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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DOREEN GRANPEESHEH

Appeal 2017-009193
Application 12/874,159[1]
Technology Center 3700

Before MICHAEL C. ASTORINO, KENNETH G. SCHOPFER, and BRADLEY B. BAYAT, *Administrative Patent Judges*.

ASTORINO, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1–8 under 35 U.S.C. § 101 as being directed to a judicial exception without significantly more. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] "The real party in interest is Center for Autism and Related Disorders." Appeal Br. 1.

STATEMENT OF THE CASE

Subject Matter on Appeal

The Appellant's invention relates to a system for providing behavioral educators of children with developmental disorders (e.g., autism) training in Applied Behavior Analysis,[2] assessment tools, and instruction programs based on a child's needs as identified through the assessment tools. *See* Spec. ¶ 1.

Claim 1, the sole independent claim, is representative of the subject matter on appeal and reproduced below with bracketed notations.

> 1. A computer-based system, comprising:
>
> a processor and a non-transitory storage medium communicatively coupled to said processor, said storage medium storing instructions, which when executed by said processor cause said processor to execute a program module configured with education, assessment, treatment plan and progress chart sub-modules for assessing development of a subject individual, developing an individualized treatment plan for the subject individual, and presentation of progress charts concerning progress of the subject individual through lessons of the individualized treatment plan, respectively, wherein
>
> [(A)] the education sub-module includes educational materials for a behavioral educator, which educational materials provide training in Applied Behavior Analysis (ABA)-based programs of instruction to teach individuals with developmental disorders;
>
> [(B)] the assessment sub-module of the program module includes assessment tools for the behavioral educator to identify mastered and non-mastered skills of the subject individual, said assessment tools including a question and answer interchange mechanism configured to

[2] "Applied [B]ehavior [A]nalysis . . . can be regarded as the application of behaviorism, the study of human behavior, to affect, enhance or eliminate a particular behavior in an individual." Spec. ¶ 2.

permit evaluation of the subject individual's existing skills and identification of the subject individual's skill strengths and deficits that require intervention, wherein:

> each question of the question and answer interchange is associated with a lesson,
>
> said question and answer interchange mechanism is organized in two components, a first component comprising a preliminary exclusionary questionnaire having a plurality of yes or no questions designed to determine whether or not the subject individual can perform basic skills, and a second component comprising a screening questionnaire having a plurality of single selection check boxes for the behavioral educator to specify information concerning the subject individual's current abilities with respect to a number of age-appropriate lessons wherein the behavioral educator is instructed to designate those lessons that cover topics in which the subject individual demonstrates no skills whatsoever, and
>
> said assessment sub-module further includes a detailed set of skill assessment questions based on particular skills the subject individual should exhibit for each of a number of lesson areas and tailored to further determine skill deficits of the subject individual not specifically identified by the screening questionnaire,
>
> wherein through answers provided by the behavioral educator via the assessment tools a lesson associated with an answered question is automatically placed within a task list of the treatment plan sub-module and skill strengths and deficits of the subject individual are identified;

[(C)] the treatment plan sub-module of the program module includes a user interface configured to permit the behavioral educator to review, select from and add to a set of domain-sorted lessons deemed necessary for the subject individual based on answers obtained

> through the assessment tools from the task list to define an individualized, ABA-based program of instruction based on the identified skill strengths and deficits of the subject individual, wherein the lessons in the task list are presented in a suggested teaching order according to difficulty level and age criteria, a lesson in the task list being associated with a lesson plan, the lesson plan including a cross reference field that provides a name of a related lesson and a link to the related lesson, wherein the link is only provided when the behavior educator has already answered skills assessment questions regarding the lesson area of the related lesson and, based on the answers to the skills assessment questions and the related lesson is determined to be consistent with an age and an identified skill deficit of the subject individual, otherwise, when the behavior educator has not answered questions regarding the lesson area, prompting the behavior educator to answer skills assessment questions regarding the lesson area and, when the answers to the skills assessment questions identify age and a skill deficit of the subject individual consistent with the related lesson area, providing the link; and
>
> [(D)] the progress chart sub-module of the program module includes a user interface configured to permit monitoring of the subject individual's progress as the subject individual progresses through the lessons of the individualized program of instruction under the guidance of one or more instructors.

ANALYSIS

Principles of Law

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 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. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (internal quotation marks and citation omitted).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step 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 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 (1853))); 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 Supreme 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 176; *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 Supreme 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.* (citing *Benson* and *Flook*); *see, 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 (citation 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.* (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.*

USPTO § 101 Guidance

The USPTO recently published revised guidance on the application of § 101. 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE,

84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Revised Guidance"). Under the 2019 Revised Guidance, we first look to whether the claim recites:

> (1) 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) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE (MPEP) § 2106.05(a)–(c), (e)–(h) (9th Ed., Rev. 08.2017, Jan. 2018)).

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 2019 Revised Guidance.

Claims 1–8

The Appellant argues claims 1–8 as a group. Appeal Br. 8–14. We select independent claim 1 as representative. The remaining claims stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

As an initial matter, we note that the Appellant argues that the Examiner "fail[s] to provide any analysis behind the rejection, the Answer and the [F]inal Office Action have failed to make out any prima facie case of lack of subject matter eligibility." Reply Br. 6; *see id.* at 8. However, in rejecting the claims under § 101, the Examiner set forth a well-reasoned analysis of the claims and a comprehensive explanation of the bases for the

rejection. *See* Final Act. 2–8; Ans. 9–14. The Examiner, thus, notified the Appellant of the reasons for the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of 35 U.S.C. § 132. And we find that, in doing so, the Examiner set forth a prima facie case of patent ineligibility. *See In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011) (holding that the USPTO carries its procedural burden of establishing a prima facie case when its rejection satisfies the requirements of 35 U.S.C. § 132); *Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (Section 132 "is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.").

Step One of the Mayo/Alice Framework

Does the claim recite a judicial exception?

Under the first step of the *Mayo/Alice* framework and *Step 2A, Prong 1*, of Office Guidelines (*see* 2019 Revised Guidance, 84 Fed. Reg. at 53–54), the Examiner determines that the "claimed system basically boils down to *asking* an educator questions and then based on the educator's answers to those question[s] *formulating* an individual education plan for a subject, as well as *tracking* the progress of that subject in carrying out that plan." Ans. 10 (emphasis added). The Examiner determines that claimed subject matter may be performed by human beings alone, which is a concept that is an "idea of itself" and abstract. *Id.*

In response, the Appellant argues that even if the Examiner is correct as to what the claimed system basically boils down to, which Appellant does not admit to, the concept "is not a recognized example of 'abstractness.'"

Reply Br. 8; *see id.* at 3–7; Appeal Br. 8–12. The Appellant's argument is not persuasive.

Limitations (B) and (C) recite modules for assessing the skills of an individual and providing ordered lessons to the individual for improving upon skill deficits, which are steps for customizing a teaching plan for an individual by an educator (i.e., a specific way of teaching), and similar to managing personal behavior or relationships or interactions between people, which falls within "Certain methods of organizing human activity" grouping. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52; *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (customizing information and presenting it to users based on particular characteristics); *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (customizing a user interface based on user selections). Therefore, claim 1 recites a judicial exception under the Guidance's groupings of abstract ideas.

Is the claim "directed to" the recited judicial exception?

Under *Step 2A, Prong 2* of the 2019 Revised Guidance, we look to whether the claims "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," i.e., "integrates the . . . judicial exception into a practical application," such that it is not directed to the identified abstract idea. 2019 Revised Guidance, 84 Fed. Reg. at 54. The Appellant argues that claim 1, as a whole, includes features, such as the processor, the non-transitory storage medium, and the treatment plan sub-module, that make claim 1 not abstract.

See Appeal Br. 10–12. For example, the Appellant points out that the treatment plan sub-module of claim 1 provides for:

> a user interface configured to permit the behavioral educator to review, select from and add to a set of domain-sorted lessons and a lesson plan including a cross reference field that provides a name of a related lesson and a link to the related lesson, wherein the link is only provided when the behavior educator has already answered skills assessment questions regarding the lesson area of the related lesson.

Reply Br. 5; *see id.* at 6–7. When viewed through the lens of the 2019 Revised Guidance, the Appellant contends that the additional elements of claim 1 integrate the abstract idea into a practical application by "reflect[ing] an improvement in the functioning of a computer." 84 Fed. Reg. at 55. We disagree.

Under the first step of the *Alice* framework, we "look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter." *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016), *cert. denied*, 137 S. Ct. 1230 (2017)).

> The "directed to" inquiry . . . cannot simply ask whether the claims *involve* a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions *involves* a law of nature and/or natural phenomenon . . . . Rather, the "directed to" inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether "their character as a whole is directed to excluded subject matter." *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015).

Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016). In other words, the first step of the *Alice* framework "asks whether the focus of

the claims is on the specific asserted improvement in [the relevant technology] . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Id.* at 1335–36; *see also* 2019 Revised Guidance, 84 Fed. Reg. at 54–55.

The Specification provides evidence as to what the claimed invention as a whole is directed to. Here, the Specification is titled "**METHODS AND SYSTEMS OF TREATMENT PLANS**" and describes that the present invention provides age appropriate comprehensive ABA-based programs for individuals (e.g., children) with developmental disabilities based on identified needs. *See* Spec. ¶¶ 22, 71. The Specification describes ABA as a framework for understanding how to develop an appropriate program for teaching a child with developmental disabilities. *See id.* ¶ 2.

An examination of claim 1 shows that the claim recites a computer-based system comprising a processor and a non-transitory computer medium with executable instructions stored thereon to execute a program module configured with education, assessment, treatment plan, and progress chart sub-modules that provide a behavioral educator with (a) "training in Applied Behavior Analysis (ABA)-based programs of instruction"; (b) "assessment tools . . . to identify mastered and non-mastered skills of the subject individual" by use of "a preliminary exclusionary questionnaire," "a screening questionnaire," and "a detailed set of skill assessment questions" through which a lesson associated with the answers are placed within a task list; and (c) "a set of . . . lessons . . . based on answers obtained through the assessment tools . . . to define an individualized, ABA-based program of instruction . . . , wherein the lessons [are placed in the] . . . task list [and] . . . are presented in a suggested teaching order according to difficulty level and

age criteria" and "associated with a lesson plan"; and (d) a way to "monitor[] . . . the subject individual's progress . . . through the lessons of the individualized program of instruction." *See supra*. The Specification discloses that its client computers (e.g., a processor) "may be any form of computer-base[d] system," including "personal computers, laptop computers, net book computers, mobile devices, smart phones, and the like" and a non-transitory computer medium including RAM, ROM, or magnetic or optical disk. Spec. ¶¶ 23, 25; *see id.* ¶¶ 24, 26–30. As for the claimed "program module" and various "sub-modules," the Specification describes "algorithms and processes presented herein may be implemented in hard-wired circuitry, by specially programming a general-purpose computer system or by any combination of hardware and software." *Id.* ¶ 28. Additionally, the Specification describes:

> [E]mbodiments of the present invention may be implemented with the aid of computer-implemented processes or methods (a.k.a. programs or routines). These processes may be rendered in any computer-readable language including, without limitation, C#, C/C++, Fortran, COBOL, PASCAL, assembly language, markup languages (e.g., HTML, SGML, XML, VoXML), and the like, as well as object-oriented environments such as the Common Object Request Broker Architecture (CORBA), Java™ and the like. In general, however, all of the aforementioned terms as used herein are meant to encompass any series of logical steps performed in a sequence to accomplish a given purpose.

Id. ¶ 71.

When considered collectively and under the broadest reasonable interpretation, the recitations of claim 1 describe a program for training behavioral educators, assessing skills of a subject individual, identifying ordered lessons for the subject individual in order to improve identified skill

deficits, and monitoring progress of the subject individual. The education sub-module of limitation (A) includes educational materials for a behavioral educator, specifically training in Applied Behavior Analysis (ABA)-based programs of instruction. In other words, the education module provides data. *See id.* ¶ 33. The progress chart sub-module of limitation (D) includes data showing the progress of a subject through the lessons of the individualized program of instruction. In other words, the progress chart sub-module presents data. *See id.* ¶¶ 21, 34, 59, Fig. 11. Limitations (A) and (D) are insignificant pre-solution and post-solution activity. *See also Bilski*, 561 U.S. at 610–11 (instructing that limiting the abstract idea to a particular technological environment and adding insignificant post solution activity does not circumvent the prohibition against patenting abstract ideas).

