UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/708,152	12/07/2012	Mark Peter Stoke	12587-0099002 / 22139US3	9678

26212 7590 08/01/2018

FISH & RICHARDSON P.C. (ACCENTURE)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
SWARTZ, STEPHEN S	

ART UNIT	PAPER NUMBER
3623	

NOTIFICATION DATE	DELIVERY MODE
08/01/2018	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MARK PETER STOKE
and
CARL WARD

Appeal 2017-004527
Application 13/708,152[1]
Technology Center 3600

Before CARLA M. KRIVAK, HUNG H. BUI, and JON M. JURGOVAN, *Administrative Patent Judges*.

JURGOVAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek review under 35 U.S.C. § 134(a) from a Final Rejection of claims 1, 5–7, 11–16, and 20–23, which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.[2]

---

[1] Appellants identify Accenture Global Services Limited, as the real party in interest. (App. Br. 1.)

[2] Our Decision refers to the Specification ("Spec.") filed December 7, 2012, the Final Office Action ("Final Act.") mailed March 30, 2016, the Appeal Brief ("App. Br.") filed September 23, 2016, the Examiner's Answer ("Ans.") mailed December 16, 2016, and the Reply Brief ("Reply Br.") filed

CLAIMED INVENTION

The claims are directed to a method and system for "conducting an assessment of the risk that [client's tax] data is either incomplete or incorrect, and deciding [a] future action as a result of the outcome of the assessment." (Spec. 1:15–17.) Appellants' invention "generates risk assessment data," "receives the risk assessment data," and "selects appropriate actions for subsequent processing of the client [tax] data according to the assessment of risk." (Abstract.) Appropriate actions include "[personalizing] any online interaction . . . to force high risk clients . . . to provide additional data that others are generally not required to provide," and "having more checks applied [to high risk cases] throughout [a tax preparation] process whilst low risk cases will generally proceed with fewer checks." (Spec. 15:5–9, 15:16–18, 15:31–33; Abstract.)

Claims 1, 7, and 16 are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A system comprising:
>
> one or more computers and one or more storage devices storing instructions that are operable, when executed by the one or more computers, to cause the one or more computers to perform operations comprising:
>
> receiving historical tax return data that includes, for each of a plurality of users, data indicating whether a respective user submitted an improper tax return and data included in the respective user's respective tax return;
>
> training, using the data indicating whether the respective user submitted an improper tax return and the data included in the respective user's respective tax return as training data, a neural network to predict a given user's predictive risk

---

January 17, 2017.

score for the given user's likelihood to submit an improper tax return based at least in part on data associated with the given user's tax return;

generating, using the trained neural network, a predictive risk score for a user, wherein the predictive risk score reflects the user's predicted risk for submitting an improper tax return;

after generating the predictive risk score, providing, for output, a first interface including one or more initial fields of an interactive tax return form, receiving one or more initial values entered by the user through the first interface in the one or more initial fields of the interactive tax return form;

before submitting the tax return for the user:

generating, using the neural network, a first modified, predictive risk score based at least on one or more of the initial values;

determining, based on comparing the first modified predictive risk score to a threshold risk score, that the user is classified as having a heightened risk for submitting an improper tax return;

based on determining that the user is classified as having heightened risk for submitting an improper tax return, providing, for output, a second interface including one or more additional fields of the interactive tax return form, wherein the one or more additional fields of the interactive tax return form are not provided to users that are not classified as having a heightened risk for submitting an improper tax return

receiving one or more additional values entered by the user through the second interface in the one or more additional interactive tax return form fields; and

generating, using the neural network, a second modified predictive risk score based at least on one or more of the initial values and one or more of the additional values; and

submitting the tax return for further processing by a tax return process that is associated with the second modified predictive risk score.

(App. Br. 19–20 (Claims App'x).)

REJECTIONS & REFERENCES

(1) Claims 1, 5–7, 11–16, and 20–23 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. (Final Act. 2–7.)

