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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* IWO WILLEM OSCAR SERLIE

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Appeal 2020-000362  
Application 15/022,252  
Technology Center 3600

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Before MAHSHID D. SAADAT, JOHN A. JEFFERY, and  
LARRY J. HUME, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant<sup>1</sup> appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 16–34, which constitute all the claims pending in this application.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Koninklijke Philips Electronics N. V. Appeal Br. 2.

<sup>2</sup> Claims 1–15 and 35 have been canceled.

## STATEMENT OF CASE

### *Introduction*

Appellant’s Specification is directed to “a system and a method for enabling review of a medical image and for generating a report on the review of the medical image.” Spec. 1:2–3. According to Appellant, the disclosed invention advantageously provides “a system or method which enables standardized reporting of medical information at a reduced burden to the user.” *See* Spec. 2:14–15.

Claim 16, which is reproduced below, is illustrative:

16. A medical diagnostic system comprising:
  - a display device that displays a medical image;
  - a user interface that enables a user to apply a graphic element to the medical image on the display device during a radiological review of the medical image, wherein the graphic element provides measurement data relative to an anatomic feature in the medical image;
  - a processing system that:
    - accesses a medical database comprising a plurality of medical information items corresponding to medical reference information;
    - selects a selected medical information item from the plurality of medical information items based on the measurement data;
    - augments the medical information item with the measurement data; and
    - generates a radiology report based on the augmented medical information item.

### *Rejections on Appeal*

Claims 16–34 stand rejected under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter. *See* Final Act. 2–6.

Claims 16–34 stand rejected under 35 U.S.C. § 102(a)(1) as being anticipated by Vining (US 2002/0131625 A1; pub. Sept. 19, 2002). Final Act. 6–9.

#### ANALYSIS

“Whether a claim is drawn to patent-eligible subject matter is an issue of law that we review de novo.” *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1331 (Fed. Cir. 2010). Arguments Appellant could have made, but chose not to make, are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

#### *35 U.S.C. § 101 REJECTION*

##### *Rejection*

The Examiner determines the claims are directed to “an abstract idea of generating a medical report based on the augmented medical information item” which “is an abstract idea because it may be further analogized to collecting information, analyzing the collected information, and displaying the results. Final Act. 2–3. The Examiner also finds that

The claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements, other than the abstract idea per se, when considered both individually and as an ordered combination, amount to no more than limitations consistent with what the courts have recognized, or those in the art would recognize, to be well-understood, routine, and conventional.

Final Act. 3. In that regard, the Examiner points to paragraphs 56–58 of Appellant’s Specification and asserts “the current invention only requires that the limitation be performed by any generic computer.” Final Act. 3–4.

*Principles of Law*

Patent-eligible subject matter is defined in 35 U.S.C. § 101 of the Patent Act, which recites:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

There is, however, an implicit, longstanding exception to patent-eligible subject matter in 35 U.S.C. § 101: “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (citation omitted). This exception precludes patenting of “the basic tools of scientific and technological work” from which all inventions spring. *Id.* at 216–17 (quotation marks and citation omitted). Invention or discovery under § 101 is distinguished as being the application of such tools to an end otherwise satisfying the requirements of the patent statutes. *See Gottschalk v. Benson*, 409 U.S. 63, 67 (1972).

The Supreme Court has established a framework for this eligibility determination. Where a claim is directed towards a law of nature, natural phenomena, or abstract idea, the elements of the claim as a whole must ensure that the claim, in practice, amounts to significantly more than a patent on the law of nature, natural phenomena, or abstract idea itself. *Alice*, 573 U.S. at 217–18. In applying this eligibility analysis, our reviewing court has stated, “the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen[,] . . . the classic common law methodology for creating law when a single governing definitional context is not available.” *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (citation omitted).

In January 2019, the 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 (“Step 2A”), the office first looks to whether the claim recites:

- (1) Prong One: 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) Prong Two: 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. 10. 2019, June 2020)).

Only if a claim (1) recites a judicial exception, and (2) does not integrate that exception into a practical application, do we then (pursuant to the Guidance “Step 2B”) 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.