Analysis of claim 1, as a whole, confirms the Examiner's determination that the claim is directed to an abstract idea. A review of the Specification demonstrates that the claim elements are not improvements in the functioning of a computer, or an improvement to other technology or technical field. *See supra*. And, the claimed features, alone and in combination, are no more than generic components operating in their ordinary capacity. Moreover, we find no evidence that the additional elements, alone or in combination, implement the abstract idea with a particular machine that is integral with the claim; effect a transformation or reduction of a particular article to a different state or thing; apply the judicial exception in some other meaningful way beyond generally linking the use of the abstract idea to a particular environment; or otherwise integrate the abstract idea into a practical application. *See* 2019 Revised Guidance at 55

(identifying exemplary considerations indicative that additional elements may have integrated the exception into a practical application).

Further, we note that the level of abstraction at which the Examiner describes the invention does not change the accuracy of the Examiner's determination. *Apple v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016) ("An abstract idea can generally be described at different levels of abstraction").

The Appellant's argument as to the lack of preemption (Appeal Br. 13–14) is unpersuasive. *Cf. OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) ("[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract."), *cert. denied*, 136 S. Ct. 701 (2015). Although "preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). "Where a patent's claims are deemed only to disclose patent ineligible subject matter" under the *Alice* framework, "preemption concerns are fully addressed and made moot." *Id*.

On this record, we are unpersuaded that the Examiner erred in concluding that claim 1 is directed to a judicial exception.

Step Two of the Mayo/Alice Framework

Under step two of the *Alice* framework, we find supported the Examiner's determination that "[t]he additional element(s) or combination of elements in the claim(s) other than the abstract idea per se amount(s) to no more than: a processor and a non-transitory storage medium

communicatively coupled to said processor" and that "these additional claim element(s) do not provide meaningful limitation(s) to transform the abstract idea into a patent eligible application of the abstract idea such that the claim(s) amounts to significantly more than the abstract idea itself." Final Act. 5.

The Appellant argues that claim 1 includes limitations that recite significantly more than the abstract idea because claim 1 provides a processor, a non-transitory storage medium, a program module, and various sub-modules. *See* Appeal Br. 12–14. The Appellant, by example, points to limitation 1(C), i.e., the treatment plan sub-module. *See id.* at 14. We disagree.

Taking the claims' elements separately, the processor and a non-transitory storage medium are purely conventional. *See supra*. It is clear, from the Specification, including the claim language, that the claim "limitations require no improved computer resources [the Appellant] claims to have invented, just already available computers, with their already available basic functions, to use as tools in executing the claimed process" performed by the claimed system. *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1169–70 (Fed. Cir. 2018). Additionally, the instructions performed by the processor by use of the program module and the various sub-modules are purely conventional. *See Elec. Power*, 830 F.3d at 1355 (gathering, sending, monitoring, analyzing, selecting, and presenting information does not transform the abstract process into a patent-eligible invention); *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1093 (Fed. Cir. 2019) (data gathering and displaying are well-understood, routine, and conventional activities); *Intellectual Ventures I LLC v. Capital One Fin.*

Corp., 850 F.3d 1332, 1341 (Fed. Cir. 2017) (determining that there was "no 'inventive concept' that transform[ed] the abstract idea of collecting, displaying, and manipulating XML data into a patent-eligible application of that abstract idea)."

The Appellant's other arguments, including those directed to now-superseded USPTO guidance (*see, e.g.*, Appeal Br. 8–12), have been considered but are not persuasive of error. *See* 2019 Revised Guidance, 84 Fed. Reg. at 51 ("Eligibility-related guidance issued prior to the Ninth Edition, R–08.2017, of the MPEP (published Jan. 2018) should not be relied upon.")).

Thus, we sustain the Examiner's rejection of claims 1–8 under 35 U.S.C. § 101 as being directed to a judicial exception without significantly more. *See* 37 C.F.R. § 41.37(c)(1)(iv).

DECISION

We AFFIRM the Examiner's decision rejecting claims 1–8.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED