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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAVIER CRUZ MOTA,
JEAN-PHILIPPE VASSEUR, and ANDREA DI PIETRO

Appeal 2019-001276
Application 14/275,344
Technology Center 2400

Before BRADLEY W. BAUMEISTER, ERIC B. CHEN, and JOHN F. HORVATH, *Administrative Patent Judges*.

BAUMEISTER, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–3, 5–13 and 15–23, which constitute all of the pending claims.[1] Appeal Br. 6–34. We have jurisdiction under 35 U.S.C. § 6(b).

The Board conducts a limited *de novo* review of 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).

We affirm.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Cisco Technology, Inc. Appeal Brief filed May 21, 2018 ("Appeal Br.") 1.

STATEMENT OF THE REJECTIONS

Claims 1–3, 5–13, and 15–23 stand rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Final Action mailed Oct. 16, 2017 ("Final Act."), 7–10.

Claims 1–3, 6–13, and 16–23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Baker (US 2007/0277242 Al; published Nov. 29, 2007) and Radinsky (US 2012/0084859 Al; published Apr. 5, 2012). Final Act. 11–18.

Claims 5 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Baker, Radinsky, and Hudis (US 2008/0229422 Al; published Sept. 18, 2008). Final Act. 18–19.

THE SECTION 101 REJECTION

The Claimed Invention and Rejection

Independent claim 1 represents the appealed claims.[2] Claim 1 is reproduced below with paragraph numbering added for clarity and emphasis added to the claim language that recites an abstract idea:

> 1. A method, comprising:
>
> [(a)] sending, by a device, voting optimization requests to a plurality of network nodes that identify a validation data set, wherein the plurality of network nodes are nodes that host classifiers that are associated with a given classification problem between classifiers distributed across a network, and wherein the classifiers are machine learning processes that associate a label from among a set of labels with an input set of data;
>
> [(b)] receiving, at the device, voting optimization data from the plurality of network nodes, wherein the network nodes generate

[2] Appellant argues the section 101 rejection of all of the appealed claims together as a group, selecting claim 1 as representative. Appeal Br. 5–13.

> the voting optimization data by executing classifiers using the validation data set, and wherein the voting optimization data includes a classifier identifier for a particular classifier and an output of the particular classifier based on the validation data set;
>
> [(c)] *selecting a set of one or more voting classifiers from among the classifiers based on the voting optimization data, wherein the selection results in an optimum voting strategy for the given classification problem between the classifiers distributed across the network and wherein the optimum voting strategy includes the set of one or more selected voting classifiers and a minimum number of votes required from the selected one or more voting classifiers to establish an agreement between the set of one or more selected voting classifiers during a vote;* and
>
> [(d)] notifying, by the device, one or more network nodes of the plurality of network nodes of the selection, wherein each of the notified network nodes hosts a voting classifier in the set of one or more selected voting classifiers.

The Examiner determines that claims 1–3, 5–13, and 15–23 are directed to a judicial exception to patent eligible subject matter without reciting significantly more. Final Act. 7–10. More specifically, the Examiner finds that "the claims fall under certain methods of organizing human activity and are directed to the abstract idea of collecting information, analyzing it, and displaying certain results of the collection and analysis. *Id*. at 8 (citing *Electric Power Group, LLC, v. Alstom*, 830 F.3d 1350 (Fed. Cir. 2016)).

Principles of Law

A. SECTION 101:

Inventions for a "new and useful process, machine, manufacture, or composition of matter" generally constitute patent-eligible subject 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. *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-step framework, described in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012), and *Alice. Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 75–77). In accordance with that framework, we first 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.").

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)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *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." *Diehr*, 450 U.S. at 187; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). 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*) (citation omitted); *see also, e.g.*, *id.* at 187 ("It 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.").

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we 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 (internal 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. USPTO SECTION 101 GUIDANCE:

In January 2019, the U. S. Patent and Trademark Office ("USPTO") published revised guidance on the application of 35 U.S.C. § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50

(Jan. 7, 2019) ("2019 Guidance"), *updated by* USPTO, *October 2019 Update: Subject Matter Eligibility* (available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf) ("October 2019 Guidance Update"); *see also* October 2019 Patent Eligibility Guidance Update, 84 Fed. Reg. 55942 (Oct. 18, 2019) (notifying the public of the availability of the October 2019 Guidance Update). "All USPTO personnel are, as a matter of internal agency management, expected to follow the guidance." 2019 Guidance, 84 Fed. Reg. at 51; *see also* October 2019 Guidance Update at 1.

