Applying the first part of the *Alice/Mayo* analysis (Step 2A), the Examiner determines claim 1 recites mental processes and certain methods of organizing human activity. Ans. 4; *see October 2019 Update: Subject Matter Eligibility* at 2 ("Other claims may recite multiple abstract ideas, which may fall in the same or different groupings, or multiple laws of nature. In these cases, examiners should not parse the claim."). For the reasons given below, we agree.

Claim 1 broadly recites the steps of (1) collecting job skills ("storing . . . a skill knowledge base comprising a collection of skills"); (2) collecting job requisition skills corresponding to the collected job skills ("storing . . . a requisition knowledge base comprising a collection of job requisitions, each job requisition associated with one or more skills in the skill knowledge base"); (3) collecting resumes comprising candidates' skills corresponding to collected job skills ("storing . . . a resume knowledge base comprising a collection of resumes, each resume associated with one or more skills in the skill knowledge base"); (4) adding a received resume to the collected resumes, the received resume comprising a candidate's skills corresponding

to collected job skills ("storing in the resume knowledge base a resume of a user received into the computer system, the resume associated with one or more skills in the skill knowledge base that match resume skills in the resume"); (5) receiving a query ("receiving an input query from the user"); (6) searching for and identifying job requisitions based on the query ("conducting a search of the requisition knowledge base for job requisitions using the input query as input to the search" and "identifying, by the search of the requisition knowledge base, a set of job requisitions matching the input query"); (7) identifying *desired or undesired skills other than required skills*[8] from the identified job requisitions ("identifying, from each of the job requisitions of the matching set, other skills listed in the job requisition that are desired in users applying for a job"); (8) assigning a weight to each of the desired skills based on their frequency of occurrence in the collected job requisitions ("assigning a distinct weight to each of the other skills based on a frequency of occurrence of the other skill across the collection of job requisitions in the requisition knowledge base"); (9) selecting desired skills based on their assigned weights and adding them to the required skills ("selecting, based on the assigned weights, other skills from each of the job requisitions in the matching set to be designated as required skills for the input query"); (10) searching the collected resumes using the required skills ("conducting a search of the resume knowledge base using the required skills as input to the search"); (11) identifying additional skills in the

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[8] The Examiner interprets "other skills" as undesired or desired skills, i.e., skills other than required skills. Non-Final Act. 9. Appellant does not contest this interpretation. For purposes of this Decision, we adopt this interpretation.

collected resumes sought by other users that are subsumed in the required skills and designating those additional skills as "implied required skills" ("identifying, from results of the search, additional skills of other users listed in resumes that are subsumed by the required skills, the additional skills being designated as implied required skills for the input query");

(12) assigning a weight to each of the "implied required skills" based on a frequency of their occurrence in the collected resumes ("assigning a distinct weight to each of the implied required skills based on a frequency of occurrence of the implied required skills in the collection of resumes in the resume knowledge base"); (13) calculating a score based on the weights assigned to the "implied required" and the required skills ("computing a score . . . for each of the implied required skills based on the weights assigned to the implied required skills and the weights assigned to the required skills"); (14) selecting a subset of the "implied required skills," i.e., subset skills ("selecting, based on the scores, a subset of the implied required skills"); (15) comparing the skills in the received resume to the subset skills ("comparing the resume skills of the user with the subset of implied required skills"); (16) identifying subset skills missing from the resume skills, i.e., gap skills ("identifying, based on the comparison, gap skills of the user that are skills present in the subset of implied required skills and absent from the resume skills of the user"); and (17) displaying the gap skills ("providing for display to the user the gap skills, which indicate what skills the user is missing and may need to acquire to be hired for a job matching the user's input query"). Appeal Br. 22–23 (Claims App.); *see* Final Act. 4. Thus, claim 1 recites collecting sets of employee and job-related information, analyzing the information sets, comparing the analyzed information sets, and

displaying the results of the comparisons. *See Electric Power Grp., LLC v. Alstrom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) ("collecting information, analyzing it, and displaying certain results of the collection and analysis" is not patent eligible); *see also Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1319 (Fed. Cir. 2019) (citing *Electric Power Grp.* with approval). Independent claim 15 recites substantially similar limitations. Appeal Br. 26–27 (Claims App.).