We review the appealed rejections for error based upon the issues Appellant identifies, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) *cited with approval in In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“[I]t has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections.”). After considering the argued claims in light of the case law presented in this Appeal and each of Appellant’s arguments, we are not persuaded the Examiner’s rejection is in

error. We adopt the Examiner’s findings and conclusions as our own, to the extent consistent with our analysis herein. We add the following primarily for emphasis and clarification with respect to the Guidance.

*I. Step 2A*

Appellant contends that, unlike the claims in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016), the recited “selecting a medical information item based on the application of the user-selected graphic element goes well beyond the ‘passive’ collection of available data.” Appeal Br. 6–7. According to Appellant, claim 16 “requires using the user-provided selection of a graphic element in order to select the particular item from the database.” Appeal Br. 7.

We are not persuaded of Examiner error.

*Prong One*

Pursuant to the Guidance, we agree with the Examiner that claim 16 is directed to an abstract idea, and more specifically to a medical diagnostic system including a display, a user interface, and a processing system for applying a graphic element to the image for providing measurement data to an anatomic feature of the image, accessing a medical data base, selecting a medical information item based on the measurement data, augmenting the medical information with the measurement data, and generating a radiology report. *See* Ans. 3–4. Appellant does not specifically argue that the claim does not recite an abstract idea, but contrasts the claimed limitations from the claims in *Electric Power*. Appeal Br. 6–8.

The Guidance states that the abstract idea exception includes mathematical concepts, certain methods of organizing activity, and mental processes. Guidance, 84 Fed. Reg. at 52. The Guidance describes mental

processes as observations, evaluations, judgements, and opinions, where such can be practically performed in the human mind. October 2019 Update: Subject Matter Eligibility 7, accessible at [https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.pdf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf). Cases reciting steps of collecting, comparing, and analyzing known information, which are practically performed in the human mind, are provided as examples of such mental processes. *Id.* at 7–8 (citing *Classen*,<sup>3</sup> *Electric Power*).

We determine that claim 16 recites an act of judgment and evaluation in the form of the above-cited limitations, which allows a user access medical information from a database, such as a book, select an information item, augment the item with measurement information provided by the user, to include in a radiology report. Such acts are characteristic of mental processes, which comprise a category of abstract ideas. October 2019 Update, 7–9; *Cybersource v. Retail Decisions*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (finding steps extending to “essentially any method of detecting credit card fraud based on information relating past transactions,” to be an unpatentable mental process) and *FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (finding claims to “detecting fraud and/or misuse in a computer environment based on analyzing data such as in log files, or other similar records, including user identifier data” to be an ineligible mental process).

We further observe that claim 16 describes functions related to providing certain measurements to an anatomic feature in a medical image and generating a radiology report based on an augmented medical

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<sup>3</sup> *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011) (collecting and comparing known information).



information item and the measurement data, which are directed to “managing personal behavior, relationships and interactions between people (including social activities, teaching, and following rules or instructions).” Guidance, 84 Fed. Reg. at 52. Pursuant to the Guidance, such limitations are the abstract concept of “[c]ertain methods of organizing human activity.” *Id.*

*Prong Two*

We are not persuaded the Examiner’s rejection is in error pursuant to Step 2A, Prong Two of the Guidance. Appellant has not shown the claim includes additional elements that improve the underlying computer or other technology. Appellant explains the claims “are directed to a system and medium that improves the accuracy and efficiency of diagnostic reporting in radiology reports.” Appeal Br. 8. According to Appellant, the claims “are directed to enabling a user to select a graphic tool to perform a measurement on a displayed image, and automatically generating at least a portion of the radiology report by selecting and augmenting a medical information item based on the user’s application of that graphic tool.” *Id.*

We are not persuaded. As the Examiner explains, the additional generic computer elements include displaying a medical image and providing a user interface so that user to apply a graphic element to the medical image. Ans. 4; *see also* Spec. 9:12–10:2 (describing generic display and user interface). Although Appellant’s alleged improvement to the underlying technology is described as generating more accurate and efficient radiology reports, the recited functions simply involve selecting an information item based on the measurement data and augmenting the information data with the measurement. *See* Appeal Br. 8; Reply Br. 2–4; Ans. 4–5. As such, the claimed invention does not improve the computer or

its components' functionality or efficiency, or otherwise change the way those devices function, at least in the sense contemplated by the Federal Circuit in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), despite Appellant's arguments to the contrary (Appeal Br. 10; Reply Br. 3). 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 or using the stored medical information 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. Unlike the inventive concept found in *DDR* ("modification of conventional mechanics behind website display to produce dual-source integrated hybrid display" where "[T]he claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.") (*see* Appeal Br. 11–12), the claims at issue here merely require "off-the-shelf, conventional, computer, network, and display technology." *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014).