Under the 2019 Guidance, we first look to whether the claim recites the following:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activities such as a fundamental economic practice, or mental processes); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)).

2019 Guidance, 84 Fed. Reg. at 52–55.

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, [and] 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.

2019 Guidance, 84 Fed. Reg. at 56.

Analysis

STEP 2A, PRONG 1:

Under step 2A, prong 1, of the 2019 Guidance, we first look to whether the claim recites any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activities such as a fundamental economic practice, or mental processes). 84 Fed. Reg. at 52–54.

Limitation (c) recites,

> selecting a set of one or more voting classifiers from among the classifiers based on the voting optimization data, wherein the selection results in an optimum voting strategy for the given classification problem between the classifiers distributed across the network and wherein the optimum voting strategy includes the set of one or more selected voting classifiers and a minimum number of votes required from the selected one or more voting classifiers to establish an agreement between the set of one or more selected voting classifiers during a vote.

Appeal Br. 22.

This limitation is broad enough to read on a human selecting the one or more voting classifiers after reading a computer display of the voting optimization data. Accordingly, limitation (c)'s step of selecting a set of one or more voting classifiers, as claimed, constitutes a mental process, such as an evaluation or judgment that can be performed in the human mind.

The 2019 Guidance expressly recognizes such mental processes as constituting patent-ineligible abstract ideas. 2019 Guidance, 84 Fed. Reg.

at 52. Because limitation (c) recites a patent-ineligible abstract idea, limitations (c) recites a judicial exception to patent-eligible subject matter under step 2A, prong 1, of the 2019 Guidance.

STEP 2A, PRONG 2:

Under step 2A, prong 2, of the 2019 Guidance, we next analyze whether claim 1 recites additional elements that individually or in combination integrate the judicial exception into a practical application. 2019 Guidance, 84 Fed. Reg. at 53–55. The 2019 Guidance provides exemplary considerations that are indicative of an additional element or combination of elements integrating the judicial exception into a practical application, such as an additional element reflecting an improvement in the functioning of a computer or an improvement to other technology or a technical field. *Id.* at 55; MPEP § 2106.05(a).

Claim 1 recites the "additional elements," "a device," "a plurality of network nodes," and one or more "classifiers" on the network nodes. Appeal Br. 22. The term "device" is a nonce word. *See Welker Bearing Co. v PHD, Inc.*, 550 F.3d 1090, 1096 (Fed Cir. 2008) (holding that an unadorned term that is simply a nonce word, or a verbal construct that is not recognized as the name of structure, is simply a substitute for the term "means for"). Also, nothing in claim 1 reasonably indicates that the network nodes and their classifiers are other than generic computer components and processes that are used to carry out the abstract idea. Indeed, Appellant's Specification indicates that the network nodes and classifiers may be realized by generic networked computers:

> Learning machine process 248 contains computer executable instructions executed by the processor 220 to perform

> various functions, such as attack detection and reporting. In general, machine learning is concerned with the design and the development of techniques that take as input empirical data (such as network statistics and performance indicators), and recognize complex patterns in these data. *One very common pattern among machine learning techniques* is the use of an underlying model M, whose parameters are optimized for minimizing the cost function associated to M, given the input data.

Spec. 7:5–12.

Use of generic computer components to perform generic machine learning classification is insufficient to integrate a judicial exception into a practical application. *See Alice*, 573 U.S. at 226 (determining that the claim limitations "data processing system," "communications controller," and "data storage unit" were generic computer components that amounted to mere instructions to implement the abstract idea on a computer); October 2019 Guidance Update at 11–12 (holding that a recitation of generic-computer limitations for implementing the abstract idea "would not be sufficient to demonstrate integration of a judicial exception into a practical application").

Aside from limitation (c), claim 1's three remaining limitations are directed to insignificant extra-solution activity. More specifically, limitation (a) recites, "sending, by a device, voting optimization requests to a plurality of network nodes that [perform a recited function]." Limitation (b) recites, "receiving, at the device, voting optimization data from the plurality of nodes, wherein the network nodes generate the voting optimization data [in a specified manner]." Limitation (d) recites, "notifying, by the device, [those nodes hosting the] selected voting classifiers."