Appellant contends the claims do not recite a method of organizing human activities identified in the *2019 Revised Patent Subject Matter Eligibility Guidance* (84 Fed. Reg. at 52). Reply Br. 3. However, claim 1's limitations, under their broadest reasonable interpretation, recite providing methods for evaluating resumes in view of job requisitions and job skills (e.g., making hiring-related decisions), which are fundamental economic practices and "commercial or legal interactions (including agreements in the form of contracts [and] business relations); [and] managing personal behavior or relationships or interactions between people (including . . . following rules or instructions)." *See* Spec. ¶¶ 1–5, 22; *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. at 52 n.13 (citing *In re Ferguson*, 558 F.3d 1359, 1364 (Fed Cir. 2009) (holding methods "directed to organizing business or legal relationships in the structuring of a sales force (or marketing company)" to be ineligible)). Thus, we determine the claims recite "certain methods of organizing human activities."[9] Ans. 4.

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[9] *See October 2019 Update: Subject Matter Eligibility* at 5 ("Finally, the sub-groupings encompass both activity of a single person (for example, a person following a set of instructions or a person signing a contract online) and activity that involves multiple people (such as a commercial interaction), and thus, certain activity between a person and a computer (for example a

Appellant also contends that the claims do not recite a mental process that can be "performed in the mind by human observation, evaluation, judgement or opinion." Reply Br. 3. In particular, Appellant contends "[t]he recitation of data processing techniques implemented to process vast amounts of data associated with user's resumes and job position within an online environment precludes an interpretation of the claims where the elements are performed in the human mind." *Id.* However, the claims do not recite that "vast amounts of data" are associated with either user's resumes or job positions, or both. *E.g.*, Appeal Br. 22–23 (Claims App.). Moreover,

> Claims can recite a mental process even if they are claimed as being performed on a computer. Suggestions were made that an examiner should determine that a claim, when given its broadest reasonable interpretation, recites a mental process only when the claim is performed entirely in the human mind. After consideration, this suggestion will not be adopted, and the current "mental processes" grouping in the 2019 PEG will be retained, since it is consistent with current case law. The courts have found claims requiring a generic computer or nominally reciting a generic computer may still recite a mental process even though the claim limitations are not performed entirely in the human mind.

October 2019 Update: Subject Matter Eligibility at 8. Here, we determine that, although the methods are intended to be performed on a computer, the recited methods, as a practical matter, could be performed in the human mind, or by a human using a pen and paper. *See id.* at 9 (citing *CyberSource Corp. v. Retail Decisions, Inc.* 654 F.3d 1366, 1372, 1375–76 (Fed. Cir.

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method of anonymous loan shopping that a person conducts using a mobile phone) may fall within the 'certain methods of organizing human activity' grouping.").

2011) (distinguishing *Research Corp. Techs. v. Microsoft Corp.,* 627 F.3d 859 (Fed. Cir. 2010), and *SiRF Tech., Inc. v. Int'l Trade Comm'n,* 601 F.3d 1319 (Fed. Cir. 2010))). Thus, we determine the claims also recite "mental processes." Ans. 4.

> *b. Step 2A, Prong Two – Abstract Ideas Not Integrated Into Practical Application*

As the Office has explained,

> the evaluation of Prong Two requires the use of the considerations (e.g. improving technology, effecting a particular treatment or prophylaxis, implementing with a particular machine, etc.) identified by the Supreme Court and the Federal Circuit, to ensure that the claim as a whole "integrates [the] judicial exception into a practical application [that] will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception." These considerations are set forth in the 2019 PEG, MPEP 2106.05(a) through (c), and MPEP 2106.05(e) through (h). Note, a specific way of achieving a result is not a stand-alone consideration in Step 2A Prong Two. However, the specificity of the claim limitations is relevant to the evaluation of several considerations including the use of a particular machine, particular transformation and whether the limitations are mere instructions to apply an exception.