Additionally, "merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea." *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015). Moreover, Appellant's purportedly improved abstract concept of "enabling a user to select a graphic tool to perform a measurement on a displayed image, and automatically generating at least a portion of the radiology report by selecting and

augmenting a medical information item based on the user's application of that graphic tool (Appeal Br. 8), is still an abstract concept under the Guidance. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (holding that “a claim for a new abstract idea is still an abstract idea”) (emphasis omitted). That is, monitoring and recognizing manual activities by receiving, storing, and transmitting information, even performed on a computer, are parts of the recited abstract idea, as discussed above. *See also* Ans. 3.

In another words, unlike the claimed invention in *McRO* that improved how the physical display operated to produce better quality images, the claimed invention here merely uses generic computing components to collect and process medical information for analysis presented in a report. This generic computer implementation is not only directed to a mental process, but also does not improve the underlying technology, such as a display mechanism as was the case in *McRO*. *See* Reply Br. 3; *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314–15 (Fed. Cir. 2016) (finding claims not abstract because they “focused on a specific asserted improvement in computer animation”); *see also SAP Am. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (distinguishing *McRO*).

The holding in *Core Wireless Licensing S.A.R.L. v. LG Elec., Inc.*, 880 F.3d 1356 (Fed. Cir. 2018) also shows why the abstract ideas in this case are not integrated into a practical application. *See* Reply Br. 3. Unlike Appellant's claim 16, the claims in *Core Wireless* recited an improved user interface. 880 F.3d at 1362. The claimed “application summary” specified a particular manner to access a summary window, a particular type of data to

be displayed in the summary window, and a particular time to display the summary window when an application is in an un-launched state. *Id.* at 1362–63. The claims thus recited a specific improvement to user interfaces that displayed a limited set of information using unconventional user interface methods. *Id.* at 1363.

As the argued elements are part of the abstract idea, they are not additional elements that integrate the identified abstract idea into a practical application. *See* Guidance, 84 Fed. Reg. 54–55 (“[E]valuate integration into a practical application by: (a) Identifying whether there are any additional elements recited in the claim beyond the judicial exception(s)”).

Accordingly, we determine the claim does not integrate the judicial exception into a practical application. *See* Guidance, 84 Fed. Reg. at 54. Because we determine the “claim recites a judicial exception and fails to integrate the exception into a practical application,” we proceed with “further analysis pursuant to the second step of the *Alice/Mayo* test (USPTO Step 2B).” Guidance, 84 Fed. Reg. at 51.

## *II. Step 2B*

Appellant argues that

[G]enerating at least a part of a radiology report by automatically selecting and annotating a medical information item based on a user’s application of a particular graphic tool to obtain measurement data, is a novel, useful, and practical application of any abstract ideas that may underlie the specific elements of the applicants’ claims.

Appeal Br. 9.

We agree with the Examiner that “[t]he claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because, ‘generating and displaying a report’ is a well-

understood, routine, conventional computer function previously known to the industry, specified at a high level of generality.” Ans. 4. The elements highlighted by Appellant above, such as selecting and annotating a medical information item and obtaining measurement data are part of the recited judicial exception itself, as discussed above. *See* Final Act. 2–3; Ans. 30; *see also* Guidance, 84 Fed. Reg. at 56 (“[E]valuate the additional elements individually and in combination” in step 2B.); Guidance 56, n.24 (“USPTO guidance uses the term ‘additional elements’ to refer to claim features, limitations, and/or steps that are recited in the claim beyond the identified judicial exception.”) (emphasis omitted).

Regarding the other elements, we agree with the Examiner and observe that the claimed system, display device, user interface, processing system, and the radiology report merely amount to the application or instructions to apply the abstract idea (i.e., a series of steps for “selecting and annotating a medical information item based on a user’s application of a particular graphic tool to obtain measurement data,” which “amount to nothing more than requiring a generic computer system (e.g. databases and electronic devices) to merely carry out the abstract idea itself.