Limitations (a) and (b) do not add any meaningful limitations beyond the abstract idea because they merely recite insignificant pre-solution activity:

> An example of pre-solution activity is a step of gathering data for use in a claimed process, *e.g.,* a step of obtaining information about credit card transactions, which is recited as part of a claimed process of analyzing and manipulating the gathered information by a series of steps in order to detect whether the transactions were fraudulent.

MPEP § 2106.05(g).

Similarly, limitation (d) does not add any meaningful limitations to the abstract idea because it is directed to the insignificant post-solution activity of transmitting data. *See, e.g.*, *Apple, Inc. v. Ameranth*, *Inc.*, 842 F.3d 1229, 1241–42 (Fed. Cir. 2016) (holding that printing or downloading generated menus constituted insignificant extra-solution activity).

Appellant argues that the present claims are directed toward the technical solution of optimizing a voting strategy for classifiers in a network. Appeal Br. 9. More specifically, Appellant argues, "the presently claimed invention allows a voting strategy to be computed between different classifiers, which is optimized for a particular classification problem that an element of a Self-Learning Network is facing, such as for instance the classification of traffic between normal and attack." *Id*. Appellant continues,

> [t]he obtained meta-classifier (voting between several different classifiers) improves the classification performance obtained by a single classifier and allows to combine classifiers that consider the same output label but that have been computed using, potentially, different machine learning techniques, such as . . . [artificial neural networks (ANN)], [support-vector machines (SVM)], naive Bayes, etc., and even different input features.

> Accordingly, the amount of data exchanged between the classification entities is reduced significantly, making this invention well suited to [Internet of Things (IoT)] networks.

Id.

The Examiner answers, "claim 1 fails to recite any specific steps, techniques or criteria for selecting a set of voting classifiers that would result in an optimum voting strategy." Ans. 5. "Instead, the 'selecting' step is recited at a high level of generality and fails to require any steps that explain how an 'optimum voting strategy' is achieved." Id. We agree with the Examiner.

Claim 1 does not recite a method for optimizing a voting strategy. Rather, it recites sending validation data to the classifiers, receiving optimization data identifying the classifiers and their outputs, and "selecting a set of one or more voting classifiers . . . based on the optimization data, wherein the selection results in an optimum voting strategy." Appeal Br. 22 (App'x A). Nothing in claim 1 indicates how the optimum voting strategy is determined or how the set of classifiers is selected based on the optimization data.

Therefore, the claim is directed to an abstract idea. *See Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1316 (Fed. Cir. 2016) (explaining that "when a claim directed to an abstract idea 'contains no restriction on how the result is accomplished . . . [and] [t]he mechanism . . . is not described, although this is stated to be the essential innovation[,]' then the claim is not patent-eligible") (internal citation omitted); *see also Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015) (a claim that "contains no restriction on how the result is accomplished"

even though the result "is stated to be the essential innovation" is not patent eligible).

Further, previous cases have found that the steps recited in claim 1 amount to conventional computer activities or routine data-gathering and data-transmission steps. *See*, e.g. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information."); *OIP Techs. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363, (Fed. Cir. 2015) (claims reciting, *inter alia*, sending messages over a network, gathering statistics, using a computerized system to automatically determine an estimated outcome, and presenting offers to potential customers found to merely recite "well-understood, routine conventional activities" by either requiring conventional computer activities or routine data-gathering steps); *see also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) ("That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive."); *Bancorp Servs. v. Sun Life Assurance Co., of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("The computer required by some of Bancorp's claims is employed only for its most basic function, the performance of repetitive calculations, and as such does not impose meaningful limits on the scope of those claims.").

For these reasons, Appellant does not persuade us that claim 1 is directed to an improvement in the function of a computer or to any other technology or technical field. MPEP § 2106.05(a). Nor has Appellant persuasively demonstrated that claim 1 is directed to a particular machine or

transformation. MPEP §§ 2106.05(b), (c). Nor has Appellant persuasively demonstrated that claim 1 adds any other meaningful limitations for the purposes of the analysis under Section 101. MPEP § 2106.05(e). Accordingly, Appellant has not persuaded us that claim 1 integrates the recited abstract ideas into a practical application within the meaning of the 2019 Guidance. *See* 2019 Guidance, 84 Fed. Reg. at 52–55.