October 2019 Update: Subject Matter Eligibility at 11. Appellant contends, however:

> Examiner merely concludes that because there are generic computer components, there are just mere instructions to apply the exception using a generic computer. *See* [Ans. 4]. However, Examiner fails to perform any actual analysis of any of the additional claim limitations beyond the computer components and the few limitations noted as the abstract idea.

Reply Br. 4. We disagree.

The Examiner finds:

> This judicial exception is not integrated into a practical application. In particular, the claim only recites the additional elements–computer system; ["]computing a score, by a processor of the computing system". The processor; computing system, display in steps are recited at a high-level of generality (i.e., as a generic processor performing a generic computer function of receiving and searching and displaying data) such that it amounts to no more than mere instructions to apply the exception using a generic computer component. Accordingly, this additional element does not integrate the abstract idea into a practical application because it does not impose any meaningful limits on practicing the abstract idea. The claim is directed to an abstract idea.

Ans. 4; *see* Non-Final Act. 5 ("The processor system in the instant application merely receives, processes and stores data. The claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment."). Moreover, the Examiner finds:

> Taking the additional claimed elements individually and in combination, the computer components at each step of the process perform purely generic computer functions. Viewed as a whole, the claims do not purport to improve the functioning of the computer itself, or to improve any other technology or technical field. Use of an unspecified, generic computer does not transform an abstract idea into a patent-eligible invention. Thus, the claim does not amount to significantly more than the abstract idea itself. Further, claims to a system and computer-readable storage medium are held ineligible for the same reason, e.g., the generically-recited computers add nothing of substance to the underlying abstract idea.[10]

[10] We acknowledge that some of the considerations at Step 2A, Prong Two, properly may be evaluated under the second part of *Alice/Mayo* analysis

Non-Final Act. 6.

As the Examiner found, the claims do not recite the particular
technology employed in the recited methods, except in the most general
terms. *Id.* at 5–6; Ans. 4; *see* Spec. ¶¶ 37 (known computer systems), 38
(known system components), 52 (typically performed on-line searches), 62
(known nested search techniques), 121 (known collections of resumes), 132
(known algorithmic descriptions), 134 ("general-purpose computing
devices"). The methods of claims 1 and 15 merely invoke generic hardware
and generic data collecting, storage, retrieval, and display techniques, and
the recited methods are not linked to any particular machine (MPEP
§ 2106.05(b)) and merely apply generic computer hardware and software to
facilitate the solution to a business problem (MPEP § 2106.05(f)). Non-
Final Act. 5–6; Ans. 4; *see 2019 Revised Patent Subject Matter Eligibility
Guidance*, 84 Fed. Reg. at 55 nn.27, 30.

In view of Appellant's claim recitations and Specification and
consistent with the Examiner's determinations, we are persuaded the
rejected claims do not recite:

(i) an improvement to the functioning of a computer;
(ii) an improvement to another technology or technical field;
(iii) an application of the abstract idea with, or by use of, a
 particular machine;
(iv) a transformation or reduction of a particular article to a
 different state or thing; or
(v) other meaningful limitations beyond generally linking the

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(Step 2B of the Office's guidance). For purposes of maintaining consistent
treatment within the Office, we evaluate those considerations under first part
of the *Alice/Mayo* analysis (Step 2A of the Office's guidance). *See 2019
Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. at 55
nn.25, 27–32.

use of the abstract idea to a particular technological
environment.

See MPEP §§ 2106.05(a)–(c), (e)–(h). Thus, we conclude that the pending

claims do not integrate the judicial exceptions into a practical application

and that the claims are directed to abstract ideas.

c. Step 2B – Significantly More Than the Abstract Ideas

Because we determine that the claims are directed to abstract ideas

and do not integrate those abstract ideas into a practical application, we now

consider whether the claims include additional limitations, such that the

claims amount to significantly more than the abstract ideas. As noted above,

applying second part of the *Alice/M*ayo analysis, the Examiner concludes:

> The claim does not include additional elements that are sufficient
> to amount to significantly more than the judicial exception. As
> discussed above with respect to integration of the abstract idea
> into a practical application, the additional element of using a
> processor, computer system and display to perform both the
> sending and receiving steps amounts to no more than mere
> instructions to apply the exception using a generic computer
> component. Mere instructions to apply an exception using a
> generic computer component cannot provide an inventive
> concept. The claims are not patent eligible.

Ans. 4. Appellant contends:

> With regards to step 2B, the additional limitations of the
> claims amount to significantly more than the alleged abstract. *As
> described above, Examiner fails to perform any actual analysis
> of any of the additional claim limitations beyond the computer
> components and the few limitations noted as the abstract idea.*
> These additional limitations do not merely recite well-
> understood and conventional activities for the reasons explained
> in the Appeal Brief. If Examiner disagrees with Appellant's
> arguments, Examiner is required to provide evidence according
> to the updates to the 2019 Guidance in view of *Berkheimer*.

Reply Br. 5 (emphasis added). In particular, Appellant contends

> the *Berkheimer* [Memorandum] states that an additional element
> (or combination of elements) is not well-understood, routine or
> conventional unless the examiner finds, and expressly supports a
> rejection in writing with, one or more of the following:
>
>> 1. A citation to an express statement in the specification or
>> to a statement made by an applicant during prosecution
>>
>> 2. A citation to one or more of the court decisions
>> discussed in MPEP § 2106.05(d)(II)
>>
>> 3. A citation to a publication that demonstrates the well-
>> understood, routine, conventional nature of the additional
>> element(s).
>>
>> 4. A statement that the examiner is taking official notice
>> of the well-understood, routine, conventional nature of the
>> additional element(s).

Appeal Br. 12 (citing Changes in Examination Procedure Pertaining to
Subject Matter Eligibility, Recent Subject Matter Eligibility Decision
(*Berkheimer v. HP., Inc.*), 3–4 (Apr. 19, 2018) (the "*Berkheimer*
Memorandum")); *see October 2019 Update: Subject Matter Eligibility* at 16
("For instance, when the examiner has concluded that certain claim elements
recite well-understood, routine, conventional activity in the relevant field,
the examiner must expressly support such a rejection in writing with one of
the four options specified in Section III.A. of the *Berkheimer*
Memorandum."). We agree with Appellant.

The Examiner's reliance on the determination that the claims fail to
integrate the recited abstract ideas into a practical application is not
sufficient to support the finding that the claim limitations, considered
individually and as a ordered combination, are well-known, routine, and
conventional and do not amount to significantly more than the abstract ideas.
See Ans. 4–5. We are persuaded that the Examiner has not adequately

addressed the requirements of the *Berkheimer* Memorandum in this second part of the patent eligibility analysis. *Berkheimer v. HP, Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018) ("The question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact. Any fact, such as this one, that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence."). Thus, we are persuaded, on this record, that the Examiner erred in determining that independent claims 1 and 15 are patent ineligible, and we do not sustain that rejection.

2. Dependent Claims 3–14, 17–28, 35, and 36

The Examiner determines that dependent claims 3–14, 17–28, 35, and 36 also are directed to abstract ideas and fail to recite significantly more than the identified abstract ideas. Non-Final Act. 6. The Examiner, however, does not find the dependent claims patentably ineligible separately from their base claims, independent claims 1 and 15. *Id.*; *see* Appeal Br. 13; Ans. 3–4. Therefore, for the reasons given above, we also do not sustain the patent ineligibility rejection of the dependent claims.

