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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte FRANK NAEYMI-RAD, REGIS JP CHARLOT,
ALINA E. OGANESOVA, DAVID O. HAINES, AZIZ M. BODAL,
ANDRE L. YOUNG JR., MASAYO KOBASHI,
STEPHANIE J. SCHAEFER, ANDREW STUART KANTER,
KIM CHARLES MEYERS, and JOSE ANTONIO MALDONADO JR.

Appeal 2016-005478[1]
Application 13/622,934[2]
Technology Center 3600

Before KENNETH G. SCHOPFER, TARA L. HUTCHINGS, and
MATTHEW S. MEYERS, *Administrative Patent Judges*.

HUTCHINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

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[1] Our decision references Appellants' Appeal Brief ("App. Br.," filed Sept. 3, 2015), Reply Brief ("Reply Br.," filed Apr. 26, 2016), and Specification ("Spec.," US 2013/0080191 A1, pub. Mar. 28, 2013), and the Examiner's Answer ("Ans.," mailed Feb. 26, 2016), and Final Office Action ("Final Act.," mailed Mar. 13, 2015). The record includes a transcript of the hearing held September 21, 2017.

[2] Appellants identify Intelligent Medical Objects, Inc. as the real party in interest. App. Br. 1.

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–14. An oral hearing was held on September 21, 2017. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED INVENTION

Appellants' claimed invention relates to "a system and method for electronic record-keeping, organizing, and managing." Spec. ¶ 2.

Claims 1, 10, and 17 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A method of implementing a controlled vocabulary in a longitudinal electronic medical record, comprising:
>
> generating a first instance of a plurality of data objects during a first encounter, said plurality of data objects comprising data elements further comprising a first instance identifier and temporal identifiers;
>
> linking a data object in said first instance to a summarization reference with a pointer, where the plurality of data objects and the summarization reference are related as part of a directed graph data structure;
>
> creating an additional instance of a plurality of data objects during a later encounter, said additional instance of a plurality of data objects comprising data elements further comprising an additional instance identifier and temporal identifier;
>
> providing continuity for said plurality of data objects of said first instance over time;
>
> capturing said controlled vocabulary using a computer by forming a list of medical terms and list of associated descriptions;
>
> creating a list of codes internal to said controlled vocabulary;

> storing said codes, said medical terms, and said descriptions using a computer in a format suitable for use in the longitudinal electronic medical record; and
>
> tagging elements within a domain within the longitudinal medical record with said controlled vocabulary;
>
> wherein said controlled vocabulary maps to at least one of a reference terminology or an administrative terminology; and
>
> wherein said providing step comprises tracking a relationship between said data object of said first instance and a data object of said additional instance.

REJECTION

Claims 1–14 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

ANALYSIS

Independent Claims 1 and 12

We are not persuaded by Appellants' argument that the Examiner erred in rejecting the claims under 35 U.S.C. § 101, because the Examiner fails to establish a prima facie rejection under 35 U.S.C. § 101. Reply Br. 1, 3–5; *see also* App. Br. 10. Here, in rejecting claims 1–14 under § 101, the Examiner analyzes the claims using the two-step framework described by the Supreme Court in *Alice Corp. Pty. Ltd., v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014). Specifically, the Examiner finds that "claim 1 is drawn to a method of implementing a controlled vocabulary in a longitudinal electronic medical record by data objects pertaining to encounters, creating and storing a vocabulary with associated codes, [and] tagging a medical record with the vocabulary," and claim 12 "is drawn to a method of processing a sound

wave and correlating it with a vocabulary by capturing a sound wave as an electronic file, translating the file to text, storing the text as a patient medical record, tagging the record with a vocabulary, mapping the vocabulary to a reference terminology, and providing a code internal to the vocabulary." Ans. 3. As such, the Examiner determines that independent claims 1 and 12 "process information to create a longitudinal medical record and thereby manage patient records." *Id.* The Examiner characterizes this concept as an abstract idea because it is similar to other concepts that the courts have held to be abstract, such as a method of organizing human activities; a fundamental economic practice; using categories to organize, store, and transmit information; comparing new and stored information; and/or comparing data using mathematical relationships/formulas. *Id.*