STEP 2B:

Under step 2B of the 2019 Guidance, we next analyze whether claim 1 adds any specific limitations beyond the judicial exception that, either alone or as an ordered combination, amount to more than "well-understood, routine, conventional" activity in the field. 84 Fed. Reg. at 56; MPEP § 2106.05(d).

Appellant's Specification describes the claimed device and network nodes and their classifiers generically, indicating that these additional elements were well-understood, routine, and conventional:

> According to various embodiments, lightweight learning machine classifiers may be distributed to network nodes for purposes of attack detection. In general, a classifier refers to a machine learning process that is operable to associate a label from among a set of labels with to an input set of data. For example, a classifier may apply a label (e.g., "Attack" or "No Attack") to a given set of network metrics (e.g., traffic rate, etc.). The distributed classifiers may be considered "lightweight" in that they may have lower computational requirements than a full-fledged classifier, at the tradeoff of lower performance. To improve attack detection, a central computing device (e.g., a FAR, NMS**,** etc.) that has greater resources may execute a more computationally intensive classifier in comparison to the distributed lightweight classifier. In cases in which a distributed classifier detects an attack, it may provide data to the central device to validate the results and/or to

> initiate countermeasures. However, since the performance of a distributed classifier may be relatively low, this also means that there may be a greater amount of false positives reported to the central classifier.

Spec. 14; *see also, e.g.*, Spec. 3 (describing conventional computer networks as being a distributed collection of nodes interconnected by communication links); Spec. 28 ("while the techniques herein are described primarily in the context of an LLN [Low power and Lossy Network], the techniques herein may be applied more generally to any form of computer network, such as an enterprise network.").

Furthermore, Appellant's Specification does not indicate that consideration of these conventional elements as an ordered combination adds any significance beyond the additional elements, as considered individually. Rather, Appellant's Specification indicates that the invention is directed to an abstract idea that is made more efficient with generic computer components—"the computation of an optimized voting strategy for a particular classification problem." Spec. 27.

For these reasons, we determine that claim 1 does not recite additional elements that, either individually or as an ordered combination, amount to significantly more than the judicial exception within the meaning of the 2019 Guidance. 84 Fed. Reg. at 52–55; MPEP § 2106.05(d).

Accordingly, we sustain the Examiner's rejection of claim 1 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. We, likewise, sustain the 101 rejection of claims 2, 3, 5–13, and 15–23, which Appellant does not argue separately. Appeal Br. 13.

THE SECTION 103 REJECTION

The Examiner finds the combination of Baker and Radinsky teaches all elements of claim 1. *See* Final Act. 11–15. Regarding the step of "selecting a set of one or more voting classifiers from among the classifiers based on the voting optimization data, wherein the selection results in an optimum voting strategy for the given classification problem," the Examiner finds Radinsky teaches this limitation. *Id.* at 14 (citing Radinsky ¶¶ 25, 30, 36, Figs. 1, 2).

Appellant disagrees for several reasons. *See* Appeal Br. 13–20. First, Appellant argues "nothing in Baker optimizes the voting strategy of the nodes in the network." *Id.* at 15. This argument is unpersuasive because the Examiner relies on Radinsky, not Baker, for teaching this limitation. *See* Final Act. 14; *see also In re Keller,* 642 F.2d 413, 425 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Appellant next argues, "Radinsky does not discuss a process for optimizing a voting strategy in the network. That is, Radinsky does not say *how* it optimizes its selection process." Appeal Br. 15 (emphasis added). This argument is unpersuasive because, as discussed above, claim 1 does not recite *how* the classification engines are selected to generate an optimum voting strategy. Rather, claim 1 recites "selecting a set of one or more voting classifiers . . . based on the voting optimization data, wherein the selection results in an optimum voting strategy." *Id.* at 22 (App'x A). Claim 1 does not recite *how* the optimization data is used to select the classifiers that form an optimum voting strategy.

Moreover, we agree with the Examiner that Radinsky teaches optimizing a voting strategy, Radinsky teaches selection component 114

contains one or more classifiers 116 that select one or more engines 104 to generate a candidate engine 118. *See* Radinsky ¶¶ 25–26, Fig. 1. The engines 104 are selected because they are known to be good at detecting certain types of files. *Id.* ¶ 30. That is, engines 104 are selected based on optimization data as required by claim 1 (i.e., engine identifiers and outputs). *Id.* The outputs of selected engines 104 (i.e., candidate engine 118) are provided to aggregation component 128, which determines an overall output 130. *Id.* ¶ 26, Fig. 1. Thus, Radinsky generates an optimum voting strategy comprising selected engines 104 and aggregation component 128.

