UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte RAVI KUMAR REDDY KANAMATAREDDY

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Appeal 2017-006692
Application 14/320,554
Technology Center 2100

———————

Before THU A. DANG, CHARLES J. BOUDREAU, and
JASON M. REPKO, *Administrative Patent Judges.*

REPKO, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's
rejection of claims 1–20. App. Br. 1.[2] We have jurisdiction under 35 U.S.C.
§ 6(b).

We affirm.

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[1] Appellant identifies the real party in interest as International Business
Machines Corporation. App. Br. 1.

[2] Throughout this opinion, we refer to the Final Rejection ("Final Act.")
mailed February 12, 2016, the Appeal Brief ("App. Br.") filed July 11, 2016,
the Examiner's Answer ("Ans.") mailed January 25, 2017, and the Reply
Brief ("Reply Br.") filed March 23, 2017.

THE INVENTION

Appellant's invention relates to data management for data aggregation, including data mining and reporting. Spec. ¶ 2. To mine data without disabling or interfering with a production database's use, data-mining methods duplicate a database's contents. *Id.* ¶ 3. But the duplicated contents will not reflect subsequent changes to the production database. *Id.* According to the Specification, a typical lag between a duplicated database and a production database is between eight and twenty-four hours. *Id.* A similar issue arises in data reporting. *Id.* ¶ 4. To address this lag, one embodiment of the invention updates the data before releasing normalized data to users. *Id.* ¶¶ 18–20. These updates could include overwriting old data or inserting new data. *Id.* ¶ 18. Normalization could include placing the data in a form suitable for later uses. *Id.* ¶ 19.

Claim 1 is reproduced below:

> 1. A method of managing data for data aggregation, the method comprising:
>   determining a plurality of locations of data to be collected within a source database;
>   acquiring at least one access configuration log of the plurality of locations from which data will be collected;
>   simultaneously collecting data from the plurality of the locations;
>   aggregating the collected data;
>   normalizing the aggregated data;
>   storing the normalized data; and
>   releasing the data at each of the plurality of locations in the source database.

THE EVIDENCE

The Examiner relies on the following as evidence:

Vittal et al.	US 6,907,401 B1	June 14,2005
Nishikado et al.	US 7,127,502 B1	Oct. 24, 2006
Kailash et al.	US 2007/0140301 A1	June 21, 2007
Notarnicola et al. ("Notarnicola" or "the '429 publication")	US 2009/0055429 A1	Feb. 26, 2009
Kanamatareddy	US 8,856,187 B2	Oct. 7, 2014

THE REJECTIONS

Claims 1–20 stand provisionally rejected on the ground of non-statutory obviousness-type double patenting over Kanamatareddy. Final Act. 2–3.

Claims 1–20 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. Ans. 2–4.[3]

Claims 1, 2, 6–8, 12–14, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Notarnicola and Nishikado. Final Act. 4–8.

Claims 3, 4, 9, 10, 15, and 16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Notarnicola, Nishikado, and Vittal. Final Act. 8–9.

Claims 5, 11, 17, and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Notarnicola, Nishikado, and Kailash. Final Act. 9–10.

THE PROVISIONAL DOUBLE-PATENTING REJECTION

Although Appellant does not provide arguments against this rejection, Appellant explains that "an appropriate disclaimer" will be filed upon an

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[3] In the Examiner's Answer, the Examiner presented this rejection for the first time as a new ground. Ans. 2–4.

indication of allowable subject matter. App. Br. 3–4. On this record, we decline to reach the Examiner's provisional rejection of claims 1–20 on the ground of non-statutory obviousness-type double patenting. *See Ex parte Moncla*, 95 USPQ2d 1884, 1885 (BPAI 2010) (precedential) (explaining that panels may decline to reach provisional obviousness-type double patenting rejections).

THE PATENT-ELIGIBILTY REJECTION

The Examiner rejects claims 1–20 under 35 U.S.C. § 101 because the claims as a whole (1) are directed to an "abstract idea" of collecting data, formatting data, and making data available and (2) do not contain an "inventive concept" sufficient to transform the claimed "abstract idea" into a patent-eligible application. Ans. 3–4.

Appellant argues claims 1–20 together. *See* Reply Br. 2–6. We select claim 1 as representative.

I. *Alice Step One*

The Supreme Court's two-step framework guides our analysis. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). Step one asks "whether the claims at issue are directed to a patent-ineligible concept," such as an abstract idea. *Id.* In this step, the claims are considered "in their entirety to ascertain 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).

The method of claim 1 collects and aggregates data from multiple locations in a database. This involves using an "access configuration log." The method then normalizes the aggregated data. According to the

Specification, normalizing data may include compressing data, changing the data's format, encrypting the data, or any actions for placing the data in a form suitable for further use. Spec. ¶ 19. The data is then stored and made available—i.e., released. *Id.* ¶ 20. Therefore, as a whole, the concept here involves formatting collected data and making it available.

Appellant argues that the claims are not directed to (1) fundamental economic practices, (2) an idea "of itself," (3) certain methods of organizing human activity, or (4) mathematical relationships and formulas. Reply Br. 5. According to Appellant, the identified abstract idea is not similar to any of these four concepts, and the Examiner has mischaracterized the method. *Id.* at 3, 5. We disagree.

Here, the Examiner finds that the claims are similar to those found to be directed to an abstract idea in *Electric Power Group, LLC v. Alstom S.A.,* 830 F.3d 1350, 1353–54 (Fed. Cir. 2016). Like the claims in that case, Appellant's claims are focused on a combination of abstract-idea processes. *Id.* at 1354.

For example, regarding the recited data collection, the court in *Electric Power Group* stated that "collecting information" is an abstract idea. *Id.* at 1353. Although claim 1 recites using an "access configuration log," information limited to particular content does not change its intangible character and remove the claimed concept from the abstract idea category. *Id.*

Similarly, the courts have treated analyzing information "by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category." *Id.* at 1354. Notably, the claimed analysis—i.e., "normalizing"—can be "any action or actions for placing the

data in a form suitable for subsequent use." Spec. ¶ 19. In this way, normalizing data is broader conceptually than even the data analysis found abstract in *Electric Power Group*.

Lastly, the recited storing step does not make the claim any less abstract. For example, the Federal Circuit has held that claims reciting classifying and storing digital images were directed to an abstract idea. *See TLI Commc'ns, LLC v. AV Auto., LLC*, 823 F.3d 607, 611–12 (Fed. Cir. 2016).

Essentially, claim 1 is not focused on a specific asserted improvement to a particular technology. *See McRO, Inc. v. Bandai Namco Games Am.*, 837 F.3d 1299, 1315 (Fed. Cir. 2016), *discussed in* Reply Br. 4–5. Considering the whole claim's character, its focus is using the computer as a tool to gather, format, and output data in another form. Similarly, the Federal Circuit has held that "[a] process that started with data, added an algorithm, and ended with a new form of data was directed to an abstract idea." *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (citing *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014)).

Accordingly, we are unpersuaded that the Examiner erred in concluding that representative claim 1 is directed to an abstract idea.

II. *Alice Step Two*

Because the claims are "directed to an abstract idea," we analyze the claims to determine if the limitations, when considered both "individually and as an ordered combination," contain an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application. *Alice*, 134 S. Ct. at 2355–58.

Appellant argues that the Examiner has failed to support the § 103 rejection, and the subject matter's novelty and non-obviousness indicates that it is not well-understood, routine, and conventional. Reply Br. 3. We first note that "a claim for a *new* abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016). Nevertheless, for the reasons discussed below, we disagree that the subject matter here is not well-understood, routine, and conventional. Reply Br. 3.

Specifically, the collecting, aggregating, and releasing steps use only a conventional database and generic devices. For example, the Specification explains that the computer system carrying out these steps "can comprise any general purpose computing article of manufacture capable of executing computer program code installed by a user (e.g., a personal computer, server, handheld device, etc.)." Spec. ¶ 25. The normalizing step broadly encompasses "any action or actions for placing the data in a form suitable for subsequent use." *Id.* ¶ 19. This broad disclosure indicates that the method relies on generic, well-known components. Therefore, contrary to Appellant's argument (Reply Br. 3), the claim here involves conventional hardware and known activity.

Although the claims recite an access configuration log, "merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas." *Elec. Power Grp.*, 830 F.3d at 1355, *quoted in FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1097 (Fed. Cir. 2016). Of relevance here, the Federal Circuit has recognized

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that storing and retrieving data is a well-understood, routine activity. *See, e.g., Versata Dev. Grp. v. SAP Am.*, 793 F.3d 1306, 1334 (Fed. Cir. 2015).

Appellant argues that the claimed method recites "specific steps" for data management and aggregation. Reply Br. 3. Appellant, however, has not explained "what is inventive about the [data generated] or about the technology used to generate and process it." *Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 912 (Fed. Cir. 2017). For example, the claims do not involve "the non-conventional and non-generic arrangement of known, conventional pieces." *BASCOM Global Internet Servs., Inc. v. AT&T Mobile LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). Rather, the claims use only a conventional, generic database and the functions of a general purpose computer—e.g., collecting, formatting, storing, and releasing data. *Accord* Spec. ¶ 25.

Considering the steps as an ordered combination, therefore, does not alter our analysis of the separately considered steps. Viewed as a whole, claim 1 simply recites the abstract concept as performed by a generic computer with a database.

Therefore, Appellant has not persuaded us of error in the rejection of claim 1 under 35 U.S.C. § 101. Accordingly, we sustain the Examiner's rejection of representative claim 1 and claims 2–20, which are not separately argued (*see* Reply Br. 2–6).

THE OBVIOUSNESS REJECTIONS OVER NOTARNICOLA AND NISHIKADO

The Examiner rejects claims 1, 2, 6–8, 12–14, 18, and 19 over Notarnicola ("the '429 publication") and Nishikado. Final Act. 4–8.

Appellant argues "Notarnicola does not qualify as prior art as relied upon by the Office for its rejections." App. Br. 4.[4]

Appellant's application was filed on June 30, 2014. The application is a continuation of U.S. Application 12/027,284 filed February 7, 2008 ("parent application").

The '429 publication published on February 26, 2009, and was filed on August 25, 2008, which is after the filing date of Appellant's parent application. But the '429 publication is based on U.S. Provisional Application 60/935,638 ("the '638 provisional") filed August 23, 2007, which is before the filing date of Appellant's parent application.

The issue here is whether the '429 publication is entitled to the date of the '638 provisional. If not, the '429 publication does not qualify as prior art because its filing date is after the filing date of Appellant's parent application.

"A reference patent is only entitled to claim the benefit of the filing date of its provisional application if the disclosure of the provisional application provides support for the *claims* in the reference patent in compliance with § 112, ¶ 1." *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1382 (Fed. Cir. 2015) (emphasis added). *Dynamic Drinkware* involved a patent, which qualifies as prior art under pre-AIA[5]

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[4] Appellant argues claims 1, 2, 6–8, 12–14, 18, and 19 together. App. Br. 4–6. We select claim 1 as representative of claims 2, 6–8, 12–14, 18, and 19. *See* 37 C.F.R. § 41.37(c)(1)(iv).

[5] This application is a continuation of an application filed before the effective date of the Leahy-Smith America Invents Act (AIA), Pub. L. No. 112-29, § 3, 125 Stat. 284, 285–93 (2011), and therefore, this application is governed by the previous version of § 102.

§ 102(e)(2), not a published application, which qualifies as prior art under pre-AIA § 102(e)(1).

Nevertheless, our reviewing court has since applied the *Dynamic Drinkware* analysis to pre-AIA § 102(e)(1) art. *See Amgen Inc. v. Sanofi,* 872 F.3d 1367, 1380 (Fed. Cir. 2017) (holding that the district court's grant of JMOL of non-obviousness was proper when "Appellants provided no evidence that the claims of the PCT applications were enabled by the provisional application"). Similarly, the Board has applied the *Dynamic Drinkware* analysis to patent applications published under 35 U.S.C. § 122(b). *Ariosa Diagnostics, Inc. v. Illumina, Inc.,* IPR2014-01093, slip op. at 15 (PTAB Jan. 7, 2016) (Paper 69), *aff'd,* 705 Fed. App'x 1002, 1002 (Fed. Cir. 2017). Therefore, we apply that analysis here to determine whether the '429 publication is entitled to the date of its provisional application, the '638 provisional.

In doing so, we need only determine whether at least one of the claims of the '429 publication is supported. *Accord* MPEP § 2136.03 III (9th ed., Rev. 08.2017, Jan. 2018) ("[T]he reference date under pre-AIA 35 U.S.C. 102(e) of a U.S. patent may be the filing date of a relied upon provisional application only *if at least one of the claims* in the patent is supported . . . .") (emphasis added) (citing *Dynamic Drinkware,* 800 F.3d at 1375). This is consistent with the principle that "[p]atent claims are awarded priority on a claim-by-claim basis based on the disclosure in the priority applications." *Lucent Techs., Inc. v. Gateway, Inc.,* 543 F.3d 710, 718 (Fed. Cir. 2008).

Regarding that disclosure, "the specification of the provisional must 'contain a written description of the invention and the manner and process of making and using it, in such full, clear, concise, and exact terms,' 35 U.S.C.

§ 112 ¶ 1, to enable an ordinarily skilled artisan to practice the invention claimed in the non-provisional application." *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294 (Fed. Cir. 2002), *quoted in Dynamic Drinkware*, 800 F.3d at 1378. For the reasons discussed below, we conclude the specification of the '638 provisional meets this requirement.

In particular, claim 11 in the '429 publication reads as follows:

A data collection method, comprising:

[1] generating a plurality of tables in a database, the tables corresponding to source data selected for collection;

[2] storing, using a first program thread, source data received from a data source in a data storage device;

[3] extracting, using a second program thread executed substantially concurrent with the first thread, the selected source data from the data storage device; and

[4] storing the selected source data in the corresponding tables of the database.

Generally, the '638 provisional and the '429 publication describe a system to support data analysis during experimentation. *See* '638 provisional 1; '429 publication ¶ 4. The data analysis relates to tests in virtual-warfare environments. '429 publication ¶ 3. These tests produce a large data set that must be collected and provided to an analyst. *Id.* Before another test can be performed, the analyst must import the data into a database and look for errors. *Id.* ¶ 4. Typically, this error-detection process adds substantial delay and cost to the program. *Id.* Notarnicola's system, however, provides instantaneous feedback about experimental runs and data analysis. *Id.* This feature reduces the need for post-test data processing. *Id.* The solution described in both disclosures involves using two independent threads to address the large volume of data. '638 provisional 13.

Regarding limitation [1], the '638 provisional discloses a relational-database-table-creation algorithm for generating tables in a database. '638 provisional 3–7. These tables correspond to source data selected for collection. *See* '638 provisional 3, Diagram 2 (describing the class that the tables are created to store).

Regarding limitations [2] and [3], the '638 provisional discloses a listening thread and an insertion thread corresponding to the recited first and second program threads. *Id.* at 13. In particular, the '429 publication's claim 11 recites, in part, "storing, using a first program thread, source data received from a data source in a data storage device." The '638 provisional discloses that "[t]he listening thread of the HOG[6] retrieves data from the Run-Time Infrastructure (RTI), formats the information, and places it in a queue for processing." *Id.* at 13. Here, the RTI is used to access the stored data source. *See id.*

The '429 publication's claim 11 further recites, in part, "extracting, using a second program thread executed substantially concurrent with the first thread, the selected source data from the data storage device; and storing the selected source data in the corresponding tables of the database." The '638 provisional discloses that "[t]he insertion thread of the HOG constantly polls the queue for available information and inserts the data into the database as it becomes available." *Id.* Notably, the constant polling is concurrent with the listening thread placing data in the queue. *See id.*

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[6] High Level Architecture to Oracle Gateway.

On this record, we find the disclosure of the '638 provisional application provides support for at least one claim in the '429 publication in compliance with § 112, ¶ 1.

We now turn to whether the Examiner has sufficiently shown that the features relied upon in the rejection have support in the provisional application to then shift the burden to Appellant to explain why this finding was erroneous. *See Ex parte Yamaguchi*, 88 USPQ2d 1606, 1613–14 (BPAI 2008) (precedential) (holding that the Examiner's statements regarding why the relied-upon subject matter from a patent was entitled the benefit of the provisional application's filing date, although "terse and conclusory," were sufficient to shift the burden to Appellants).

For the reasons discussed below, we find that the Examiner has explained, sufficiently, how both documents show the same subject matter, and thus, has shifted the burden to Appellant to rebut this finding. Final Act. 10–11; Ans. 5–6. Appellant, however, has not persuasively shown why the Examiner's finding is erroneous. Reply Br. 7.

In particular, according to Appellant, "[i]f the Office is relying on a publication dated after the filing date of the parent application, the Office must be able to specifically cite where the first filed publication teaches or suggests the rejected features." App. Br. 5. Yet Appellant does not point out any particular deficiency in the Examiner's specific mapping. *See id.*; Reply Br. 7. Rather, Appellant argues that the Examiner has merely paraphrased the disclosure and characterizes the Examiner's citations as "vague." App. Br. 5; Reply Br. 7. We disagree.

In rejecting claim 1, the Examiner maps the recited determining and collecting steps to the simulation-test data source and data-collection tool in

the '429 publication, and the Examiner also finds that these features are described in the '638 provisional. *Compare* Final Act. 4 (citing '429 publication ¶¶ 17–18, 21) *with* Final Act. 10 (citing '638 provisional 3).

In the rejection, the Examiner relies upon a normalized database in the '429 publication to address the recited normalizing step. Final Act. 4 (citing the '429 publication ¶ 40). Similarly, the Examiner explains that the '638 provisional also discloses a normalized database. Final Act. 10 (citing '638 provisional 8–9); Ans. 6 (citing '638 provisional 9).

In the rejection, the Examiner finds the '429 publication's tables are used for the recited aggregating, storing, and releasing. Final Act. 4 (citing '429 publication ¶¶ 34, 36, 39–40, 70–71). Likewise, the Examiner provides page numbers and a discussion of the '638 provisional's Platform table as well as other tables. Final Act. 10 (citing '638 provisional 3); Ans. 5–6 (citing '638 provisional 3, 6, 7, Diagrams 4, 6). On this record, the weight of the evidence supports the Examiner's finding that the subject matter relied upon from '429 publication is supported by the '638 provisional.

Because Appellant has not shown that the Examiner erred in relying on the '429 publication as prior art, we sustain the Examiner's rejection of representative claim 1 and claims 2, 6–8, 12–14, 18, and 19, which fall with claim 1.

THE REMAINING OBVIOUSNESS REJECTIONS

Claims 3–5, 9–11, 15–17, and 20 depend from one of independent claims 1, 7, 13, or 18. In arguing for the patentability of claims 3–5, 9–11, 15–17, and 20, Appellant refers to the arguments presented for independent claims 1, 7, 13, and 18. App. Br. 6–7; Reply Br. 8. For the reasons

discussed in connection with claims 1, 7, 13, and 18, we also sustain the rejections of claims 3–5, 9–11, 15–17, and 20.

DECISION

We affirm the Examiner's rejections of claims 1–20.

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

AFFIRMED