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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STEVEN W. LUNDBERG

Appeal 2019-000099
Application 14/826,006
Technology Center 2100

Before JOHN A. JEFFERY, DENISE M. POTHIER, and JUSTIN BUSCH,
Administrative Patent Judges.

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Under 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–8. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Black Hills IP Holdings, LLC. Appeal Br. 2.

STATEMENT OF THE CASE

Appellant's invention (1) manages information disclosure statements used in connection with patent applications, and (2) controls cross-citations of prior art references. *See* Spec. ¶¶ 2–3. To this end, Appellant's invention uses software that, among other things, (1) receives a reference document into a database; (2) associates that document with a first case; and (3) identifies a set of patent cases related to the first case as potential propagation target cases for cross-citation of the reference document. *Id.*

¶ 20. Claim 1 is illustrative:

1. A method comprising:

maintaining a patent case database, wherein the database includes data about each patent case in the patent case database, receiving a reference document into the database;

associating the reference document with a first patent case in the patent case database;

identifying a set of target patent cases including at least one patent case related to the first patent case as potential propagation target cases for cross-citation of the reference document;

identifying a number of propagation levels for each target patent case in the set of patent cases by assessing a number of levels between the reference document and each target patent case in the set of patent cases;

displaying in a user interface the identity of the set of target patent cases, the user interface including a potential citation pathway of the reference document for at least one target patent case from the set of target patent cases, a

propagation level selection option, and at least one propagation selection option for the reference document, wherein the propagation level selection option selects the identified number of propagation levels between the reference document and the at least one target patent case;

receiving, from a user via the user interface, a selected propagation option from the at least one propagation selection option for the reference document, and a selected propagation level option;

associating, in response to receiving the selected propagation option and the selected propagation level option, the reference document with one or more of the set of target patent cases based on the selected propagation option, the selected propagation level option, and a comparison of a publication or priority date of the reference document and a priority date of a target patent case of the set of target patent cases.

THE REJECTIONS

The Examiner rejected claims 1–8 under 35 U.S.C. § 101 as directed to ineligible subject matter. Final Act. 3–5.²

The Examiner rejected claims 1 and 3–8 under 35 U.S.C. § 103 as unpatentable over Casey (US 2009/0282054 A1; published Nov. 12, 2009), Ashley (US 2011/0231449 A1; published Sept. 22, 2011), Rivette (US 2007/0208669 A1; published Sept. 6, 2007), and Lundberg (US 2005/0246194 A1; published Nov. 3, 2005) (“Lundberg ’194”). Final Act. 6–12.

² Throughout this opinion, we refer to (1) the Final Rejection mailed January 19, 2018 (“Final Act.”); (2) the Appeal Brief filed June 19, 2018 (“Appeal Br.”); (3) the Examiner’s Answer mailed August 3, 2018 (“Ans.”); and (4) the Reply Brief filed October 3, 2018 (“Reply Br.”).

Appeal 2019-000099
Application 14/826,006

The Examiner rejected claim 2 under 35 U.S.C. § 103(a) as unpatentable over Casey, Ashley, Rivette, Lundberg '194, and Lundberg (US 2006/0190449 A1; published Aug. 24, 2006) ("Lundberg '449"). Final Act. 12–13.

RELATED APPEALS

On pages 3 and 4 of the Appeal Brief, Appellant identifies 33 related appeals as follows:

Application Number	Appeal Number	Appeal Status
10/128,141	2009-005709	Decision mailed Mar. 23, 2010
10/874,486	2009-006404	Decision mailed Aug. 2, 2010
11/061,383	2011-009966	Decision mailed Jan. 31, 2014
11/061,312	2012-004166	Decision mailed Nov. 4, 2014
13/309,080	2015-000319	Decision mailed May 27, 2016
13/309,127	2015-000321	Decision mailed July 26, 2017
13/309,039	2015-003180	Decision mailed Sept. 23, 2016
13/309,146	2015-007422	Decision mailed June 1, 2016
13/309,060	2016-000912	Decision mailed Aug. 25, 2017
11/888,632	2016-001687	Decision mailed Jan. 19, 2017
13/309,200	2016-002121	Decision mailed Aug. 28, 2017
13/310,279	2016-002680	Decision mailed Aug. 30, 2017
12/605,030	2016-002792	Decision mailed Sept. 1, 2017
13/310,368	2016-006797	Decision mailed Aug. 30, 2017
13/573,803	2016-007186	Decision mailed July 28, 2017
13/464,598	2016-007415	Decision mailed July 31, 2017

13/408,877	2016-007623	Decision mailed Sept. 6, 2017
13/310,322	2016-007787	Decision mailed Sept. 20, 2017
13/253,936	2016-008030	Decision mailed Aug. 3, 2017
13/408,917	2017-000280	Decision mailed Sept. 12, 2017
11/098,761	2017-000386	Decision mailed Nov. 17, 2017
14/010,376	2017-002337	Decision mailed Sept. 8, 2017
14/483,903	2017-003702	Decision mailed Sept. 25, 2017
14/094,542	2017-003815	Decision mailed Sept. 18, 2017
14/010,391	2017-004158	Decision mailed Oct. 25, 2017
14/010,380	2017-004159	Decision mailed Sept. 27, 2017
14/010,400	2017-004188	Decision mailed Nov. 3, 2017
13/409,189	2017-006390	Decision mailed Dec. 18, 2017
13/310,452	2017-006642	Decision mailed Sept. 29, 2017
13/253,811	2017-011247	Decision mailed Nov. 1, 2017
14/608,520	2017-011549	Decision mailed Nov. 27, 2017
14/628,941	2017-011552	Decision mailed Dec. 6, 2017
13/679,830	2018-009240	Decision mailed Sept. 30, 2019

THE INELIGIBILITY REJECTION

The Examiner determines that the claimed invention is directed to an abstract idea, namely receiving, associating, identifying, and displaying data. *See* Final Act. 3–4; Ans. 3–9. The Examiner adds that the claims do not include elements that add significantly more than the abstract idea, but

merely recite a conventional computer implementation of the identified abstract idea. *See* Final Act. 4–5; Ans. 7, 9.

Appellant argues that the claims are eligible because, among other things, they are directed to a specific technical improvement that manages and reduces the number of prior art cross-citations stored and associated with a reference document—an improvement that is said to reduce the storage and processing resources involved with those citations. Appeal Br. 9–10, 13–15; Reply Br. 2–4. According to Appellant, not only does the Examiner oversimplify the claimed invention and characterize it overly broadly, the Examiner’s reliance on the decision in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016) is said to be misplaced. Appeal Br. 9–10, 13–15; Reply Br. 2–4. Appellant adds that not only does the Examiner fail to provide evidentiary support that the claims are well-understood, routine, and conventional, the claims recite a specific, unconventional process that manages cross-citations of reference documents and, therefore, are not directed to an abstract idea. Appeal Br. 10–13, 15–17; Reply Br. 2–3.

ISSUE

Under § 101, has the Examiner erred in rejecting claims 1–8 as directed to ineligible subject matter? This issue turns on whether the claims are directed to an abstract idea and, if so, whether the recited elements—considered individually and as an ordered combination—transform the nature of the claims into a patent-eligible application of that abstract idea.

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. *See, e.g., Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the 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 187 n.7 (quoting *Corning v. Burden*, 56 U.S.

(15 How.) 252, 267–68 (1854)); and manufacturing flour (*Benson*, 409 U.S. at 67 (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.”). That said, 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 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (alterations in original) (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

In January 2019, the United States Patent and Trademark Office (“USPTO”) published revised guidance on the application of § 101. *See* USPTO’s *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”). Under that 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, and conventional in the field (*see* MPEP § 2106.05(d)); or
- (4) simply appends well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Guidance, 84 Fed. Reg. at 56.

ANALYSIS

Claims 1–8: Alice/Mayo Step One

Representative independent claim 1 recites a method comprising the following steps:

maintaining a patent case database, wherein the database includes data about each patent case in the patent case database, receiving a reference document into the database;

associating the reference document with a first patent case in the patent case database;

identifying a set of target patent cases including at least one patent case related to the first patent case as potential propagation target cases for cross-citation of the reference document;

identifying a number of propagation levels for each target patent case in the set of patent cases by assessing a number of levels between the reference document and each target patent case in the set of patent cases;

displaying in a user interface the identity of the set of target patent cases, the user interface including a potential citation pathway of the reference document for at least one target patent case from the set of target patent cases, a propagation level selection option, and at least one propagation selection option for the reference document, wherein the propagation level selection option selects the identified number of propagation levels between the reference document and the at least one target patent case;

receiving, from a user via the user interface, a selected propagation option from the at least one propagation selection option for the reference document, and a selected propagation level option;

associating, in response to receiving the selected propagation option and the selected propagation level option, the reference document with one or more of the set of target patent cases based on the selected propagation option, the selected propagation level option, and a comparison of a publication or priority date of the reference document and a

priority date of a target patent case of the set of target patent cases.

As the disclosure explains, Appellant's invention (1) manages information disclosure statements used in connection with patent applications, and (2) controls cross-citations of prior art references. *See* Spec. ¶¶ 2–3. To this end, Appellant's invention uses software that (1) receives a reference document into a database; (2) associates that document with a first case; and (3) identifies a set of patent cases related to the first case as potential propagation target cases for cross-citation of the reference document. *Id.* ¶ 20. The software also (1) receives user input identifying and selecting cross-citation characteristics of the reference document, and (2) associates that document with potential target cases based on that selection. *Id.*

As shown in Appellant's Figure 5, a user interface is provided that not only displays the set of target cases in window 510, but also enables the user to select various propagation selection options in windows 514 to regulate the manner in which a reference document is propagated to be cross-cited in another case or set of patent cases. *Id.* ¶¶ 21, 52. Propagation options may be related to the reference document's cross-citation characteristics including, among other things, (1) a comparison of the reference document's and target cases' respective priority dates; (2) a score based on occurrences of a particular keyword in the reference document; (3) the reference document's source; (4) the ground of rejection on which the reference document was cited by a patenting authority; (5) the degree of relation between the first case and the set of target cases; (6) any instances of prior cross-citation of the reference document to other patent cases, etc. *Id.* ¶ 21.

A reference document may be propagated downstream to be cross-cited in first, second, or even third sets of target cases. *Id.* This downstream propagation from a source to a target case may be assessed in terms of the number of “hops” or “levels” taken by a reference document to flow from a source to a target. *Id.* This hop-number assessment may form the basis of a cross-citation characteristic, including prior cross-citations. *Id.* The user interface can also display the citation pathway for each reference document, namely (1) where it started, and (2) what cases it flowed through to be cross-cited against one or more target cases. *Id.*

Turning to claim 1, we first note that the claim recites a method and, therefore, falls within the process category of § 101. But despite falling within this statutory category, we must still determine whether the claim is directed to a judicial exception, namely an abstract idea. *See Alice*, 573 U.S. at 217. To this end, we must determine whether the claim (1) recites a judicial exception, and (2) fails to integrate the exception into a practical application. *See Guidance*, 84 Fed. Reg. at 52–55. If both elements are satisfied, the claim is directed to a judicial exception under the first step of the *Alice/Mayo* test. *See id.*

In the rejection, the Examiner determines that claim 1 is directed to an abstract idea, namely receiving, associating, identifying, and displaying data. *See Final Act*. 3–4; *Ans.* 3–9. To determine whether a claim recites an abstract idea, we (1) identify the claim’s specific limitations that recite an abstract idea, and (2) determine whether the identified limitations fall within

certain subject matter groupings, namely, (a) mathematical concepts³; (b) certain methods of organizing human activity⁴; or (c) mental processes.⁵

Here, apart from the recited “database” and “user interface,” all of claim 1’s recited limitations fit squarely within at least one of the above categories of the USPTO’s guidelines. When read as a whole, the recited limitations are directed to associating a reference document with target patent cases based on (1) selected propagation levels and options, and (2) document publication or priority date information.

First, the limitations reciting (1) “maintaining a patent case database, wherein the database includes data about each patent case in the patent case database,” and (2) “receiving a reference document into the database” involves at least mental processes, at least to the extent that a person could merely think about—or write down—information about patent cases and reference documents, and compile that information into a collection of data using pen and paper. That is, apart from a database, which has been defined, quite broadly, as “any electronically-stored collection of data,” *In re*

³ Mathematical concepts include mathematical relationships, mathematical formulas or equations, and mathematical calculations. *See* Guidance, 84 Fed. Reg. at 52.

⁴ Certain methods of organizing human activity include fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations); managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions). *See* Guidance, 84 Fed. Reg. at 52.

⁵ Mental processes are concepts performed in the human mind including an observation, evaluation, judgment, or opinion. *See* Guidance, 84 Fed. Reg. at 52.

Comiskey, 554 F.3d 967, 981 (Fed. Cir. 2009), the recited patent case data collection could otherwise be a paper-based collection of patent case information.

In short, apart from the recited database, the recited “maintaining” and “receiving” steps can be done entirely mentally or using pen and paper. *Cf. CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (noting that a person could construct a map of credit card numbers by merely *writing down a list* of credit card transactions made from a particular IP address). These limitations fall squarely within the mental processes category of the USPTO’s guidelines and, therefore, recite an abstract idea. *See* Guidance, 84 Fed. Reg. at 52 (listing exemplary mental processes including observation and evaluation).

We reach the same conclusion regarding the limitations calling for (1) “associating the reference document with a first patent case . . .”; (2) “identifying a set of target patent cases including at least one patent case related to the first patent case as potential propagation target cases for cross-citation of the reference document”; and (2) “identifying a number of propagation levels for each target patent case in the set of patent cases by assessing a number of levels between the reference document and each target patent case in the set of patent cases.” In short, these steps involve mere observation and logical reasoning. *Cf. CyberSource*, 654 F.3d at 1372 (noting that a recited step that utilized a map of credit card numbers to determine the validity of a credit card transaction could be performed entirely mentally by merely using *logical reasoning* to identify a likely instance of fraud by merely *observing* that numerous transactions using different credit cards all originated from the same IP address). These

limitations fall squarely within the mental processes category of the USPTO's guidelines and, therefore, recite an abstract idea. *See* Guidance, 84 Fed. Reg. at 52 (listing exemplary mental processes including observation and evaluation).

We reach the same conclusion regarding the limitation calling for:

displaying . . . the identity of the set of target patent cases . . . including [1] a potential citation pathway of the reference document for at least one target patent case from the set of target patent cases, [2] a propagation level selection option, and [3] at least one propagation selection option for the reference document, wherein the propagation level selection option selects the identified number of propagation levels between the reference document and the at least one target patent case.

This display, including the displayed potential citation pathway, propagation option, and propagation level selection option, involves at least mental processes, at least to the extent that a person could merely write down that information on a piece of paper, including the selected number of propagation levels. *Cf. CyberSource*, 654 F.3d at 1372 (noting that a person could construct a map of credit card numbers by merely *writing down a list* of credit card transactions made from a particular IP address); *see also id.* (noting that a recited step that utilized a map of credit card numbers to determine the validity of a credit card transaction could be performed entirely mentally by merely using *logical reasoning* to identify a likely instance of fraud by merely *observing* that numerous transactions using different credit cards all originated from the same IP address). These limitations fall squarely within the mental processes category of the USPTO's guidelines and, therefore, recite an abstract idea. *See* Guidance,

84 Fed. Reg. at 52 (listing exemplary mental processes including observation and evaluation).

The recited “receiving, from a user . . . , a selected propagation option from the at least one propagation selection option for the reference document, and a selected propagation level option” can be performed entirely mentally by merely reading that information and noting the associated selections. *Cf. CyberSource*, 654 F.3d at 1372 (noting that limitation reciting obtaining information about transactions that have used an Internet address identified with a credit card transaction can be performed by a human who simply reads records of Internet credit card transactions from a pre-existing database). Alternatively, a person could receive that information by communicating with another person with such knowledge, such as a colleague, or by writing this information down. *Cf. id.*; *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1344 (Fed. Cir. 2018) (noting that a nontechnical human activity of passing a note to a person who is in a meeting or conversation as illustrating the invention’s focus, namely providing information to a person without interfering with the person’s primary activity); *TLI Comm., LLC v. AV Automotive, LLC*, 823 F.3d 607, 610–14 (Fed. Cir. 2016) (holding ineligible claims reciting recording and administering digital images including (1) recording images using a digital pick-up unit in a telephone unit; (2) storing the recorded images; (3) transmitting data including the images and classification information to a server; (4) extracting the received classification information; and (5) storing the images in the server considering that information); *In re Salwan*, 681 F. App. 938, 939–41 (Fed. Cir. 2017) (unpublished) (holding ineligible claims reciting, among other things, receiving medical records information and

transmitting reports where the claimed invention's objective was to enable electronic communication of tasks that were otherwise done manually using paper, phone, and facsimile machine); *LendingTree, LLC v. Zillow, Inc.*, 656 F. App. 991, 993–94, 996 (Fed. Cir. 2016) (unpublished) (holding ineligible claims reciting, among other things, (1) receiving selection criteria from lending institutions and credit data from a computer user, and (2) forwarding the credit data to selected lending institutions as directed to an abstract idea). Therefore, apart from receiving the selected propagation option via a *user interface*, the “selected propagation option” receiving clause fits squarely within the mental processes and certain methods of organizing human activity categories of the USPTO's guidelines and, therefore, recites an abstract idea. *See* Guidance, 84 Fed. Reg. at 52 (listing exemplary (1) mental processes including observation and evaluation, and (2) methods of organizing human activity, including personal interactions and following rules or instructions).

In addition, the recited “associating, in response to receiving the selected propagation option and the selected propagation level option, the reference document with one or more of the set of target patent cases” based on the selected options and comparison can also be done entirely mentally or with pen and paper. In short, these steps involve mere observation and logical reasoning. *Cf. CyberSource*, 654 F.3d at 1372 (noting that a recited step that utilized a map of credit card numbers to determine the validity of a credit card transaction could be performed entirely mentally by merely using *logical reasoning* to identify a likely instance of fraud by merely *observing* that numerous transactions using different credit cards all originated from the same IP address). These limitations fall squarely within the mental

processes category of the USPTO's guidelines and, therefore, recite an abstract idea. *See* Guidance, 84 Fed. Reg. at 52 (listing exemplary mental processes including observation and evaluation).

Therefore, apart from the recited "database" and "user interface," all of claim 1's limitations fall squarely within the mental processes or certain methods of organizing human activity categories of the USPTO's guidelines and, therefore, recite an abstract idea. *See* Guidance, 84 Fed. Reg. at 52 (listing exemplary (1) mental processes including observation and evaluation, and (2) methods of organizing human activity, including personal interactions and following rules or instructions).

Here, the recited "database" and "user interface" are the only recited elements beyond the abstract idea, but these additional elements, considered individually and in combination, do not integrate the abstract idea into a practical application when reading claim 1 as a whole.

In reaching this conclusion, we are not persuaded that the claimed invention improves the computer or its components' functionality or efficiency, or otherwise changes the way those devices function, at least in the sense contemplated by the Federal Circuit in *Enfish LLC v. Microsoft Corporation*, 822 F.3d 1327 (Fed. Cir. 2016), despite Appellant's arguments to the contrary (Appeal Br. 14). The claimed self-referential table in *Enfish* was a specific type of data structure designed to improve the way a computer stores and retrieves data in memory. *Enfish*, 822 F.3d at 1339. To the extent Appellant contends that the claimed invention uses such a data structure to improve a computer's functionality or efficiency, or otherwise change the way that device functions, there is no persuasive evidence on this record to substantiate such a contention.

To the extent Appellant contends that the claimed invention is rooted in technology because it is ostensibly directed to a technical solution (*see* Appeal Br. 14–15), we disagree. Even assuming, without deciding, that the claimed invention can manage and associate prior art cross-citations with reference documents faster than doing so manually, any speed increase comes from the capabilities of the generic computer components—not the recited process itself. *See FairWarning*, 839 F.3d at 1095 (citing *Bancorp Services, LLC v. Sun Life Assurance Co.*, 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.”)); *see also Intellectual Ventures I LLC v. Erie Indemnity Co.*, 711 F. App. 1012, 1017 (Fed. Cir. 2017) (unpublished) (“Though the claims purport to accelerate the process of finding errant files and to reduce error, we have held that speed and accuracy increases stemming from the ordinary capabilities of a general-purpose computer do not materially alter the patent eligibility of the claimed subject matter.”) (quotation marks, bracketed alteration, and citation omitted).

That the claimed invention is used in connection with patent cases, without more, does not integrate the abstract idea into a practical application, for merely generally linking the use of an abstract idea to a particular technological environment or field of use does not render the claimed invention any less abstract. *See Affinity Labs of Texas, LLC v. DirectTV, LLC*, 838 F.3d 1253, 1259 (Fed. Cir. 2016); *accord Flook*, 437 U.S. at 584, 588–90, 596–97 (holding ineligible method for updating an alarm limit on a process variable, despite the process involving the catalytic chemical

conversion of hydrocarbons); *see also* Guidance, 84 Fed. Reg. at 55 (citing MPEP § 2106.05(h)).

Like the claims in *FairWarning*, the focus of claim 1 is not on an improvement in computer processors as tools, but on certain independently abstract ideas that use generic computing components as tools. *See FairWarning*, 839 F.3d at 1095 (quotation marks and citations omitted). As with the ineligible claimed invention in *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1284–91 (Fed. Cir. 2018), the claimed invention does not improve a computer’s functionality or that of its associated components, but rather the benefits flow from performing the abstract idea in conjunction with those generic computer components. *See BSG*, 899 F.3d at 1288 (“While the presentation of summary comparison usage information to users improves the quality of the information added to the database, an improvement [in] . . . the information stored by a database is not equivalent to an improvement in the database’s functionality.”).

In short, the recited additional elements, when considered individually and as an ordered combination, do not (1) improve the computer itself; (2) improve another technology or technical field; (3) implement the abstract idea in conjunction with a particular machine or manufacture that is integral to the claim; (4) transform or reduce a particular article to a different state or thing; or (5) apply or use the abstract idea in some other meaningful way beyond generally linking the abstract idea’s use to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* Guidance, 84 Fed. Reg. at 55 (citing MPEP §§ 2106.05(a)–(c), (e)). Rather, the above-noted additional elements merely (1) apply the abstract idea on a computer; (2) include

instructions to implement the abstract idea on a computer; or (3) use the computer as a tool to perform the abstract idea. *See id.* (citing MPEP § 2106.05(f)). Therefore, the recited additional elements, namely the recited “database” and “user interface,” do not integrate the abstract idea into a practical application when reading claim 1 as a whole.

We add that the limitations calling for (1) “maintaining a patent case database, wherein the database includes data about each patent case in the patent case database,” and (2) “receiving a reference document into the database” not only can be performed entirely mentally as noted above, but these steps are also insignificant pre-solution activity that merely gather data and, therefore, do not integrate the exception into a practical application for that additional reason. *See In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008) (en banc), *aff’d on other grounds*, 561 U.S. 593 (2010) (characterizing data gathering steps as insignificant extra-solution activity); *see also CyberSource*, 654 F.3d at 1371–72 (noting that even if some physical steps are required to obtain information from a database (e.g., entering a query via a keyboard, clicking a mouse), such data-gathering steps cannot alone confer patentability); *accord* Guidance, 84 Fed. Reg. at 55 (citing MPEP § 2106.05(g)).

In conclusion, although the recited functions may be beneficial by managing and associating prior art cross-citations with reference documents, a claim for a useful or beneficial abstract idea is still an abstract idea. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379–80 (Fed. Cir. 2015).

We, therefore, agree with the Examiner that claim 1 is directed to an abstract idea.

Claims 1–8: Alice/Mayo Step Two

Turning to *Alice/Mayo* step two, claim 1’s additional recited elements, namely the recited “database” and “user interface,” when considered individually and as an ordered combination, do not provide an inventive concept such that these additional elements amount to significantly more than the abstract idea when reading claim 1 as a whole. *See Alice*, 573 U.S. at 221; *see also* Guidance, 84 Fed. Reg. at 56. As noted above, the claimed invention merely uses generic computing components to implement the recited abstract idea.

To the extent Appellant contends that the recited limitations, including those detailed above in connection with *Alice* step one, add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two (*see* Appeal Br. 10–13, 15–17; Reply Br. 2–3), these limitations are not *additional* elements *beyond* the abstract idea, but rather are directed to the abstract idea as noted previously. *See BSG*, 899 F.3d at 1290 (explaining that the Supreme Court in *Alice* “only assessed whether the claim limitations *other than the invention’s use of the ineligible concept* to which it was directed were well-understood, routine and conventional”) (emphasis added); *see also* Guidance, 84 Fed. Reg. at 56 (instructing that *additional* recited elements should be evaluated in *Alice/Mayo* step two to determine whether they (1) *add* specific limitations that are not well-understood, routine, and conventional in the field, or (2) simply *append* well-understood, routine, and conventional activities previously known to the industry (citing MPEP § 2106.05(d)).

Rather, the recited “database” and “user interface” are the only additional recited elements whose *generic computing functionality* is well-understood, routine, and conventional. *See* Spec. ¶¶ 11–15, 34–38; Figs. 1–2 (describing exemplary systems that use generic computing components); *see also FairWarning*, 839 F.3d at 1096 (noting that using generic computing components like a microprocessor or user interface does not transform an otherwise abstract idea into eligible subject matter); *Mortgage Grader Inc. v. First Choice Loan Services, Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (noting that components such as an “interface,” “network,” and “database” are generic computer components that do not satisfy the inventive concept requirement); *accord* Final Act. 7 (concluding that the recited functions merely (1) require no more than a generic computer to perform *generic computer functions* that are well-understood, routine, and conventional, and (2) provide a *conventional* computer implementation of the identified abstract idea); Ans. 7 (noting that the *hardware* that makes up the system on which the computer operates is a generic computer with generic components, and *this addition* is insufficient to improve existing technology and, therefore, does not add significantly more than the abstract idea).

Appellant’s reliance on *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) (Appeal Br. 15–17) is unavailing. There, the court held eligible claims directed to a technology-based solution to filter Internet content that overcame existing problems with other Internet filtering systems by making a known filtering solution—namely a “one-size-fits-all” filter at an Internet Service Provider (ISP)—more dynamic and efficient via individualized filtering at the ISP.

BASCOM, 827 F.3d at 1351. Notably, this customizable filtering solution improved the computer system’s performance and, therefore, was patent-eligible. *See id.* But unlike the filtering system improvements in *BASCOM* that added significantly more to the abstract idea in that case, the claimed invention here uses generic computing components to implement an abstract idea as noted previously.

Appellant’s contention that the Examiner allegedly did not comply with the evidentiary requirements under the April 2018 USPTO memorandum mandating these requirements for ineligibility rejections after *Berkheimer v. HP, Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018) (Appeal Br. 10–13; Reply Br. 2–3) is unavailing. To be sure, the Examiner must show—with supporting facts—that certain claim elements are well-understood, routine, and conventional where such a finding is made. *See Berkheimer*, 881 F.3d at 1369 (noting that whether something is well-understood, routine, and conventional to a skilled artisan at the time of the invention is a factual determination). In light of this factual determination, the USPTO issued a memorandum requiring that Examiners support a finding that an *additional element* of a claim is well-understood, routine, and conventional. Robert W. Bahr, *Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (Berkheimer v. HP, Inc.)*, USPTO, Apr. 19, 2018 (“*Berkheimer* Memo.”), at 2–3 (noting that the *Berkheimer* decision clarifies the inquiry whether an *additional element* (or combination of *additional elements*) represents well-understood, routine, and conventional activity).

As noted previously, the recited “database” and “user interface” are the only additional recited elements whose *generic computing functionality*

is well-understood, routine, and conventional. Therefore, to the extent that Appellant contends that the Examiner failed to provide evidence that *all* recited elements are well-understood, routine, and conventional (*see* Appeal Br. 10–13; Reply Br. 3–4), such an argument is not commensurate with the more limited scope of the Examiner’s finding in this regard. Rather, the Examiner’s finding is that the elements *other than the abstract idea*, namely the *additional computer-based elements*, provide *generic computing functionality* that is well-understood, routine, and conventional. *See* Final Act. 7 (concluding that the recited functions merely (1) require no more than a generic computer to perform *generic computer functions* that are well-understood, routine, and conventional, and (2) provide a *conventional* computer implementation of the identified abstract idea); Ans. 7 (noting that the *hardware* that makes up the system on which the computer operates is a generic computer with generic components, and *this addition* is insufficient to improve existing technology and, therefore, does not add significantly more than the abstract idea).

As noted previously, there is ample evidence of this generic computing functionality in not only the cited case law, but also Appellant’s own Specification. *See, e.g., Fair Warning*, 839 F.3d at 1096 (noting that using generic computing components like a *microprocessor* or *user interface* do not transform an otherwise abstract idea into eligible subject matter); *Internet Patents*, 790 F.3d at 1343–49 (holding ineligible claims reciting providing an intelligent *user interface* to an online application comprising (1) furnishing plural hyperlinked icons on a displayed web page, and (2) *displaying* a dynamically generated online application form set responsive to activating an icon as directed to the abstract idea of retaining information in

navigating online forms); *Mortgage Grader*, 811 F.3d at 1324–25 (noting that a database is a generic computer component that does not satisfy the inventive concept requirement); Spec. ¶¶ 11–15, 34–38 (describing generic computer components used to implement the invention). Therefore, the additional recited elements, when considered individually and as an ordered combination, do not add significantly more than the abstract idea to render the claim patent-eligible.

We reach a similar conclusion regarding the recited insignificant extra-solution activity, namely (1) “maintaining a patent case database, wherein the database includes data about each patent case in the patent case database,” and (2) “receiving a reference document into the database.” That a patent case database is maintained and can receive reference documents does not mean that these functions are performed in an unconventional way to add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two. *See* Guidance, 84 Fed. Reg. at 56. Given these limitations’ (1) high level of generality, and (2) use of generic computing components whose functionality is well-understood, routine, and conventional for the reasons noted previously, the recited extra-solution activity does not add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two. To the extent Appellant contends otherwise (*see* Appeal Br. 10–13, 15–17; Reply Br. 2–3), we disagree.

In conclusion, the additional recited elements—considered individually and as an ordered combination—do not add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two. *See Alice*, 573 U.S. at 221; *see also* Guidance, 84 Fed. Reg. at 56.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1 and claims 2–8 not argued separately with particularity.

THE OBVIOUSNESS REJECTION OVER CASEY, ASHLEY, RIVETTE,
AND LUNDBERG '194

Regarding independent claim 1, the Examiner finds that Ashley discloses, among other things, (1) receiving a reference document into a patent case database; (2) identifying a number of propagation levels, via a “hops” value, for each target patent case in a set of such cases by assessing a number of levels between the reference document and each target case; and (3) displaying, in a user interface, a propagation level selection option that selects the identified number of propagation levels associated with the “hops” values. *See* Final Act. 6–8; Ans. 9–10.

Although the Examiner acknowledges that Ashley does not receive a selected propagation option for the reference document that is used as a basis for associating that document with target patent cases, the Examiner cites Casey for teaching this feature. *See* Final Act. 7. The Examiner also cites (1) Rivette for teaching displaying a reference document’s potential citation pathway in the user interface, and (2) Lundberg '194 for teaching comparing the reference document’s and target cases’ respective priority dates. Final Act. 9–10. Given these collective teachings, the Examiner concludes that the claim would have been obvious. Final Act. 6–10.

Appellant argues that Ashley does not teach or suggest propagation levels, let alone a propagation level selection option as claimed. Appeal Br. 18–21; Reply Br. 4–5. According to Appellant, Ashley’s “hops” value on which the Examiner relies is created and modified by a user, unlike the

recited propagation level that is an unmodifiable “identified factual value.” Appeal Br. 18–21; Reply Br. 4–5. Appellant adds that Casey’s reference export functionality does not teach or suggest the recited selected propagation option that provides a basis for associating a reference document with a set of target patent cases. Appeal Br. 21–22.

ISSUE

Under § 103, has the Examiner erred in rejecting claim 1 by finding that Casey, Ashley, Rivette, and Lundberg ’194 collectively would have taught or suggested (1) propagation levels, and (2) a selected propagation level selection option that provides a basis for associating a reference document with a set of target patent cases?

ANALYSIS

We begin by noting that the Examiner’s reliance on the teachings of Rivette and Lundberg ’194 is undisputed, as is the cited references’ combinability. Rather, as noted above, this dispute turns solely on the Examiner’s reliance on Ashley for teaching the recited propagation levels, and Casey for teaching the recited selected propagation level selection option. Therefore, we confine our discussion to Ashley and Casey.

Turning to claim 1, the claim recites, in pertinent part, identifying a number of propagation levels for each target patent case in a set of such cases by assessing a number of levels between the reference document and each target patent case in the set. As the Specification’s paragraph 21 explains, a reference document may be propagated downstream to be cross-cited in first, second, or even third sets of target cases. This downstream

propagation from a source to a target case may be assessed in terms of the number of “hops” *or* “levels” taken by a reference document to flow from a source to a target. Spec. ¶ 21. This hop-number assessment may form the basis of a cross-citation characteristic, including prior cross-citations. *Id.*

Our emphasis on the alternative term “or” above underscores that the term “levels” is synonymous with “hops” as the Examiner indicates. *See* Ans. 10 (noting this point). Given this equivalence, we see no error in the Examiner’s reliance on the functionality associated with Ashley’s “hop” values for at least suggesting the recited propagation level identification. *See* Final Act. 8; Ans. 9–10.

A key aspect of Ashley’s system is preventing irrelevant material from migrating between certain cases, such as cases 202 and 206 in Figure 2. To this end, a “hops” value can be assigned to particular Information Disclosure Statement (IDS) submissions in a linking case, such as case 204. Notably, “hops” values can be assigned *automatically* by, for example, creating them when a particular document (e.g., an IDS submission) is created and filed. Ashley ¶ 41.

“Hops” values affect reference migration from one case to another. *See id.* (noting that a prior art citation determination for case 202 may drop any reference cited in case 204 whose “hops” value exceeds a predetermined value). In one implementation, “hops” values can be *incremented by each case to which it migrates*, and some threshold (e.g., hops=2) may be used to determine whether the reference needs to be reported. Ashley ¶ 42.

Given this functionality, Ashley at least suggests identifying a number of propagation levels, or “hops,” via a “hops” value—a value incremented

with each level or “hop” between a reference document and target case as noted in Ashley’s paragraph 42.

That the user can modify “hops” values in the form 700 in Ashley’s Figure 7 as Appellant contends (Appeal Br. 19–20; Reply Br. 4–5) does not change our conclusion. Not only does the claim not preclude user-modifiable propagation level identifications, but Appellant’s argument ignores the fact that Ashley’s “hops” values can also be incremented *automatically* to reflect the number of cases to which a reference is migrated. *See* Ashley ¶¶ 42, 61. This “hop” count functionality effectively identifies the number of propagation levels or “hops” between a reference document and a target case, particularly given the linkages between cases as the Examiner indicates. *See* Ans. 10. Nor are we persuaded of error in the Examiner’s reliance on the functionality of Ashley’s form in Figure 7 and paragraphs 55 and 61 for at least suggesting a propagation level selection option, particularly given the user’s ability to enter individual “hops” values in that form. *See* Final Act. 8. In short, Appellant’s arguments (Appeal Br. 19–20; Reply Br. 4–5) are unavailing and not commensurate with the scope of the claim.

We are also unpersuaded of error in the Examiner’s reliance on Casey’s reference export functionality for at least suggesting the recited selected propagation option that provides a basis for associating a reference document with a set of target patent cases despite Appellant’s arguments to the contrary (Appeal Br. 21–22). *See* Final Act. 7; Ans. 11–12. As shown in Casey’s Figure 5a, selecting any of the checkboxes causes corresponding applications to be related. Casey ¶ 33. Moreover, selecting the “Export to related” function in Casey’s Figure 5b pushes references cited in the

displayed application to the related applications, or “target patent cases,” automatically. *See* Casey ¶ 34; *see also* Ans. 11. This functionality that not only relates cases based on certain selected criteria, but also exports documents to those cases based on a user selection at least suggests the recited selected propagation option that provides at least a basis for associating a reference document with a set of target patent cases. Appellant’s arguments are unavailing and not commensurate with the scope of the claim.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 3–8 not argued separately with particularity.

THE OTHER OBVIOUSNESS REJECTION

We also sustain the Examiner’s obviousness rejection of claim 2. Final Act. 12–13. Because this rejection is not argued separately with particularity, we are not persuaded of error in this rejection for the reasons previously discussed.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–8	101	Eligibility	1–8	
1, 3–8	103	Casey, Ashley, Rivette, Lundberg ’194	1, 3–8	
2	103	Casey, Ashley, Rivette, Lundberg ’194, Lundberg ’449	2	
Overall Outcome			1–8	

Appeal 2019-000099
Application 14/826,006

TIME PERIOD FOR RESPONSE

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

AFFIRMED