II. Lack of Obviousness Over Rennison '125 and Pennington, Alone or in Combination with Other References

A. Independent Claims 1 and 15

As noted above, the Examiner rejects independent claims 1 and 15 under 35 U.S.C. § 103 as obvious over the combined teachings of Rennison '125 and Pennington. Non-Final Act. 8–12. With respect to claim 1, the Examiner determines that Rennison '125 teaches or suggests most of the claim limitations, but the Examiner acknowledges that Rennison '125 does not specifically teach,

> *identifying, <u>based on the comparison</u>, gaps in a resume; identifying gap skills/titles of the user that are skills present in the subset of implied required skills and absent from the resume skills of the user*; and

> <u>*providing for display to the user the gap skills, which indicated what skills the user is missing and may need to acquire to be hired for a job matching the user's input query*</u>.

Id. at 11 (quoting Claim 1) (underlining added by the Examiner)). However, the Examiner finds that Pennington teaches these claim limitations. *Id.*

Pennington's Figure 1 is reproduced below.
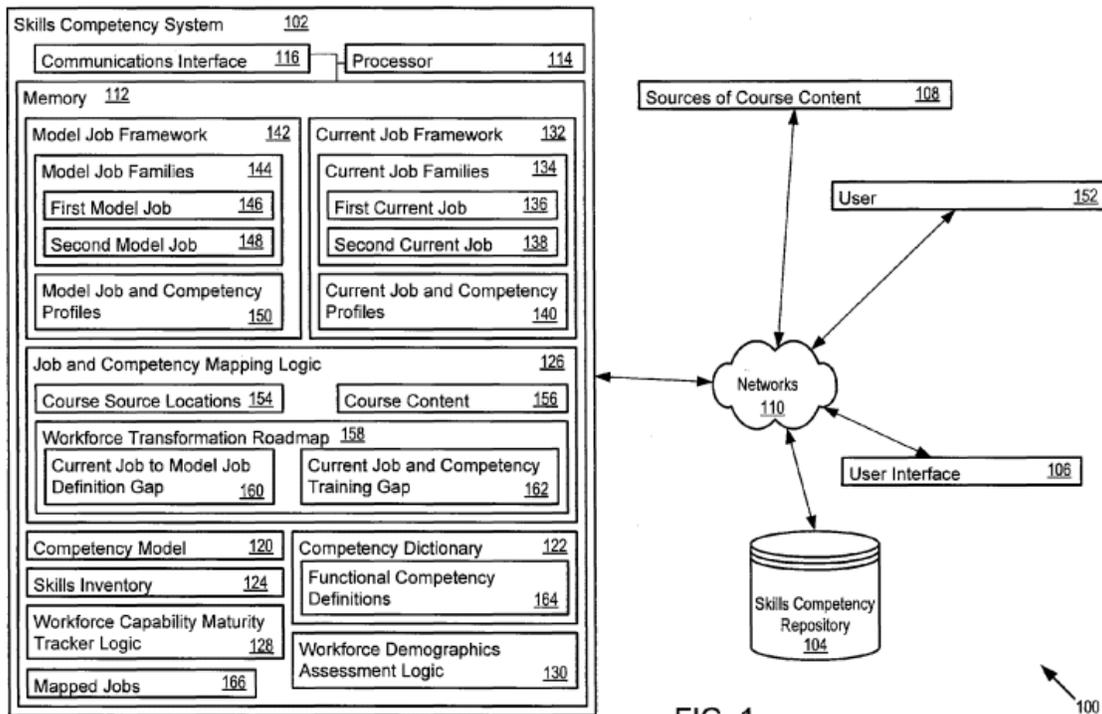

FIG. 1

Figure 1 depicts a skills competency system configuration. Pennington ¶ 18; *see id.* ¶¶ 60–62, 66–67 (describing Fig. 1). The Examiner finds Pennington teaches

> generat[ing] a mapped job gap assessment that comprises difference job and competency profile elements. The difference job and competency profile elements identify elements of the current job and the functional competency definitions and the

> skills inventory functional competency definitions that do not
> match. . . . The job and competency mapping logic 126 generates
> and displays a job gap assessment for the current [query.] . . . The
> job and competency mapping logic 126 generates the current job
> and competency training gap 162 for the user 152.

Non-Final Act. 11. In particular, Pennington discloses "[t]he workforce

transformation roadmap 158 may include current job to model job definition

gap 160, a current job and competency training gap 162, and mapped jobs

166." Pennington ¶ 67.

> Pennington further discloses that:

> A skills competency tool provides a quick and efficient way to
> assess an organization's workforce capability maturity, and
> generate a workforce transformation roadmap. *The skills
> competency tool provides a way to assess and recommend
> modifications to job and competency profiles defined by an
> organization.*

Pennington, Abstract (emphasis added); *see* Non-Final Act. 12. The

Examiner concludes that a person of ordinary skill in the art would have had

reason to combine the teachings of Rennison '125 and Pennington to achieve

the methods recited in claim 1, as well as those recited in claim 15. Non-

Final Act. 12.

Appellant contends "Rennison ['125] does not disclose 'assigning a

distinct weight *to each of the other skills* based on a frequency of occurrence

of the other skill *across the collection of job requisitions in the requisition

knowledge base*." Reply Br. 6 (emphases added); *see* Appeal Br. 16. As

noted above, the Examiner interprets "other skills" as "undesired or desired

skills i.e. skills other than required." Non-Final Act. 9.

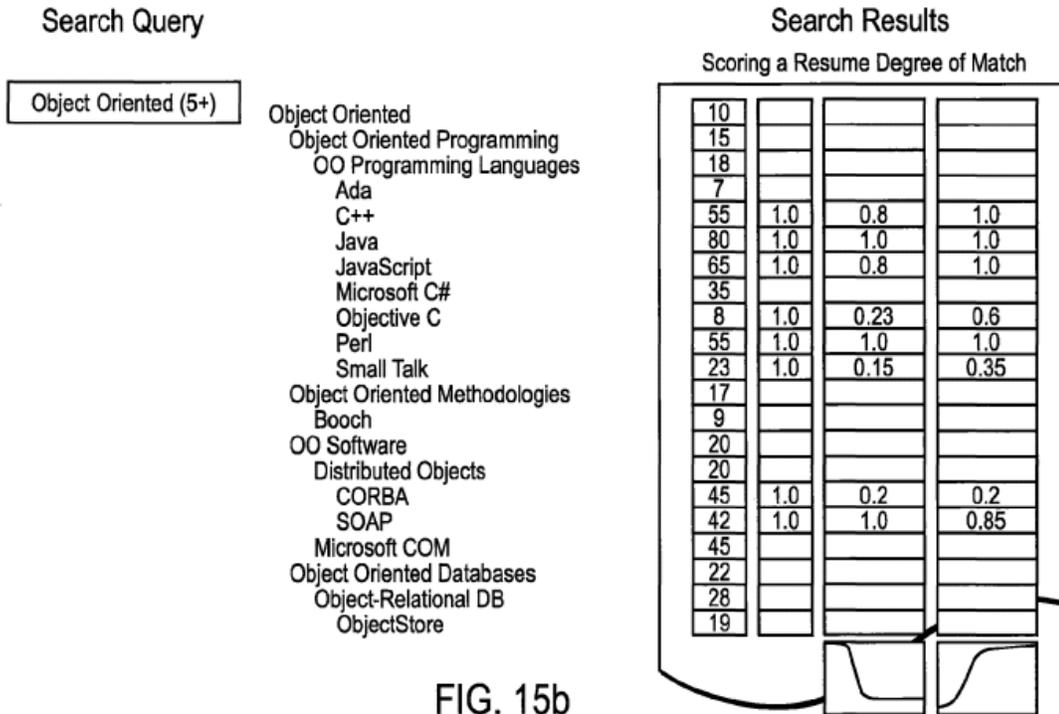Rennison '125's Figure 15b is reproduced below.

FIG. 15b

Figure 15b depicts "a high-level block diagram illustrating a search query example showing *scoring of a resume degree of match*, according to one embodiment of the [Rennison '125's] invention." Rennison '125, 10:65–67 (emphasis added). Referring to Figure 15b, the Examiner finds Rennison '125 teaches a weight is assigned to each of various skills, such as C++ programming or JAVA programming. Ans. 6 (citing Rennison '125, 40:62–41:2). The weight assigned each skill allegedly indicates number of *resumes* that listed those skills, i.e., the frequency of occurrence of those skills in the *resumes*. *Id.* (citing Rennison '125, 43:1–10). A skill may be identified by its importance based on this weighing. *Id.* (citing Rennison '125, 48:45–58, 49:1–15, 62–65, Table I). Nevertheless, the cited portions of Rennison '125 refer to weighting based on occurrences in

resumes, not occurrences in *job requisitions*, as recited in claims 1 and 15.[11]
Thus, we are persuaded that the Examiner fails to demonstrate that
Rennison '125 teaches or suggests this limitation.

Consequently, we are persuaded that the Examiner erred in rejecting
claims 1 and 15 as rendered obvious over the combined teachings of
Rennison '125 and Pennington, and we do not sustain the rejection of those
claims.

B. Dependent Claims 3–14, 17–28, 35, and 36

The Examiner determines that dependent claims 3–14, 17–28, 35, and
36 are rendered obvious over the combined teachings of Rennison '125 and
Pennington, alone or in combination with the teachings of one or more other
references. *See* Non-Final Act. 12–22. Appellant does not challenge the
obviousness rejections of the dependent claims separately from their base
claims, independent claims 1 and 15. Appeal Br. 18–20; Reply Br. 8–9.
Therefore, for the reasons given above, we also do not sustain the
obviousness rejections of the dependent claims.

DECISIONS

1. The Examiner erred in rejecting claims 1, 3–15, 17–28, 35, and 36 under
   35 U.S.C. § 101, as directed to patent ineligible subject matter;

2. The Examiner erred in rejecting claims 1, 3–15, 17–28, 35, and 36 under

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[11] We note that claim 1 further recites "assigning a distinct weight to each of
the implied required skills based on a frequency of occurrence of the implied
required skills in the collection of resumes in the resume knowledge base."
Appeal Br. 23 (Claims App.). Unlike the limitation discussed above, this
limitation assigns weights based on frequency of occurrence in *resumes*,
rather than *job requisitions*.

35 U.S.C. § 103, as obvious over the combined teachings of
Rennison '125 and Pennington, alone or in combination with the
teachings of one or more of Zhu, Megargel, Sweeney, and
Rennison '060.

3. Thus, on this record, claims 1, 3–15, 17–28, 35, and 36 are not
unpatentable.

CONCLUSION

We reverse the Examiner's rejections of claims 1, 3–15, 17–28, 35,
and 36.

In summary:

Claims Rejected	35 U.S.C. §	Basis/References	Affirmed	Reversed
1, 3–15, 17–28, 35, 36	101	Eligibility		1, 3–15, 17–28, 35, 36
1, 5, 6, 9–15, 19, 20, 23–28	103	Rennison '125, Pennington		1, 5, 6, 9–15, 19, 20, 23–28
7, 21	103	Rennison '125, Pennington, Zhu		7, 21
3, 4, 17, 18	103	Rennison '125, Pennington, Megargel		3, 4, 17, 18
8, 22	103	Rennison '125, Pennington, Sweeney		8, 22
35	103	Rennison '125, Pennington, Rennison '060		35
36	103	Rennison '125, Pennington, Rennison '060, Sweeney		36

Overall Outcome				1, 3–15, 17–28, 35, 36

REVERSED