Appellant next argues, the "combination of Baker and Radinsky does not provide a process for optimizing a voting strategy" because it does not teach "wherein the optimum voting strategy includes: (1) the set of one or more selected voting classifiers and (2) a minimum number of votes required from the selected one or more voting classifiers." Appeal Br. 16 (emphasis omitted). The Examiner relies on Baker to teach an optimum voting strategy that includes a set of classifiers and requires a minimum number of classifier votes. *See* Final Act. 13 (citing Baker ¶¶ 31, 33, 40). Appellant argues this is error because "the voting process is static in Baker," which "initiates a non-optimized voting process using the strategy already implemented in the network." Appeal Br. 18.

We are not persuaded by Appellant's arguments, which fail to consider what the combined teachings of Baker and Radinsky would have suggested to a person skilled in the art. *See Keller,* 642 F.2d at 425; *Merck,* 800 F.2d at 1091. As explained above, Radinsky selects one or more engines 104 to generate candidate engine 118 and aggregation component 128 to aggregate the outputs of engines 104 in candidate engine 118 (i.e., an

optimum voting strategy). *See* Radinsky ¶¶ 25–26, 30, Fig. 1. Baker teaches an optimized voting strategy could consist of a threshold number of votes from a selected set of classifiers. *See* Baker ¶¶ 29–31 (teaching an agent sends an attack petition to a plurality of agents, and a leader monitors the votes from the plurality of agents for a threshold number of votes).[3]

Finally, Appellant argues, "Radinsky does not discuss a process for optimizing a voting strategy" because it only "makes the selection of classification engines based on information learned off-line. Thus, the selection process does not utilize machine learning." Appeal Br. 19. We disagree.

Although Radinsky selects engines 104 because "[o]ff-line, it can be learned that a subset of the expensive engines 104 are good at detecting BOTs," this does not mean that the selection process does not use machine learning. Radinsky ¶ 30. Indeed, Radinsky provides "a description for training *machine learning classifiers* to be applied for expert selection. Specifically, the algorithm is divided into the classifier's training and the classifier's application on unknown and possibly realtime data." *Id.* ¶ 65 (emphasis added). Thus, each "classifier can be provided per anti-malware

[3] We note that Radinsky also teaches an optimum voting strategy consisting of a selected set of classifiers and a minimum number of classifier votes. Radinsky's candidate engine 118 is a set of selected classifiers and Radinsky's aggregation component 128 "process[es] the correspond outputs of classification information 122 and output[s] an overall detection output 130." Radinsky ¶ 26. Radinsky further teaches the classifier outputs "can be combined in one of several ways to make the final determination if the unknown file is malware," including by determining "if at least one anti-malware engine classifies the unknown file as malware" or "if two or more engines detect the file is malware." *Id.* ¶¶ 85–86.

engine (that can be trained offline in a controlled environment). However, this is not to be construed as so limited as training can also be performed on real examples (e.g., online or offline . . .)." *Id.* ¶ 66.

Accordingly, for the reasons explained above, Appellant has failed to demonstrate the Examiner erred in rejecting claim 1 as obvious over Baker and Radinsky.

Appellant does not separately argue for the patentability of claims 2, 3, 6–13, and 16–23 over the combination of Baker and Radinsky. *See* Appeal Br. 13–20. Accordingly, we affirm the rejection of claims 2, 3, 6–13, and 16–23 for the same reasons as claim 1.

Finally, Appellant argues claims 5 and 15 are patentable over the combination of Baker, Radinsky, and Hudis for the same reasons as claims 1 and 11. *Id.* at 20. Accordingly, we affirm the rejection of claims 5 and 15 for the same reasons as claim 1.

DECISION SUMMARY

In summary:

Claims Rejected	**35 U.S.C. §**	**Reference(s)/ Basis**	**Affirmed**	**Reversed**
1–3, 5–13, 15–23	101	Eligibility	1–3, 5–13, 15–23	
1–3, 6–13, 16–23	103	Baker, Radinsky	1–3, 6–13, 16–23	
5, 15	103	Baker, Radinsky, Hudis	5, 15	
Overall Outcome			**1–3, 5–13, 15–23**	

TIME PERIOD FOR RESPONSE

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).

AFFIRMED