(2) Claims 1, 6, 7, 12–16, 21, and 23 stand rejected under 35 U.S.C. § 103(a) based on Walker et al. (US 2001/0044734 Al, published Nov. 22, 2001) ("Walker"), TurboTax (*Taxes Made Easy. Taxes Done Right*, Internet Archive Wayback Machine, available at, http://turbotax.intuit.com, 1–5 (2005)) ("TurboTax"), and Fischthal (US 5,822,741, issued Oct. 13, 1998).[3] (Final Act. 8–21.)

(3) Claims 5, 11, 20, and 22 stand rejected under 35 U.S.C. § 103(a) based on Walker, TurboTax, Fischthal, and Quinn et al. (US 7,860,763 B1, issued Dec. 28, 2010) ("Quinn"). (Final Act. 21–24.)

ANALYSIS

Rejection of Claims 1, 5–7, 11–16, and 20–23 under 35 U.S.C. § 101

Patent eligibility is a question of law that is reviewable *de novo*. *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012).

Patentable subject matter is defined by 35 U.S.C. § 101 as follows:

> [w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new

[3] The TurboTax document has five consecutive pages. Although these pages are not consecutively *numbered* inside the document, the Examiner refers to TurboTax's five consecutive pages *as pages 1–5*; we do the same. (*See* Final Act. 8.)

> and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In interpreting this statute, the Supreme Court emphasizes that patent protection should not preempt "the basic tools of scientific and technological work." *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012); *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014). The rationale is that patents directed to basic building blocks of technology would not "promote the progress of science" under the U.S. Constitution, Article I, Section 8, Clause 8, but instead would impede it. Accordingly, laws of nature, natural phenomena, and abstract ideas are not patent-eligible subject matter. *Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1346 (Fed. Cir. 2017) (citing *Alice*, 134 S. Ct. at 2354).

The Supreme Court set forth a two-part test for subject matter eligibility in *Alice*. *Alice*, at 2355. The first step is to determine whether the claim is directed to a patent-ineligible concept. *Alice*, at 2355 (citing *Mayo*, 566 U.S. at 76–77). If so, then the eligibility analysis proceeds to the second step of the *Alice/Mayo* test, in which we "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*, at 2357 (quoting *Mayo*, at 72, 79). The "'inventive concept'" may be embodied in one or more of the individual claim limitations or in the ordered combination of the limitations. *Alice*, at 2355. The "inventive concept" must be significantly more than the abstract idea itself, and cannot be simply an instruction to implement or apply the abstract idea on a computer. *Alice*, at 2358. "'[W]ell-understood, routine, [and] conventional activit[ies]'

previously known to the industry" are insufficient to transform an abstract idea into patent-eligible subject matter. *Alice*, at 2359 (citing *Mayo*, at 73).

Turning to the first part of the *Alice/Mayo* analysis, the Examiner finds claim 1 is directed to "the abstract idea of analyzing information provided by users to determine whether the data entered" is correct and "to determine [whether] tax preparation is correct," which is a fundamental economic practice that can also "'be performed in the human mind, or by a human using a pen and paper.'" (Final Act. 3–4.) The Examiner also finds claim 1 is directed to an abstract idea of "using categories to organize, store and transmit information," "comparing new and stored information and using rules to identify options," and "collecting data, recognizing certain data within the collected data set, and storing that recognized data," which is analogous or similar to the abstract ideas of gathering and organizing information discussed in *Cyberfone*, *SmartGene*, *Content Extraction*, and *Electric Power Group*. (Final Act. 4 (citing *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 F. App'x 988 (Fed. Cir. 2014); *SmartGene, Inc. v. Advanced Biological Labs., SA*, 852 F. Supp. 2d 42 (D.D.C. 2012), *aff'd* 555 F. App'x 950 (Fed. Cir. 2014); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343 (Fed. Cir. 2014)); Ans. 10–11 (citing *Electric Power Grp, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016)).)

Appellants contend the Examiner erred in rejecting claim 1, and similarly claims 7 and 16, as directed to non-statutory subject matter because the claims are not directed to an abstract idea, and the Examiner overgeneralized the claims and "ignored various claim features." (App. Br. 14, 17–18.) However, the Examiner concludes, and we agree, claim 1 is

abstract because it is directed to a fundamental economic business practice of checking tax filing information to ensure tax documents are correct, helping tax filers avoid audits by revenue agencies (e.g., IRS), and helping revenue agencies identify tax reporting errors. (Final Act. 3–4.)

The Examiner's finding is supported by Appellants' Specification, which provides "[a]n embodiment of the invention continuously predicts compliance risk for each taxpayer and such a risk assessment may be used to intervene proactively with taxpayers to avoid lodgement of a non complying return," thus "requir[ing] less effort for the tax payer to lodge a compliant return." (*See* Spec. 14:29–15:2.) The Specification further describes an "embodiment of the invention" in which "[a]s the revenue agency processes each return form[,] it may calculate interaction risk scores" "using the same risk model that is used for calculating predictive risk scores," further "enabl[ing] the tax agency to set hidden fields within the [electronic] form that provide an indication if a risk condition has been reached." (*See* Spec. 26:3–7, 28:1–7.) Similar abstract ideas long prevalent in our system of commerce, for implementing tasks to mitigate risks in financial and transactional practices, have been identified in *Alice*, *Bilski*, *buySAFE*, *CyberSource*, and *Accenture Global Services*. *See Alice*, at 2356–57 (intermediated settlement of traded or exchanged financial obligations to mitigate the risk that one party will not perform); *Bilski v. Kappos*, 561 U.S. 593, 599, 611 (2010) (risk hedging); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (guaranteeing a party's performance of its online transaction); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011) (verifying the validity of a credit card transaction over the Internet); and *Accenture Global Servs., GmbH v.*

Guidewire Software, Inc., 728 F.3d 1336, 1344–45 (Fed. Cir. 2013) (claims reciting "generalized software components arranged to implement an abstract concept [of generating insurance-policy-related tasks based on rules to be completed upon the occurrence of an event, e.g., for processing an insurance claim] on a computer" not patent eligible).

As further recognized by the Examiner, Appellants' claim 1 recites generic data manipulation steps of receiving, comparing, and organizing data. (Final Act. 4; Ans. 10–11.) As the Specification itself observes, "[t]he system and method of the present invention is particularly useful for receiving data from clients, conducting an assessment of the risk that the data is either incomplete or incorrect, and deciding future action as a result of the outcome of the assessment." (*See* Spec. 1:14–20.) Such data manipulation steps are abstract ideas similar to data manipulation techniques identified in *Cyberfone*, *SmartGene*, *Digitech*, *Content Extraction*, *Electric Power Group*, and *Intellectual Ventures*. (Final Act. 4; Ans. 10–11; *see SmartGene, Inc. v. Advanced Biological Labs., SA*, 852 F. Supp. 2d 42 (D.D.C. 2012), *aff'd* 555 F. App'x 950 (Fed. Cir. 2014); *Cyberfone*, 558 F. App'x at 988, 992; *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (employing mathematical algorithms to manipulate existing information); *PerkinElmer, Inc. v Intema Ltd.*, 496 Fed. Appx. 65 (Fed. Cir. 2012) (comparing data to determine a risk level); *Content Extraction*, 776 F.3d at 1347–48 (finding that "[t]he concept of data collection, recognition, and storage is undisputedly well-known," and "humans have always performed these functions"); *Electric Power Grp.*, 830 F.3d at 1353–54 (collecting information and "analyzing information by steps people go through in their minds, or by mathematical algorithms,

without more, [are] essentially mental processes within the abstract-idea category"); and *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (tailoring information presented to a user based on particular information).)

We further agree with the Examiner the data manipulation steps recited in claim 1 "can be performed . . . by a human using a pen and paper." (Final Act. 4.) "[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101." *CyberSource*, 654 F.3d at 1373. That is, mental processes can be unpatentable even when automated to reduce the burden on the user of what once could have been done with pen and paper. *See CyberSource*, at 1375 ("purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*."). For example, the claimed steps of generating risk scores for a user before submitting the user's tax return could be performed by a certified public accountant (CPA) hired to prepare the user's taxes. A CPA could determine or anticipate a user's possible tax reporting errors by reviewing the user's tax filing history and previous user's interactions with IRS. The claimed steps of requesting "initial" and "additional values" (e.g., tax information) from the user could be performed by the CPA requesting tax-related information from the user based on the CPA's understanding of user's previous reporting errors and oversights.