Additionally, we observe the Examiner has made the above findings as required by the notice requirement of 35 U.S.C. § 132. *See also In re Jung*, 637 F.3d at 1363 (declining “to impose a heightened burden on examiners beyond the notice requirement of § 132”). In rejecting the pending claims under § 101, the Examiner notified Appellant that the claims recite steps that describe the abstract concept of “enabling user to apply a graphical element to the medical image, accessing medical database and selecting medical information item from the plurality of medical information

items,” “augmenting the medical information,” and “generating a radiology report,” a method of organizing human activity or mental processes, and that the claims do not include additional elements that would amount to significantly more than the abstract idea. *See* Final Act 2–6. In particular, the Examiner found “[t]he computing elements of the instant process, when taken alone, each execute in a manner routinely and conventionally expected of these elements,” in accordance with *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). Final Act. 3–5. The Examiner specifically cited portions of Appellant’s Specification and Court decisions to establish the recited database-related functions, storing and retrieving information, and transmitting data over a network constitute elements that are well-understood, routine and conventional to a skilled artisan. *Id.*; Ans. 3–5.

*§ 101 Conclusion*

Thus, we sustain the Examiner’s rejection of claims 16–34 under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter.

*35 U.S.C. § 102 REJECTION*

In rejecting claim 16, the Examiner finds paragraphs 8–10 and 44–46 of Vining disclose the recited display device and the user interface and paragraphs 29, 44, 51, and 59 of Vining disclose the recited processing system that accesses a medical database, selects and augments a medical information item, and generates a radiology report. Final Act. 6–7. Appellant contends the cited portions of Vining do not expressly or inherently teach the recited features of “**a system that selects a medical information item from a plurality of medical information items based on measurement data in a graphic element applied to a medical image by a user.**” Appeal Br. 9. Appellant specifically argues paragraph 51 of

Vining discloses adding the measurement automatically and “does not address the applicants’ claimed feature of *having the system determine the particular medical information item to which the measurement is to be added based on the measurement data obtained by applying selected graphic element to the image.*” Appeal Br. 9. According to Appellant, the claimed invention requires a system that “assesses the measurement based on the context and *selects a medical information item that is to be annotated* with the measurement information, and in some instances, provide a diagnostic classification based on the measurement information.” Appeal Br. 11.

In the Answer, the Examiner further cites paragraph 56 of Vining as disclosing the disputed limitation by providing “a link to reference materials and example images.” Ans. 5–6. Appellant contends the Examiner’s newly cited teachings in Vining also fail to anticipate the subject matter of claim 16 because Vining provides the reference material to the user “based on *the diagnostic code combination.*” Reply Br. 5.

We agree with Appellant that the Examiner’s stated position and the cited portions of Vining do not clearly identify the specific claim limitations pointed out by Appellant. The user in Vining is taken to a database by selecting the link, which at best, may meet the limitation related to selecting a selected medical information item. However, the Examiner has not identified sufficient details regarding the annotation menus (*see Vining ¶¶ 44–46*), that provide the link, to show which element corresponds to the specific “selected medical information item.” In fact, rejections based on section 102 must rest on a factual basis wherein the “burden of proof [is placed] on the Patent Office which requires it to produce the factual basis for

its rejection of an application under sections 102 and 103.” *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016 (CCPA 1967)). The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. *See In re Warner*, 379 F.2d at 1017.

Here, the Examiner has not produced a factual basis supported by the prior art teachings and by identifying the exact disclosure of Vining that meet the claimed features, nor has addressed all the limitations argued by Appellant to be missing in the reference. As such, we find the Examiner erred in rejecting independent claim 16, independent claim 26 which recites similar limitations discussed above, as well as claims 17–25 and 27–34 dependent therefrom.

### *§ 102 Conclusion*

For the above reasons, because we are persuaded of Examiner error in rejecting claims 16–34, we do not sustain their rejection under 35 U.S.C. § 102(a)(1) as being anticipated by Boswell.

### DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/ Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
16–34	101	Eligibility	16–34	
16–34	102	Vining		16–34
<b>Overall Outcome</b>			16–34	



Appeal 2020-000362  
Application 15/022,252

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)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED