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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SATISH MENON,
JAYAKUMAR MUTHUKUMARASAMY,
PARTHA SAHA, KURTIS S. TAYLOR, and
JAMES R. UTTER ¹

Appeal 2017-000206
Application 13/913,965
Technology Center 3700

Before CAROLYN D. THOMAS, BRADLEY W. BAUMEISTER, and
NABEEL U. KHAN, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge*
CAROLYN D. THOMAS.

Opinion Concurring filed by *Administrative Patent Judge*
BRADLEY W. BAUMEISTER.

THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ Appellants list Apollo Education Group, Inc. as the real party in interest.
Appeal Brief filed November 19, 2015 (App. Br. 2).

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner's Final Rejection of claims 1–20, all the pending claims in the present application (*see* Claims Appendix). We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We REVERSE.

The present invention relates generally to utilizing a course skeleton for adaptive learning (*see* Spec., Abstract).

Claim 1 is illustrative:

1. A method comprising:
 - maintaining a hierarchy of learning goals that includes a plurality of learning goal nodes, each node corresponding to a learning goal;
 - adding, to the hierarchy of learning goals, a first learning goal node corresponding to a particular learning goal;
 - wherein the first learning goal node is associated with a particular set of learning goal metadata;
 - wherein the particular set of learning goal metadata includes a particular set of metadata items for finding learning items;
 - wherein the particular set of metadata items does not identify any particular learning items;
 - maintaining a learning item repository, wherein the learning item repository includes a plurality of learning items;
 - receiving a request for learning items for a particular user;
 - automatically determining that the request is for learning items to assist the particular user to achieve the particular learning goal;
 - in response to determining that the request is for learning items to assist the particular user to achieve the particular learning goal:

automatically identifying the first learning goal node in the hierarchy of learning goals,
automatically identifying the particular set of metadata items included in the particular set of learning goal metadata associated with the first learning goal node, and
automatically using the particular set of metadata items to identify a particular learning item, from the learning item repository, to facilitate achievement of the particular learning goal; and

automatically providing the particular learning item as a response to the request for learning items;

wherein the steps of maintaining the hierarchy of learning goals, maintaining the learning item repository, receiving the request, using the particular set of metadata items, and providing the particular learning item are performed by one or more computing devices.

R1. Claims 1–20 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter (Final Act. 2–4).

R2. Claims 1–20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Krebs et al., (US 2007/0099161 A1; published May 3, 2007; hereinafter “Krebs”); and Siefert (US 6,334,779 B1; issued Jan. 1, 2002) (Final Act. 4–10).

ANALYSIS

Claim Construction

For the purposes of this Decision, we determine that no explicit claim constructions are needed to resolve the issues before us. *See, e.g., Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘to the extent necessary to resolve the controversy.’”) (citation omitted) (citing *Vivid Techs., Inc. v. Am. Sci. &*

Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999)). Contrary to the positions presented below in the concurring opinion, we note that neither Appellants nor the Examiner present any controversy regarding the claimed limitation “automatically,” presumably because it did not relate to any of the specific arguments presented by Appellants.

We review the appealed rejections for error based upon the issues identified by Appellants, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential).

Rejection under § 101

Issue 1: Did the Examiner err in determining that the claims are directed to patent-ineligible subject matter?

Alice Corp. Pty. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014), identifies a two-step framework for determining whether claimed subject matter is judicially excepted from patent eligibility under § 101. According to *Alice* step one, “[w]e must first determine whether the claims at issue are directed to a patent-ineligible concept,” such as an abstract idea. *Alice*, 134 S. Ct. at 2355. “If the claims are not directed to an abstract idea [or other patent-ineligible concept], the inquiry ends. If the claims are ‘directed to’ an abstract idea, then the inquiry proceeds to the second step of the *Alice* framework.” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016). In analyzing whether a claim is directed to an abstract idea, we look to other decisions where similar concepts were

previously found abstract by the courts. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016).

Step One

In this regard, with respect to independent method claim 1, and similarly, computer readable media claim 11, the Examiner determines that the claims are directed to at least the abstract idea of “maintaining hierarchy of learning goals in association with metadata searched for learning items” (Final Act. 3) and “organizing human activities” (*id.* at 11). The Examiner further determines that “[t]his is like comparing new and stored information and using rules to identify options like . . . SmartGene” (Ans. 3; *see also id.* at 13).

For example, in *SmartGene, Inc. v. Advanced Biological Laboratories, SA*, the Federal Circuit concluded that claims reciting methods and systems of selecting a therapeutic treatment regimen for a patient with a known disease were directed to an abstract idea. *See SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 Fed. App’x 950, 955 (Fed. Cir. 2014) (claim directed to “the mental steps of comparing new and stored information and using rules to identify medical options,” which was held to be unpatentable subject matter); *Elec. Power Grp. LLC v. Alstom S.A.*, 830 F.3d 1350, 1353-54 (Fed. Cir. 2016) (presenting the results of the collection and analysis without more are patent-ineligible abstract concepts).

We find that the Examiner’s cogent analysis relying on judicial examples (*see* Ans. 3), shows the Examiner provided an adequate basis for determining that the claims are directed to an abstract idea.

Appellants challenge the Examiner’s determinations on the ground that (1) “[t]he Office Action fails to establish a prima facie case of

unpatentability;” and (2) “[t]his application qualifies for streamlined § 101 analysis” (App. Br. 5).

Here, the claimed sequence of steps in claim 1 cover employing computing devices to perform functions, such as maintaining a hierarchy of learning goals, adding to the hierarchy, maintaining a repository, receiving a request for items, determining that the request is for items, identifying the first learning goal node, identifying particular set of metadata, using the metadata, and providing the particular learning item (*see* claim 1).

However, information collection and analysis, including when limited to particular content, e.g., learning goals, is within the realm of abstract ideas. *Elec. Power Grp.*, 830 F.3d at 1353 (holding that “collecting information, analyzing it, and displaying certain results of the collection and analysis” are “a familiar class of claims ‘directed to’ a patent-ineligible concept.”).

As such, the abstract idea here is not meaningfully different from the ideas found to be abstract in other cases. Furthermore, we note that just because claim 1 includes more words than the phrase the Examiner uses as an articulation of the abstract idea is an insufficient reason to persuasively argue that claim 1 is not directed to an abstract idea. Stated differently, the identified abstract idea need not encompass every claim limitation.

Otherwise, there would be no need for step two of the *Alice* inquiry. *Alice*, 134 S. Ct. at 2355.

The Examiner analyzed the claims using the *Mayo/Alice* two-step framework. Thus, the Examiner notified Appellants of the reasons for the rejection “together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.” 35 U.S.C. § 132. Therefore, contrary to Appellants’ assertions *supra*, in

doing so, the Examiner set forth a prima facie case of unpatentability such that the burden shifted to Appellant to demonstrate that the claims are patent-eligible.

In regard to Appellants' argument that a streamline eligibility analysis should be applied to the present claims (*see* App. Br. 5), we find that Appellants mischaracterizes the purpose of section 1(B)(3) of the 2014 *Interim Guidance on Patent Subject Matter Eligibility* guidelines as placing a requirement on the Examiner ("section 1(B)(3) requires" (App. Br. 17)). Rather, section 1(B)(3) is available to the Examiner as a discretionary streamlined § 101 *Alice/Mayo* analysis favoring Applicant. Section 1(B)(3) is explicit that "if there is doubt as to whether the applicant is effectively seeking coverage for a judicial exception itself, *the full analysis should be conducted.*" Emphasis added. Contrary to Appellant's argument, the streamlined patent-eligibility analysis under section 1(B)(3) is not required to be available to Appellants; rather, it is at the Examiner's discretion. As such, the Examiner choosing to perform a full § 101 *Alice/Mayo* analysis is not an error.

Thus, we agree with the Examiner that the claims are directed to an abstract idea.

Step Two

We now turn to the second step of the *Alice* framework: "a search for an 'inventive concept'—*i.e.*, an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Alice*, 134 S. Ct. at 2355 (alteration in original) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)).

The Examiner determines that “[t]he additional element(s) . . . amount(s) to no more than [] (i) mere instructions to implement the idea on a computer, and (ii) recitation of [a] generic computer device that serves to perform generic computer functions [that are] only well-understood, routine, and conventional activities” (Final Act. 3). The Examiner further concludes that the claims merely illustrate “standard search activity [as] known in [prior] art Krebs” (Ans. 15) and that the additional elements “are organization of information through mathematical correlations” (*id.*).

Appellants contend that “[b]ecause several additional elements were not even identified in the Office Action, much less considered individually and collectively,” the Examiner has not sufficiently shown that the claims do not amount to “significantly more” (*see* App. Br. 19) or “are well-understood, routine, and conventional activities” (*id.* at 20). We agree with Appellants.

Specifically, Appellants highlight various limitations, including the claimed *in response to determining that the request is for learning items . . . automatically identifying the first learning goal node in the hierarchy of learning goals [and] automatically identifying the particular set of metadata items . . . associated with the first learning goal node* (*see* App. Br. 22–23) and point out that “limitations that are so specific as to distinguish all art of record cannot properly be deemed to be generic as to qualify as a ‘generic computer function’” (*id.* at 23).

Here, we conclude that the Examiner has not set forth with sufficient specificity or provided any factual finding that the specifically claimed manner of *identifying the first learning goal and the metadata included therein* is well-understood, routine, or conventional. *Berkheimer v. HP Inc.*,

No. 2017-1437, slip op. at 14 (Fed. Cir. Feb. 8, 2018) (“Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.”). Instead, the Examiner merely directs our attention to conventional search techniques, rather than the specifics noted in the claims.

Thus, under *Alice Step Two*, the Examiner has not properly consider the elements of the claims, both individually and “as an ordered combination,” to determine whether the additional elements transform the Examiner’s asserted abstract idea into a patent-eligible application.

For the above reasons under step two of *Alice*, the Examiner’s rejection of claims 1–20 under 35 U.S.C. § 101 is reversed.

Rejection under § 103(a)

Issue 2: Did the Examiner err in finding that the combined teachings of Krebs and Siefert teach and/or suggest *in response to determining that the request is for the learning items . . . automatically identifying the first learning goal node*, as set forth in claim 1?

Appellants contend that “[t]here is no evidence in Krebs of (a) first identifying a **learning goal node** that corresponds to a learning goal for a request for learning items . . . and (b) [] using metadata from the identified learning goal node to find learning items to return to the user” (App. Br. 34). We agree with Appellants.

Even if we assume *arguendo* (without deciding) that Krebs teaches “receiving a request for learning items” and “in response to receiving the request, using the metadata items to identify a particular learning item” as proffered by the Examiner (*see* Final Act. 6; *see also* Ans. 18–20), we do not

find, and the Examiner has not established that Krebs also, in response to the request, identifies a first learning goal node and then identifies the particular set of metadata items . . . associated with the first learning goal node, as required by claim 1. Furthermore, it is unclear how (*or if*) Siefert is being used to cure this deficiency of Krebs.

For instance, the Examiner merely notes that “Siefert, however, teaches the execution of automatically presenting query against a learning item repository to identify a learning item . . . ; identifying the learning item . . . ; and presenting the learning item to the student” (*see* Final Act. 8; *see also* Ans. 21). However, like with Krebs, the Examiner has not clearly associated Siefert’s teachings with the claimed identifying a first learning goal node and identifying the particular set of metadata items . . . associated with the first learning goal node, as required by claim 1.

An Examiner cannot entirely ignore any limitation in a claim while determining whether the subject matter of the claim would have been obvious. *In re Wilson*, 484 F.2d 1382, 1385 (CCPA 1970).

Therefore, we are constrained by the record before us to find that the Examiner erred in rejecting representative claim 1, and also erred in rejecting claims 2–20 for similar reasons, because they all include the aforementioned limitations. Because this issue is dispositive regarding our reversal of the claims under § 103(a), we need not address any additional arguments made by Appellants.

Accordingly, we reverse the Examiner’s rejection of claims 1–20 under 35 U.S.C. § 103(a).

Appeal 2017-000206
Application 13/913,965

DECISION

The Examiner's decision rejecting claims 1–20 under both 35 U.S.C. §§ 101 and 103(a) are reversed.

REVERSED

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SATISH MENON,
JAYAKUMAR MUTHUKUMARASAMY,
PARTHA SAHA, KURTIS S. TAYLOR, and
JAMES R. UTTER

Appeal 2017-000206
Application 13/913,965
Technology Center 3700

Before CAROLYN D. THOMAS, BRADLEY W. BAUMEISTER, and
NABEEL U. KHAN, *Administrative Patent Judges*.

BAUMEISTER, *Administrative Patent Judge*, concurring.

To the extent that the claims can be interpreted as broadly as the Majority interprets them, I agree with the Majority's reasoning and conclusions. I write separately, at least in part, though, because I question whether the Majority's broad interpretation is reasonable. As discussed below, an alternative narrower interpretation of the claims appears to be no less reasonable than the broad interpretation adopted by the Majority. *See In re Steele*, 305 F.2d 859, 862, (CCPA 1962) (holding that the Examiner and the Board were wrong in relying on what, at best, were speculative assumptions as to the meaning of the claims and in basing a rejection under 35 U.S.C. § 103 thereon).

Because I find the intended meaning of the amended claims to be speculative at best, I would exercise the Board's discretionary authority under 35 U.S.C. § 41.50(b) and newly reject the claims under 35 U.S.C. § 112(b) (pre-AIA § 112, ¶ 2) as being indefinite. I also would reject the claims under 35 U.S.C. § 112(a) (pre-AIA § 112, ¶ 1) because the claims, as amended, lack adequate written description.

Addressing the indefiniteness rejection first, I initially note that the appealed claims have been amended and their original scope changed over the course of prosecution. *See* Amendment and Response 3–4, filed Dec. 10, 2014 (“the 2014 Amendment”). To better illustrate how the claims were amended, claim 1 is reproduced below illustrating additions to the original version of the claim with underlining and illustrating deletions to the original version with strikethroughs and brackets:

1. A method comprising:

maintaining a hierarchy of learning goals that includes a plurality of learning goal nodes, each node corresponding to a learning goal;

adding, to the hierarchy of learning goals, a first learning goal node[[,]] corresponding to a particular learning goal;

wherein the ~~particular learning goal~~ first learning goal node is associated with a particular set of learning goal metadata;

wherein the particular set of learning goal metadata includes a particular set of metadata items for finding learning items ~~without identifying any particular learning items~~;

wherein the particular set of metadata items does not identify any particular learning items;

maintaining a learning item repository, wherein the learning item repository includes a plurality of learning items;

receiving a request for learning items for a particular user;

automatically determining that the request is for learning items to assist [[a]] the particular user to achieve the particular learning goal;

in response to ~~receiving~~ determining that the request is for learning items to assist the particular user to achieve the particular learning goal: [[,]]

automatically identifying the first learning goal node in the hierarchy of learning goals,

automatically identifying the particular set of metadata items included in the particular set of learning goal metadata associated with the first learning goal node, and

automatically using the particular set of metadata items to identify a particular learning item, from the learning item repository, to facilitate achievement of the particular learning goal; and

automatically providing the particular learning item as a response to the request for learning items;

wherein the steps of maintaining the hierarchy of learning goals, maintaining the learning item repository, receiving the request, using the particular set of metadata items, and providing the particular learning item are performed by one or more computing devices.

App. Br., Claims Appendix, 42–43; *see also* 2014 Amendment, 3–4.

Turning to the first noted ground of rejection, I would reject the claims as indefinite under 35 U.S.C. § 112, ¶ 2. In order to consider the appealed patent-eligibility and obviousness rejections properly, the Board necessarily must first undertake a claim-construction analysis of the appealed claims. “Before considering the rejections . . . , we must first [determine the scope of] the claims” *In re Geerdes*, 491 F.2d 1260, 1262 (CCPA 1974). Such a claim-construction analysis indicates that the meaning of the term “automatically” is unreasonably ambiguous.

The term “automatically” was added to the claims by amendment and, therefore, does not appear anywhere in the originally Specification. As such, the Specification does not reasonably clarify the term’s intended meaning. Specifically, the Specification does not help render it reasonably clear whether the term “automatically” is being employed broadly, as I understand the Majority to be interpreting the term, to mean that the various claim steps modified by this term merely are performed by a computer, as opposed to being performed manually. It alternatively might be the case that the term is being used more narrowly to mean that a computer performs the various claim steps without any user input. For example, the claim limitation of “automatically determining that the request is for learning items to assist the particular user to achieve the particular learning goal” might be intended to mean that the computer determines the meaning of the request and the identity of the learning goal node without the computer user first providing that information.

This latter, narrower interpretation does not appear to be reasonable because the Specification does not provide support for such an interpretation. The *broader* interpretation—that the system merely determines that the user made a request for learning items—appears more consistent with the Specification, and it seems unreasonable to interpret the claims in a manner that is not supported by the originally filed application:

A first user that is working on a goal associated with a particular node in the course skeleton makes a request for learning items to adaptive learning engine 100. Learning analysis logic 130 generates a query to be executed against the learning item repository using goal metadata associated with the learning goal that the student is attempting to achieve.

Spec. ¶ 58.

However, the broader interpretation does not appear to be reasonable either. The last two limitations of claim 1 read as follows:

automatically providing the particular learning item as a response to the request for learning items;

wherein the steps of maintaining the hierarchy of learning goals, maintaining the learning item repository, receiving the request, using the particular set of metadata items, and providing the particular learning item are performed by one or more computing devices.

(Emphasis added.) Because the last limitation, itself, expressly states that the step of providing the learning item is performed by one or more computing devices, it would be unduly redundant to include the word “automatically” in the penultimate limitation if “automatically,” likewise, merely means to perform the providing step with one or more computing devices.

To be sure, the double inclusion of a claim element does not per se render a claim indefinite. *See* MPEP 2173.05(o). In the present case, though, the double inclusion of the claim element that would result from interpreting the term “automatically” broadly to mean merely that a computer performs the step, does render it less than reasonably clear whether Appellants intend such an effectively meaningless construction.

Because the amended term “automatically” renders the claims unreasonably ambiguous, I would reject the claims as indefinite under 35 U.S.C. 112(b) (or pre-AIA § 112, ¶ 2). *See Ex parte Miyazaki*, 89 USPQ2d 1207, 1211 (BPAI 2008) (precedential) “[I]f a claim is amenable to two or more plausible claim constructions, the USPTO is justified in requiring the applicant to more precisely define the metes and bounds of the claimed invention by holding the claim unpatentable under

35 U.S.C. § 112, second paragraph, as indefinite.”); *see also Ex parte McAward*, Appeal No. 2015-006416, 2017 WL 3669566 (PTAB Aug. 25, 2017) (precedential).

Turning to the second issue, I also would reject the claims under 35 U.S.C. § 112(a) (pre-AIA § 112, ¶ 1) as lacking adequate written description in the originally filed Specification.

Referring to claim 1, for example, Appellants contend on appeal that their invention entails a two-level search:

The first level of the two-level search in Claim 1 involves identifying a learning goal node that corresponds to a particular learning goal determined from a received request for learning items. . . .

Once Claim 1 determines which learning goal the user wants to achieve, a learning goal node is automatically identified, from the hierarchy of learning goals, where the node corresponds to the learning goal for the request. To be specific, Claim 1 recites: “in response to determining that the request is for learning items to assist the particular user to achieve the particular learning goal: automatically identifying **the first learning goal node** in the hierarchy of learning goals”. Claim 1 further recites that the “first learning goal node **correspond[s] to [the] particular learning goal**”.

Identification of the **learning goal node** that corresponds to the learning goal for a request for learning items is only the first step toward identifying learning items to be provided as a response to the received request for learning items learning items.

App. Br. 31.

Appellants then describe the second-level search as follows:

[T]he second-level search of Claim 1 is based on the information identified in the first-level search. More specifically, Claim 1 automatically uses metadata items from the learning goal node “to identify a particular learning item, from the learning item repository, to facilitate achievement of the

particular learning goal”. The learning goal node metadata (used to identify a learning item) is “for finding learning items”, but “does not identify any particular learning items”, as recited by Claim 1.

Again, to accomplish the second-level search, Claim 1 uses the metadata items from the learning goal node to identify a particular learning item that is then provided to the user as a response to the user’s request. As such, it is this second level of search that ultimately identifies the learning items from the learning item repository.

Id. at 32.

Appellants’ characterization of their originally filed Specification as disclosing a two-level search, and more particularly, as disclosing the purported first level of the search, is inaccurate. To be sure, the *amended* claims, which are on appeal, set forth language directed to the purportedly disclosed first-level search:

automatically determining that the request is for learning items to assist the particular user to achieve the particular learning goal;

in response to determining that the request is for learning items to assist the particular user to achieve the particular learning goal:

automatically identifying the first learning goal node in the hierarchy of learning goals,

automatically identifying the particular set of metadata items included in the particular set of learning goal metadata associated with the first learning goal node, and

automatically using the particular set of metadata items to identify a particular learning item, from the learning item repository, to facilitate achievement of the particular learning goal.

Amended claim 1 (emphasis added). But the *original* version of claim 1 does not recite *identifying a first learning goal in the hierarchy in response to determining that a request is for a learning item*. The original version of claim 1 merely recites, in relevant part, “receiving a request for learning items” and “in response to receiving the request, using the metadata items to identify a particular learning item.”

Appellants allege in their Appeal Brief where the originally filed Specification provides support for this “identifying-in-response-to” limitation:

Claim 1 further recites receiving a request for learning items for a particular user and determining that the request is for learning items to assist the user to achieve a particular learning goal. (Specification, paragraph [0058].) To identify learning items that will assist the user to achieve the particular learning goal, Claim 1 identifies the learning goal node associated with the indicated learning goal, identifies the metadata associated with the learning goal node, then **uses the metadata to find a learning item** to facilitate achievement of the learning goal. (Specification, paragraphs [0016] and [0058]).

App. Br. 3

But these cited paragraphs do not disclose a first-level search that entails identifying a learning node in response to determining that a received request is for a learning item. These cited paragraphs disclose only a single-level search functionality that entails searching for the requested learning items:

GENERAL OVERVIEW

....

[0016] In an embodiment, a course “skeleton” is associated with a course of instruction. The course skeleton is made up of a hierarchy of goals, with each goal being associated with goal metadata that describes the goal and provides information about

the type of content that may be used to achieve the goal. The course skeleton is used to provide a more dynamic adaptive learning experience. The nodes of the course skeleton are associated with metadata about the corresponding goal. A learning item repository stores learning items and learning item metadata describing the learning items. Instead of directly mapping these learning items to the nodes or goals, the goal metadata is used to dynamically generate a query that can be executed against the learning item repository in order to retrieve learning items for the student.

.....

SELECTING LEARNING ITEMS USING DYNAMICALLY GENERATED QUERIES

[0058] In an embodiment, the learning item repository includes learning items, such as multimedia, audio, text, and video files. In addition, the learning item repository includes learning item metadata that describes the learning items. For example, the learning item metadata may be stored in a database with a relational link to the learning items described by the metadata. A logical hierarchy such as course skeleton 200 is stored in the course skeleton data table 160 in database 150. The course skeleton is representative of a course of instruction, and each node in the hierarchy represents a learning goal. Corresponding goal metadata that describes each learning goal is associated with each node in the course skeleton. A first user that is working on a goal associated with a particular node in the course skeleton makes a request for learning items to adaptive learning engine 100. Learning analysis logic 130 generates a query to be executed against the learning item repository using goal metadata associated with the learning goal that the student is attempting to achieve. A learning item or a reference to a learning item from learning items table 170 is returned, and presentation logic 140 presents the learning item to the student.

[0059] A second user requests learning items from adaptive learning engine in an embodiment. The second user is attempting to achieve the same goal as the first user, *and therefore an identical query is generated for the second user.* However, when the query is executed for the second user, a

learning item is returned that is different than the learning item that was returned for the first user. In an embodiment, additional learning items [are] added to the learning item repository between the execution of the query for the first user and the execution of the query for the second user. Th[ese] additional learning items [are] determined to be more relevant to the query, and therefore the updated learning items [are] delivered to the second user.

Spec. ¶¶ 16, 58, 59 (emphasis added).

Read as a whole, Appellants' originally filed Specification merely discloses that a user working on a goal associated with a particular node, requests learning items. Then in response, the metadata associated with that particular node is used to perform a search of available learning items. The Specification does not further disclose that the learning engine 100 is unaware of the user's specific learning node until after the user submits the request for learning items.

Due to the Specification's silence on this point, it alternatively could be the case that the user identifies the user's learning node to the learning engine either (1) prior to submitting a request for learning items (e.g., before or at the time of login), or (2) simultaneously when submitting the request for learning items (e.g., the request theoretically could include an indication of the node for which the learning items are being requested). But in either of these hypothetical cases, the learning engine would not identify the user's learning goal node *in response to* (i.e., after) determining that the request is for the learning item.

Our reviewing court has interpreted the written-description requirement of the patent statutes as follows:

The test for determining compliance with the written description requirement is whether the disclosure of the

application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language.

In re Kaslow, 707 F.2d 1366, 1375 (Fed. Cir. 1983) (citations omitted).

“[O]ne cannot disclose a forest in the original application, and then later pick a tree out of the forest and say here is my invention.” *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1326 (Fed. Cir. 2000). Rather, the Specification must provide some guides or “blaze marks” that disclose the claimed invention “specifically, as something appellants actually invented.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1348 (Fed. Cir. 2010) (en banc).

For the reasons outlined above, Appellants’ originally filed Specification does not reasonably convey to the artisan that at the time of filing, Appellants had possession of a search functionality entailing identifying a learning goal node *in response to* determining that a received request is for learning items, as claimed. Accordingly, I would reject the claims as lacking adequate written description.