We recognize Appellants' claim 1 recites a "trained neural network," which is a computing system, not a pen and paper application. Appellants, however, have not demonstrated their claimed neural network is able to perform *functions that are not merely generic* for neural networks. *See DDR*

Holdings, LLC, v. Hotels.com, L.P., 773 F.3d 1245, 1257–58 (Fed. Cir. 2014) (holding the claims at issue patent eligible because "they do not broadly and generically claim 'use of the Internet' to perform an abstract business practice (with insignificant added activity)," and "specify how interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink"); *see also Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter."); *Dealertrack*, 674 F.3d at 1333–34 ("[s]imply adding a 'computer aided' limitation to a claim covering an abstract concept, without more, is insufficient to render [a] claim patent eligible" (internal citation omitted)).

Appellants further argue claim 1 is similar to the claims in *Enfish* because "claim 1 recites several features that are tied to [a] specific solution" that is "directed to using neural networks to identify likely improper tax returns and only present additional user interfaces to the users who have a heightened risk for submitting an improper tax return." (App. Br. 14–15 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016)).) Appellants' Specification, however, does not describe how the claimed applications for identifying and correcting improper tax returns effect specific improvements to the computers, neural networks, or user interfaces, or to the way such systems operate. (Ans. 10, 12.) *See Enfish*, 822 F.3d at 1336. Additionally, Appellants do not present evidence to establish their claim recites a specific improvement to the computers, or an improvement in

the technical functioning of a neural network system. *See Enfish*, at 1336. Appellants also have not demonstrated their claim "improve[s] the way a computer stores and retrieves data in memory," as the claims in *Enfish* did via a "self-referential table for a computer database." *See Enfish*, at 1327, 1336. Additionally, Appellants have not demonstrated their claim provides a "solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks," as explained by the Federal Circuit in *DDR*, 773 F.3d at 1257, or an "unconventional technological solution . . . to a technological problem" that "improve[s] the performance of the system itself," as explained in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300, 1302 (Fed. Cir. 2016).

We are also unpersuaded by Appellants' argument that "claim 1 is patent-eligible" because the claimed computer "perform[s] a distinct process to automate a task" that allows for specific advantages and improvements realized. (App. Br. 15–16.) Particularly, Appellants argue claim 1 "improves the state of the art using a 'specific process for automatically' using neural networks to analyze tax returns in real time" and automatically "predicts the probability a taxpayer will be non-compliant based on the data available at the time the prediction is to be made." (App. Br. 15–16 (citing Spec. 4:24–5:20, 21:19–22).) Appellants' arguments are unpersuasive because Appellants are reading limitations from the Specification into the claims. Although claims are interpreted in light of the Specification, limitations from the Specification are not read into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). Here, claim 1 does not recite or effect the advocated improvements of identifying or predicting *non-*

compliant tax submissions to a revenue agency. (*See* App. Br. 15.) Claim 1's predictive risk scores are generated "*before submitting* the tax return," and are used for "*submitting* the tax return *for further processing by a tax return process* that is associated with the second modified predictive risk score." (App. Br. 19–20 (Claims App'x) (emphasis added).) The claimed "submitting the tax return for further processing by a tax return process" does not recite a purpose or application of the risk score generating steps, such as determining whether a filed tax return is non-compliant with a revenue agency's tax reporting guidelines. In fact, claim 1 does not require the tax return to be submitted, or even evaluated, by a revenue agency or other official tax entity.

Further, with respect to Appellants' preemption argument (that "'claim 1 is limited to a specific process'" and does not preempt "all . . . means of [] determining whether tax preparation is correct," *see* App. Br. 17), we note the *McRO* court explicitly "recognized that 'the absence of complete preemption does not demonstrate patent eligibility.'" *See McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1315 (Fed. Cir. 2016) (quoting *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015)).

Additionally, as explained *supra*, we are not persuaded Appellants' stated advantages and solutions are caused by a specific technological implementation or by any technical improvement to a computer's operation. Rather, as recognized by the Examiner, Appellants' claim "utiliz[es] generic computer equipment." (Ans. 12.) "[T]he use of generic computer elements like a microprocessor" to perform conventional computer functions does "not alone transform an otherwise abstract idea into patent-eligible subject

matter." *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) (citing *DDR Holdings*, at 1256).

Accordingly, we agree with the Examiner that independent claims 1, 7, and 16 are directed to an abstract idea and amount to nothing more than an attempt to patent the abstract idea embodied in the steps of the claims. *See Alice*, at 2355 (quoting *Mayo*, at 78).

Because we agree with the Examiner's analysis and find Appellants' arguments insufficient to show error, we sustain the rejection of claims 1, 7, and 16 under 35 U.S.C. § 101. No separate arguments are presented for the dependent claims 5, 6, 11–15, and 20–23, which fall with independent claims 1, 7, and 16. 37 C.F.R. § 41.37(c)(1)(iv). We, therefore, sustain the rejection under 35 U.S.C. § 101 of claims 5, 6, 11–15, and 20–23.

Rejection of Claims 1, 5–7, 11–16, and 20–23 under 35 U.S.C. § 103(a)

Claim 1 (and similarly, claims 7 and 16) recites:

> *generating, using the trained neural network,* a *predictive risk score for a user*, wherein the predictive risk score reflects the user's predicted risk for submitting an improper tax return;
>
> *after generating the predictive risk score*, providing, for output, a first interface including one or more initial fields of an interactive tax return form, receiving one or more initial values entered by the user through the first interface in the one or more initial fields of the interactive tax return form;
>
> before submitting the tax return for the user:
>
> *generating, using the neural network*, a *first modified, predictive risk score* based at least on one or more of the initial values;
>
> determining, based on comparing the first modified predictive risk score to a threshold risk score, that the user is classified as having a heightened risk for submitting an improper tax return;

> *based on determining that the user is classified as having heightened risk for submitting an improper tax return, providing, for output, a second interface including one or more additional fields* of the interactive tax return form, wherein the one or more additional fields of the interactive tax return form *are not provided to users that are not classified as having a heightened risk for submitting an improper tax return*
>
> receiving one or more additional values entered by the user through the second interface in the one or more additional interactive tax return form fields; and
>
> *generating, using the neural network*, a *second modified predictive risk score* based at least on one or more of the initial values and one or more of the additional values.

(App. Br. 19–20 (Claims App'x) (emphasis added).)

Thus, claims 1, 7, and 16 require a *trained neural network* to generate the following *three risk scores* reflecting a user's predicted risk for submitting an improper tax return: **(1)** *an initial predictive risk score* for the user, **(2)** *a first modified, predictive risk score* based on user's initial value(s) provided in initial field(s) of an interactive tax return form, and **(3)** *a second modified predictive risk score* based on user's initial value(s) and *additional value(s) requested via additional field(s)* of the interactive tax return form, the *additional value(s) being requested* from the user after "comparing the first modified predictive risk score to a threshold risk score" and "determining, based on [the] comparing . . . that the user is classified as having a heightened risk for submitting an improper tax return." (App. Br. 19–20 (Claims App'x).) The *additional field(s)* of the interactive tax return form "are not provided to users that are not classified as having a heightened risk for submitting an improper tax return." (App. Br. 19–20.)

With respect to claims 1, 7, and 16, the Examiner finds the combination of Walker, Fischthal, and TurboTax teaches determining a

user's predicted risk for submitting an improper tax return and generating corresponding predictive risk scores, as claimed. (Final Act. 8–13; Ans. 4–7.) Particularly, the Examiner finds Walker's paragraph 105 discloses "based on the audit risk providing additional documents that need to be addressed (i.e.[,] additional forms)" or "not providing additional documents (i.e.[,] additional forms)," thereby teaching the claimed "based on determining that the user is classified as having heightened risk for submitting an improper tax return, providing, for output, a second interface including one or more additional fields of the interactive tax return form" although "the one or more additional fields of the interactive tax return form are not provided to users that are not classified as having a heightened risk for submitting an improper tax return." (Final Act. 8–9 (citing Walker ¶ 105) (emphasis omitted).) The Examiner further finds TurboTax teaches receiving a user's initial values and additional values provided in respective initial fields and additional fields of an interactive tax return form. (Ans. 5–6 (citing TurboTax 5); Final Act. 9.) The Examiner also finds Fischthal teaches a trained neural network generates the claimed predictive risk scores by determining "a measure of error likelihood (i.e.[,] score) of fraudulent tax return" and "an iteratively calculated error likelihood (i.e.[,] score)" based on "additional data inputted." (Final Act. 11 (citing Fischthal col. 5, ll. 5–15, col. 5, l. 49–col. 6, l. 25, col. 7, ll. 29–42, col. 7, l. 60–col. 8, l. 33, col. 9, ll. 41–59); *see also* Ans. 5–6.) The Examiner finds Fischthal's "different attributes that are summed up are . . . [the claimed] one or more initial values," the "determined error likelihood of the individual attributes are . . . a first predictive score," and "the addition of the multiple other attributes

contributes to . . . a second modified predictive score which may cause an error in the tax return." (Ans. 7.) We do not agree.

We agree with Appellants that Walker, Fischthal, and TurboTax, alone or in combination, fail to teach or suggest a "'*trained neural network*'" generating a "'*second modified predictive risk score*'" based on a "'*first modified, predictive risk score*'" generated by the same trained neural network, the "'*second modified predictive risk score*'" being generated *only for a user classified as having a heightened risk for submitting an improper tax return*, as claimed. (App. Br. 8–10 (emphasis added).) Walker, Fischthal, and TurboTax also fail to teach or suggest a "trained neural network" generates the "second modified predictive risk score" based on additional value(s) requested from and provided by a user after "comparing the first modified predictive risk score [generated by the trained neural network] to a threshold risk score" and "determining, based on [the] comparing . . . that the user is classified as having a heightened risk for submitting an improper tax return." (App. Br. 7–10, 19–20.) Rather, Fischthal's "error likelihoods," "sum of the error likelihoods," and "the total error likelihood for an attribute" of historical data (*see* Ans. 5, 7) are parameters that "create a set of conceptually cohesive classes, class 1 through class N" before "a separate and independent neural network is . . . created" for each class. (*See* Fischthal col. 5, ll. 5–15 and ll. 50–55, col. 6, ll. 18–33; App. Br. 8–9.) In other words, Fischthal's error likelihoods and total error likelihood are used "to build a series of separate classes" (such as "classes of taxpayers") from historical data attributes, before a "next task, [in which] the neural network classifier **30** must be created and trained" to establish "a neural network . . . for each of the respective classes." (*See*

Fischthal col. 6, ll. 45–46 and ll. 57–59, col. 7, ll. 45–52, col. 8, ll. 62–64.) Thus, Fischthal's error likelihoods and total error likelihood do not teach a "second modified predictive risk score" generated by a trained neural network based on a "first modified, predictive risk score" generated by the same trained neural network, as claimed. (App. Br. 8–9.)

The Examiner also refers to Fischthal's *iterations* as generating the claimed "**second modified predictive risk score**." (Final Act. 11.) As Appellants explain, however, Fischthal's iterations merely create the classes and train neural networks for respective classes, and do not teach "'generating . . . a second modified predictive risk score' 'using [a] [trained] neural network'" as claimed. (App. Br. 9; *see* Fischthal col. 7, ll. 29–42, col. 7, l. 60–col. 8, l. 33.)