The Examiner further finds that the

> claims do not include limitations that are sufficient to amount to significantly more than the judicial exception because the additional element(s) or combination of element(s) in the claim(s) in conjunction with the abstract idea per se amount(s) to no more than mere instructions to implement the idea on a computer, and/or the recitation of generic computer structure (e.g., a computer, etc.) that serves to perform generic computer functions (e.g., generating data, linking data, creating data objects, etc.) that are well-understood, routine, and conventional activities previously known to the pertinent industry.

Final Act. 2.

The Examiner, thus, 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; *Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (Section 132 "is violated when a rejection is so uninformative that it

prevents the applicant from recognizing and seeking to counter the grounds for rejection."). And we find that, in doing so, the Examiner set forth a proper rejection under § 101 such that the burden then shifted to Appellants to demonstrate that the claims are patent-eligible.

We are not persuaded by Appellants' argument that the Examiner erred in characterizing claim 1 as being directed to an abstract idea. Specifically, Appellants charge that the Examiner oversimplifies the claims, ignores the specific technical details and structure recited in the claims, and fails to compare the abstract idea to abstract ideas identified by the Supreme Court or the Federal Circuit. App. Br. 10. For example, with reference to Figures 9 and 10 of the Specification, Appellants assert that the invention enables a health care provider to collect certain data elements, such as follow-up data items, and reuse previously stored items, thereby alleviating the need to store duplicative data, and increasing the speed and efficiency of processing records. App. Br. 6–8; *see also* Reply Br. 2–3. The updated data items are automatically linked to previous data by pointers. App. Br. 7. Data items are tagged with source vocabulary using business logic. *Id.* at 9 (citing Spec., Fig. 3).

Under the "abstract idea" step, we evaluate the focus of the claimed advance over the prior art to determine if the claim's character as a whole is directed to excluded subject matter. *Affinity Labs of Tex. LLC v. DIRECTV LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016). According to Appellants' Specification, current healthcare patient record structure standards allow the exchange of information, but do not address "the real need of the actual care of patients or the proper storage of patient information over time." Spec. ¶ 5; *see also id.* ¶¶ 6–11. To address this shortcoming, Appellants' invention

provides longitudinal electronic record-keeping, organzing and managing. *Id.* ¶ 33. A longitudinal electronic medical record (LEMR) structure provides a written medical history of what has happened to a patient since birth. *Id.* ¶ 35. The LEMR "should automate and streamline the clinician's workflow." *Id.* ¶ 36. "The LEMR design may include the ability to setup and collect information pointers directed at other activities within the LEMR." *Id.* ¶ 40. "The LEMR is a data collection device." *Id.* ¶ 41.

Here, independent claim 1 recites generating a first instance of a plurality of data objects, linking a data object with a pointer, creating an additional instance of a plurality of data objects, providing continuity for the plurality of data objects, capturing controlled vocabulary, creating a list of codes internal to the controlled vocabulary, storing the code, and tagging elements of the plurality of data objects with the controlled vocabulary. Independent claim 12 recites capturing a sound wave as an electronic file, translating the electronic file into text, storing the text as a patient medical record, tagging the patient medical record with a source vocabulary, mapping the source vocabulary to a reference, and providing a code internal to the source vocabulary.

Thus, the claim language, viewed in light of Appellants' Specification, supports the Examiner's determination that independent claims 1 and 12 are directed to processing information to create a longitudinal medical record, and thereby manage patient records. Stated at a higher level of abstraction, claims 1 and 12 can be characterized as collecting, storing, and organizing data.[3] Spec. ¶ 3 (claimed invention "is

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[3] An abstract idea can generally be described at different levels of abstraction. *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240–1241

directed to a system and method for electronic record-keeping, organizing, and managing").

Yet, our reviewing court has repeatedly held that claims directed to collecting, storing, and organizing data are patent ineligible. For example, in *In re TLI Commc'ns*, the Federal Circuit concluded that the concept of classifying data (an image) and storing it based on its classification is abstract under step one. *In re TLI Commc'ns LLC Patent Litigation*, 823 F.3d 607, 611 (Fed. Cir. 2016). In *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Assn.*, the Federal Circuit similarly held that the concept of data collection, recognition, and storage is abstract. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Assn.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). And more recently, in *Intellectual Ventures I LLC v. Erie Indemnity Co.*, the Federal Circuit found that the concept of organizing and accessing records through the creation of an index-searchable database "existed well before the advent of computers and the Internet," and was similar to other concepts held to be abstract, such as collecting data, recognizing data, storing data, classifying data, and filtering data. *Intellectual Ventures I LLC v. Erie Indemnity Co.,* 850 F.3d 1315, 1327 (Fed. Cir. 2017) (collecting cases). Likewise, the court determined that the concept of remotely accessing and retrieving user-specific information from any device located in a region through a user interface using pointers is

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(Fed. Cir. 2016) ("An abstract idea can generally be described at different levels of abstraction. As the Board has done, the claimed abstract idea could be described as generating menus on a computer, or generating a second menu from a first menu and sending the second menu to another location. It could be described in other ways, including, as indicated in the specification, taking orders from restaurant customers on a computer.").

abstract. *Id.* at 1330. As such, we agree with the Examiner's determination that claims 1 and 12 recite steps similar to other steps that have been held to be abstract, such as organizing, storing, and transmiting information.

Turning to step two of the analysis, we are not persuaded by Appellants' argument that claims 1 and 12 recite additional elements that amount to significantly more than the abstract idea, because the Examiner acknowledges that the claims are novel and non-obvious. App. Br. 10–11; *see also* Reply Br. 7. Although the second step in the *Mayo/Alice* framework is termed a search for an "inventive concept," the analysis is not an evaluation of novelty or non-obviousness, but rather, a search for "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 Corp.*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1294) (alteration in original)). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) ("The 'novelty' of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.")

Appellants argue that the claims recite "specific technical elements" that "confine the alleged abstract idea to a particular, useful application," thereby differentiating Appellants' claims from the claims held ineligible in *Content Extraction and Transmission, LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343 (Fed. Cir. 2014), *Cyberfone Sys., LLC v. CNN Interactive Group*, Inc., 558 Fed. Appx. 988 (Fed. Cir. 2014), and *Digitech Image Techs., LLC v. Electronic for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014). App. Br.

11–12. Yet, the test is not whether the claim is confined to a particular field of use or technological environment. *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1366 (Fed. Cir. 2015) ("[a]n abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment").

Appellants direct our attention to "the recited directed graph structures (claims 1 and 12), pointers used to link data collected at different times to a summarization record (claim 1), and tracking relationships between data collected at different times (claim 1)" as "specific technological features" that derive various benefits, such as increased flexibility, more efficient storage space, decreased load times, and alleviation for data cleansing. App. Br. 12 (citing Spec. ¶¶ 37–38, 173–194) ; *see also* Reply Br. 6–7 (citing Spec. ¶¶ 37–38, 173–194; Figs. 8–10, and 11–14EE). In the Reply Brief Appellants additionally argue that the claims solve "how to efficiently store electronic medical records that develop over time in a manner [sic] and how to simultaneously make the smaller amount of data that is stored more useful and easier to process during subsequent data retrieval." Reply Br. 8. Appellants further contend that the problem has no real-world equivalent with paper medical records that store data over time, because paper records cannot be stored using the same techniques (e.g., pointers). *Id.*

However, the relevant question, even at the first step of the *Mayo/Alice* analysis, is "whether the claims are directed to an improvement in computer functionality versus being directed to an abstract idea." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). Here, the invention uses computer technology, but the Specification describes the claimed solution as a scheme in collecting, storing and managing electronic

records over time. *See, e.g.*, Spec. ¶¶ 3, 5, and 12–13. Indeed, this scheme is also what Appellants effectively describe as the claimed solution. *See* Reply Br. 8. And collecting, storing, and organizing information describes the abstract idea to which Appellants' claims are directed, not an improvement in computer technology. *Erie Indemnity Co.*, 850 F.3d at 1328 ("the heart of the claimed invention lies in creating and using an index to search for and retrieve data . . . an abstract concept").

As noted by Appellants (App. Br. 12), claim 1 recites linking a data object of a first instance to a summarization reference with a pointer where the plurality of data objects and summarization reference are related as part of a graph directed structure, and providing continuity for the plurality of data objects of the first instance over time. And claim 12 recites storing text as a patient medical record using a computer with directed graph database storage. But we are not persuaded that these recitations, considered alone or as an ordered combination, are enough to transform the patent-ineligible abstract idea into a patent-eligible invention. Instead, reasonably broadly construed, the specific computer technologies recited cover generic components, e.g., pointers, directed graph data storage, employed in a conventional manner. *See, e.g.*, Spec. ¶¶ 187–188 (describing directed graph database storage as known); *see also Erie Indemnity Co.*, 850 F.3d at 1331 ("[t]he recited use of a mobile interface and pointers . . . evidences nothing more than a 'generic computer implementation' of the abstract idea) (citing *Alice*, 134 S. Ct. at 2357), *id.* ("pointers themselves are conventional, as is the manner in which the claims employ them") (citation omitted).

Claim 1 additionally recites tagging elements within a domain within the longitudinal electronic medical record with a controlled vocabulary.

Claim 12 recites additionally recites tagging the medical record with a source vocabulary. But to the extent Appellants contend that use of a vocabulary to tag the medical record renders the claim non-abstract or constitutes significantly more, we disagree. *Erie Indemnity Co.*, 850 F.3d at 1328 ("[t]he inclusion of XML tags as the chosen index building block, with little more, does not change th[e] conclusion [that the claim is abstract]"), *id.* at 1329 ("the claims do not sufficiently recite how the inclusion of XML tags or metadata leads to an improvement in computer database technology").

We are not persuaded of Examiner error by Appellants' arguments that the claims are analogous to the hypothetical, patent-eligible claims in Examples 1,[4] 2,[5] and 21[6] of the Interim Guidance, as well as the claims in *DDR Holdings*.[7] App. Br. 12–13; *see also* Reply Br. 7–8. As an initial matter, with respect to the USPTO Examples, the Board decides cases in accordance with the law, not hypothetical "examples [that] are intended to be illustrative only." *Examples Jan. 2015* 1. Nonetheless, we find no parallel between Appellants' claims and the hypothetical, patent-eligible claims described in Examples 1, 2, and 21 of the Interim Guidance.

Example 1, for example, includes claims directed to physically isolating a received communication on a memory sector and extracting

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[4] *Examples: Abstract Ideas* (Jan. 27, 2015) (available at https://www.uspto.gov/sites/default/files/documents/abstract_idea_examples.pdf) (hereinafter "*Examples Jan. 2015*"), 1–3.
[5] *Id.* at 4–6.
[6] *July 2015 Update Appendix 1: Examples* (July 30, 2015) (available at https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-app1.pdf) (hereinafter "*Examples July 2015*") 1–5.
[7] *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

malicious code to create a sanitized communication in a new data file, which is inextricably tied to computer technology. *See Examples Jan. 2015* 2. Such action does not describe a concept similar to those found by the courts to be abstract, and is "inextricably tied to computer technology." *Id.* In contrast, Appellants' claims 1 and 12 focus on collecting, storing, and organizing data, which is a concept similar to those found by the courts to be abstract. While Appellants' claims are implemented using computer technology, the concept of collecting, storing, and organizing data is not inextricably tied to computer technology. To the contrary, like the concept of "organizing and accessing records through an index-searchable database" described in *Erie Indemnity Co.*, the concept of collecting, storing, and organizing medicale records includes longstanding conduct that existed well-before the advent of computers and the Internet. *Erie Indemnity Co.*, 850 F.3d at 1327.

Example 2 is based on *DDR Holdings*. There, the Federal Circuit held that the claimed solution is necessarily rooted in computer technology to overcome a problem specifically arising in the realm of computer networks and, thus, not abstract. Namely, the court found that the claims specify how interactions with the Internet are manipulated to yield a desired result that "overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink." *DDR Holdings*, 773 F.3d at 1258; *see also Examples Jan. 2015* 4–6. Appellants' claims, in contrast, do not overcome any problem arising in the realm of computer networks. *See* Spec. ¶ 5 (claimed solution addresses "the real need of the actual care of patients or the proper storage of patient information over time").

Example 21's patent-eligible claim 2 is modeled after the technology in *Google Inc. v. Simpleair, Inc.*, Covered Business Method Case No. CBM 2014-00170 (Jan. 22, 2015). *See Examples Jan. 2015* 1. Claim 2 recites a series of steps for distributing stock quotes to selected remote devices that amount to "comparing and organizing data," which is a concept similar to mental processes and other concepts that courts have found to be abstract under step one. *Examples July 2015* 4. However, applying step two, the claimed invention "addresses the Internet-centric challenge of alerting a subscriber with time sensitive information when the subscriber's computer is offline" by "transmitting the alert over a wireless communication channel to activate the stock viewer application, which causes the alert to display[,] and enables the connection of the remote subscriber computer to the data source over the Internet when the remote subscriber computer comes on line." *Id.* No analogous limitation is recited in Appellants' claims.

We are not persuaded by Appellants' argument that the initial assignment of class and art unit should not be determinative of patent eligibility. App. Br. 14–15. The Examiner does not reject these claims because they are in class 705. Instead, the Examiner applies the framework set forth by the Supreme Court in determining whether claims are directed to patent eligible subject matter.

We are not persuaded by Appellants' argument that the claims "pass muster using the streamlined eligibility analysis because they do not seek to tie up the recited allegedly abstract idea of 'providing healthcare.'" App. Br. 15. As an initial matter, the streamlined analysis set in the 2014 Interim Guidance is an optional tool for Examiners. *See 2014 Interim Guidance on Patent Subject Matter Eligibility*, 79 Fed. Reg. 74618, 74625 (Dec. 16,

2014) ("a streamlined eligibility analysis *can be used*") (emphasis added). Moreover, pre-emption is not the test for eligibility under § 101. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1377 (Fed. Cir. 2015) ("Where a patent's claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.").

Appellants' Specification does not adequately support Appellants' argument that the invention solves a computer problem or recites additional elements that amount to significantly more than the abstract idea, and Appellants do not show how the claims are technically performed such that they are not routine, conventional functions of a computer.

Dependent Claims 2–11, 13, and 14

In the Appeal Brief, Appellants argue that the dependent claims are patent-eligible by virtue of their dependence from claims 1 and 12 "plus the additional recited limitations." App. Br. 15. In the Reply Brief, Appellants assert that the recitations of electronically tagging domains (claim 2), clarifying the electronic relationship between vocabularies in different domains (claim 4), and reducing the need to cleanse data (claim 5) further show that the claims are rooted in computer technologies. Putting aside whether Appellants have shown "good cause" under 37 C.F.R. § 41.41(b)(2) to present this new argument and whether this statement rises to the level of a substantive argument, we disagree that these limitations show the claims are rooted in technology. *Erie Indemnity Co.*, 850 F.3d at 1328–29 ("[w]hile limiting the index to XML tags certainly narrows the scope of the claims, in this instance, it is simply akin to limiting an abstract idea to one field of use or adding token post solution components that do not convert the otherwise

ineligible concept into an inventive concept.") (citing *Bilski v. Kappos*, 130 S. Ct. 3218 (2010)).

We are not persuaded that the Examiner erred in rejecting independent claims 1 and 12 or dependent claims 2–11, 13, and 14 under 35 U.S.C. § 101. Therefore, we sustain the Examiner's rejection.

DECISION

The Examiner's rejection of claims 1–14 under 35 U.S.C. § 101 is affirmed.

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