The Examiner further cites to Fischthal's column 9, lines 41–59 as teaching the use of a *trained neural network* to measure a user's predicted risk for submitting an improper tax return. (Final Act. 11 (citing Fischthal col. 9, ll. 41–59).) Fischthal, however, discloses a parser "assign[s] the event [e.g., a particular tax return] to the correct class"—this classification *not using the neural network*. (*See* Fischthal col. 9, ll. 33–35 and ll. 45–51, col. 10, ll. 16–18; App. Br. 10.) "*After the event has been assigned to a class*, a second set of predetermined vectors is provided as input *to the neural network* ***30*** which corresponds to the class," "[t]he *neural network then processes the information"* and "provide[s] an output in the form of an identification of whether there is or is not likely fraud in the tax return." (*See* Fischthal col. 9, ll. 34–40, col. 10, ll. 24–27 (emphases added).) Thus, Fischthal at most teaches the trained neural network generates *one risk score* ("an identification of whether there is or is not likely fraud in the tax return,"

see Fischthal col. 10, ll. 25–27), but does not teach "'*modified*' *versions of* '*risk scores*' that were 'generat[ed] using the trained neural network,' as recited by claim 1." (App. Br. 10 (emphasis added).)

Fischthal therefore does not teach or suggest the claimed "second modified predictive risk score" generated by a trained neural network based on additional values requested from a user "classified as having a heightened risk for submitting an improper tax return" based on "comparing the [user's] first modified predictive risk score [generated by the same trained neural network] to a threshold risk score." (App Br. 9–10.)

Walker does not make up for the above-noted deficiencies of Fischthal. Walker's online risk evaluator generates *one risk score* based on the user's answers to *a fixed set of questions*. (*See* Walker ¶¶ 104–105, Figs. 6A–6C (questionnaire generates a risk of being audited by the IRS).) For example, Walker's online risk evaluator requests a list of the user's filed Schedules and Forms. (*See* Walker ¶¶ 104–105, Figs. 6A–6B.) Walker does not teach or suggest the claimed "second modified predictive risk score" generated *based on additional value(s) requested from a user after* "comparing [a] first modified predictive risk score to a threshold risk score" and "'determining, based on [the] comparing . . . that the user is classified as having a heightened risk for submitting an improper tax return.'" (App Br. 10, 19–20.) Walker also does not teach "one or more additional fields of the interactive tax return form are not provided to users that are not classified as having a heightened risk for submitting an improper tax return," as claimed. (App. Br. 10.)

TurboTax similarly fails to teach the claimed "second modified predictive risk score" generated based on *additional value(s) requested from*

a user after "comparing [a] first modified predictive risk score to a threshold risk score" and "determining, based on [the] comparing . . . that the user is classified as having a heightened risk for submitting an improper tax return." (App Br. 9, 19–20.) Rather, TurboTax requests values from its users *based on the fields required by IRS tax forms*. (*See* TurboTax 4 ("The interview . . . ask[s] simple questions in plain English. Your answers are put on the right IRS and state tax forms," and "[a]s you answer simple tax preparation questions, Turbo Tax automatically places your answers onto the right IRS-approved forms").)

TurboTax then "double checks [the user's] return for accuracy" so the user "[doesn't] have to worry about making a mistake." (*See* TurboTax 5; App. Br. 9.) As Appellants explain, "'double check[ing] . . . for accuracy' does not generate a [second] 'predictive risk score' . . . '*using [a] neural network*'" and *using additional values requested from a user after* "determining . . . that the user is classified as having a heightened risk for submitting an improper tax return." (App. Br. 9, 19–20 (emphasis added).) The Examiner also has not shown the additional teachings of Quinn make up for the above-noted deficiencies of Walker, Fischthal, and TurboTax.

Thus, for the reasons set forth above, we do not sustain the Examiner's obviousness rejection of independent claims 1, 7, and 16, and claims 5, 6, 11–15, and 20–23 dependent therefrom. Because the above-discussed issues are dispositive as to the obviousness rejections of all claims on appeal, we do not reach additional issues raised by Appellants' arguments as to the rejections of dependent claims 12, 14, and 15.

DECISION

The Examiner's rejection of claims 1, 5–7, 11–16, and 20–23 under 35 U.S.C. § 101 is affirmed.

The Examiner's rejection of claims 1, 5–7, 11–16, and 20–23 under 35 U.S.C. § 103(a) is reversed.

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner's decision rejecting claims 1, 5–7, 11–16, and 20–23. *See* 37 C.F.R. § 41.50(a)(1).

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).

AFFIRMED