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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT POPILOCK and MATTHEW J. WALKER

Appeal 2019-001274
Application 13/512,032
Technology Center 3600

BEFORE DONALD E. ADAMS, RICHARD M. LEBOVITZ, and
JOHN G. NEW, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

The Examiner rejected the claims under 35 U.S.C. § 103 as obvious and 35 U.S.C. § 101 as lacking patent-eligibility. Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject the claims. 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 Koninklijke Philips N.V., Eindhoven, NL. Appeal Br. 2.

STATEMENT OF THE CASE

Claims 1–7, 10–17, and 19–31 stand finally rejected by the Examiner as follows:

1. Claims 1–7, 10–17, and 19–31 under pre-AIA 35 U.S.C. § 103(a) as obvious in view of Miller et al. (US 2006/0074286 A1, published Apr. 6, 2006) (“Miller”) and Segawa et al. (EP 1 486 902 A1, published Dec. 15, 2004) (“Segawa”). Final Act. 4.

2. Claims 1–7, 10–17, and 19–31 under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception to patent eligibility. Final Act. 2.

Claims 1 and 17 are illustrative of the appealed subject matter and are reproduced below (bracketed numbers have been added for reference to the recited limitations in each claim):

1. A method, comprising:

[1] detecting a presence of a person interacting with a medical imaging apparatus by at least one of a motion sensor directly detecting motion by the person, an infrared sensor directly sensing heat from the person, or an audio sensor directly sensing sound made by the person;

[2] in response to the detected presence of the person interacting with the medical imaging apparatus, requesting with a configured processor an identification of the person via an output region of a display of the medical imaging apparatus;

[3] receiving with the configured computer processor a signal indicative of a response by the person to the request via an input region of the display, and the signal includes the identification of the person;

[4] comparing with the configured computer processor the identification in the signal with an identification in an electronic schedule for the medical imaging apparatus;

[5] confirming the identification of the person with the configured processor in response to the signal matching the identification from the electronic schedule; and

[6] in response to the confirmed identification of the person, presenting information via the display based on the confirmed identification of the person.

17. An imaging system, comprising:

[1] an imaging apparatus which performs an imaging examination and includes at least one of a CT scanner, a MR scanner, a PET scanner, a SPECT scanner, an X-ray scanner, or an Ultrasound scanner, and including:

[2] a patient examination region; and

[3] a display for presenting to a person and receiving information via the display;

[4] a console that controls an operation of the imaging apparatus;

[5] an electronic assistant that includes one or more configured computer processors and selects one or more programs from pre-recorded electronic media, [6] wherein the one or more programs are presented via the display according to a type of the person; and

wherein the display includes:

[7] an output region that presents the one or more programs; and

[8] an input region that accepts at least one of sound, optical, or tactile input directly from the person wherein the one or more programs are selected by the person based on an input received in the input region.

OBVIOUSNESS REJECTION

Claim 1

The Examiner found that Miller describes an imaging system as required by claim 1, but not step [1] of “detecting a presence of a person interacting with a medical imaging apparatus by at least one of a motion sensor directly detecting motion by the person, an infrared sensor directly sensing heat from the person, or an audio sensor directly sensing sound

made by the person.” Final Act. 4. For this feature, the Examiner cited the magnetic card reader described by Segawa. The Examiner found that the magnetic card reader is “motion sensor” because “the card needs to be moved into the proximity of the reader.” *Id.* The Examiner determined it would have been obvious to have detected the presence of the patient as in step [1] of claim 1, and confirmed the patient identity as in steps [2] and [3], as “to ensure the correct patient is present for the procedure.” *Id.* at 5.

Appellant contends that the magnetic card reader “does not directly detect the presence of a person by a motion sensor At best, the magnetic card reader directly detects motion of a card and a card is not a person.” Appeal Br. 13.

We agree with Appellant. The claim requires detecting the presence of the person by a motion sensor “directly detecting motion by the person.” Segawa discloses that a patient is given a consultation card (“IC card”) with patient information. Segawa ¶¶ 3, 6. The card can be magnetic card. *Id.* The imaging system comprises “a card reader capable of reading the information in the IC card in a non-contact manner.” *Id.* at ¶ 33. “When the patient brings the IC card 80 near the card reader 70,” the patient identification information is read.” *Id.* at ¶ 48. Thus, the presence of the patient is detected by the card reader, but the motion of the patient is only being detected *indirectly* by virtue of the patient carrying the card. The claim, however, requires the motion sensor to be “directly detecting motion by the person,” but the card reader in Segawa does not *directly* detect motion of the person. All limitations in a claim must be given when determining a claim’s patentability over the prior art. *In re Gulack*, 703 F.2d 1381, 1385 (Fed. Cir. 1983). Thus, giving the term “directly” appropriate

weight, we agree with Appellant that Segawa's card reader does not meet the limitation of "a motion sensor *directly* detecting motion by the person."

Claim 31 also requires "detecting a presence of a patient interacting with an imaging apparatus according to a sensor which *directly* senses the presence of the patient by at least one of motion." (Emphasis added.) The obviousness rejection is affirmed for the same reason as for claim 1.

The obviousness rejection of claims 1 and 31, and dependent claims 2–7 and 10–16 is reversed.

Claim 17

With respect to claim 17, the Examiner found that

Miller teaches [1] an imaging apparatus CT scanner including [2] a patient examination region (Paragraph 0014) and [3] a display (Paragraph 0015) [3] a console that controls the operation (Paragraph 0030), and [5] an electronic assistant that selects pre-recorded electronic media for presenting on the display (Paragraph 0026). Miller teaches the person is a patient undergoing an examination and that the information displayed [6] is based on (or meant for) the fact that the person is a patient (Paragraph 0022).

Final Act. 8 (bracketed numbering added to reference the limitations in claim 17).

The Examiner further found that "Miller and Segawa do not appear to specify [8] a sound sensor, an optical sensor, or a tactile sensor." Final Act. 8. However, the Examiner found that "Segawa does teach a sensor (Paragraph 0050). Sound sensors, optical sensors, and tactile sensors have all been old and well known long before the filing of Applicant's invention." *Id.* Based on this finding, the Examiner determined it would have been obvious to one having ordinary skill in the art at the time the invention was

made “to use any of these sensors *to sense the presence of a patient* since the claimed invention is merely a combination of old elements and the combination of each element merely would have performed the same function as it did separately and a person of ordinary skill in the art would have recognized that the results of the combination were predictable.” *Id.* at 10 (emphasis added).

Claim 17, however, does not require the system to sense the presence of a patient and then request identification of the patient, as required by claim 1. Thus, the Examiner’s rationale for combining Miller and Segawa is based on a limitation that does not appear in claim 17.

Appellant argues that the magnetic card reader described by Segawa does not accept input from the person. Appeal Br. 22 ([8] “an input region that accepts at least one of sound, optical, or tactile input directly from the person”). We agree with Appellant. However, the Examiner also asserts that Segawa discloses an input interface. Final Act. 6. The Examiner states that it would be obvious to use other input interfaces in Segawa (Final Act. 6), but the Examiner does not explain how such interfaces would enable identification of the person standing in front of the imaging device as required by Segawa. Segawa ¶¶ 33, 45, 48.

In sum, Appellant identified deficiencies in the Examiner’s rejection of claim 17 based on the combination of Miller and Segawa. However, for the reasons set forth below, we find that Segawa discloses or makes obvious the limitations of claim 17. Because our rationale differs from the

Examiner's, we designate the rejection of claim 17, and the claims which depend from it, as a new ground of rejection pursuant to 37 C.F.R. § 41.50(b).

Figures 3 and 4 of Segawa show an imaging system ([1] and [2] of claim 17) which comprises a display 13 and input device 12. Segawa ¶ 37. The display serves as the recited [3] display having [7] an output region. Display 13 and input 12 are part of console 10. Segawa, Figs. 3, 4. The console 10 controls “operation of the imaging system” (Segawa ¶¶ 8, 10, 12) and therefore meets the corresponding limitation [4] of the claim. The console 10 also comprises a “central processing apparatus” (Segawa, Fig. 1), which serves as the claimed [5] electronic assistant.

The 12 “command/data input device” is “including a keyboard and a mouse.” Segawa ¶ 37. A mouse is a device that is used “to control the motion of a cursor in two dimensions in a graphical user interface. Clicking or hovering can select files, programs or actions from a list of names, or (in graphical interfaces) through pictures called ‘icons’ and other elements.” Mouse (computing) 9.² Therefore, the display of Segawa contains the input region of [8] which receives “tactile input” through the mouse.

Alternatively, as found by the Examiner, touch screens which receive “tactile input” were known at the time of the invention. Ans. 7–8.

Therefore, it would have been obvious to have employed a touchscreen as the user input device for its known and established function. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007).

² Mouse (computing), Wikipedia, Aug. 5, 2008. Listed on attached PTO-892.

The claim also requires that “[6] wherein the one or more programs are presented via the display according to a type of the person.” Claim 17. A technician operates console 10 (Segawa ¶ 32), which includes the display 13 and input device 12. The technician uses the console to control the imaging apparatus (limitation [4] of claim 17). *Id.* Although Segawa doesn’t explicitly state that the console and input device is used to select the program to accomplish the scan as required by limitation [8] (“wherein the one or more programs are selected by the person based on an input received in the input region”), Segawa refers to controlling aspects of the imaging system (Segawa ¶¶ 33, 37), and therefore it would have been obvious to the ordinary skilled worker that such an imaging scan program would be selected by the technician (the “type” of person of [6]) using the mouse or touchscreen to initiate the scan. Claim 17. Segawa also describes a storage device 16 for storing applications that is connected to the CPU of the console. Segawa ¶ 37, Fig. 1. The applications are “for storing several kinds of application programs and several kinds of calculation/correction data files necessary for operating the present apparatus.” *Id.* Therefore, it would have been obvious to one of ordinary skill in the art to have selected those programs (“pre-recorded electronic media”) from the storage device 16 using a mouse or touchscreen.

In sum, we find that Segawa describes or suggests all the limitations of claim 17, and we accordingly enter a new ground of rejection for that claim. Because claims 23–25, 30, and 31 are not separately argued they fall with claim 17.

Claim 19

Appellant separately argues claim 19 (Appeal Br. 23), which depends from claim 17 and further recites “wherein the selected one or more programs request identification information from the person interacting with the display and the input includes the identification information.”

As discussed by Appellant, Segawa automatically identifies the person when standing in front of the card reader. Segawa ¶ 50. Segawa, however, does not describe selecting a program which requests information from the person as required by the claim. However, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made “to include a prompt on the display showing a user where to enter their information after detection of a presence of a user in order to save power and make the system more user friendly.” Final Act. 5. Appellant addressed the Examiner’s discussion about “printed matter,” but did not address that Examiner’s rationale for including the request for identification information. Appeal Br. 23–24. Consequently, we affirm the rejection of claim 19 for the reasons set forth by the Examiner. Because this claim depends from claim 17, however, we designate the affirmance a new ground of rejection for the reasons set forth above with respect to claim 17.

Claims 20–22

Appellant separately argues dependent claim 20, which depends from claims 19 and 17, and further recites “wherein the person is a patient and the electronic assistant confirms the patient’s identification based on the input and a patient identification from an electronic schedule.” The Examiner found that Segawa describes an electronic schedule. Final Act. 4–5.

Appellant contends that this limitation is not described by Segawa.
Appeal Br. 24–25.

We do not agree.

As explained in the Answer, Segawa contains the following disclosure:

the operation console means 10 compares the information identifying the subject to be examined read by the information reading means 70 with information identifying a current subject to be examined managed by said operation console means 10 itself, and when they do not match, displays information indicating the mismatch on said display means 32

Segawa ¶ 19.

We agree with the Examiner that the comparison of the identified person to “a current subject to be examined managed by said operation console means 10 itself” indicates, or reasonably suggests, that an electronic schedule is being consulted to determine the “current subject to be examined.” *Id.* Appellant did not address paragraph 19 in their argument.

Accordingly, the rejection of claim 20, and dependent claims 21 and 22, is affirmed. Because these claims ultimately depend from claim 17, however, we designate the affirmance a new ground of rejection for the reasons set forth above with respect to claim 17.

Claim 26

Appellant separately argues dependent claim 26 (Appeal Br. 25), which depends from claim 17 and further recites “wherein the presented one or more programs includes information about the imaging examination.”

Segawa describes displaying information to the technician about the scan. For example Segawa teaches “13 designates a display device (CRT)

for displaying information on a scan plan including information identifying the subject.” Segawa ¶ 37. The “scan plan” is “information about the imaging examination” as required by claim 26 because the “scan” relates to the imagine procedure (*id.*). Appellant did not address this disclosure in Segawa. Accordingly, the obviousness rejection of claim 26 is affirmed. Because this claim depends from claim 17, however, we designate the affirmance a new ground of rejection for the reasons set forth above with respect to claim 17.

Claim 28

Appellant separately argues dependent claim 28 (Appeal Br. 26), which depends from claim 17 and further recites “wherein the presented one or more programs includes a post-imaging examination survey, and responses from the patient to the post-imaging survey are received by the electronic assistant via the input region of the display.”

In rejecting claim 17 based on Segawa, we considered the [5] electric assistant to be the console 10.

The Examiner, however, cited the “console” in paragraph 30 of Miller as the electronic assistant. Final Act 8. Paragraph 30 of Miller does not describes a console as asserted by the Examiner. It describes a control room 404 and display controller 402. The display controller receives commands from the control room 404 to display renderings on the patient display 104. Miller ¶ 31. Thus, the display controller does not include “programs from pre-recorded electronic media” and therefore does not meet the limitation of [5] the electronic assistant of claim 17. The control room 404 “sends out information based on data received from various peripheral devices 408.”

Miller ¶ 30. Miller does not disclose that 404 “selects one or more programs from pre-recorded electronic media” as required by [5] of claim 17.

Consequently, Miller does not meet the electric assistant of claim 28.

Console 10 displays scan programs and other “kinds of application programs.” Segawa § 37; *supra* at p. 8. The claim requires “post-examination surveys” to be presented from the patient. The “survey” information is printed matter. Claim limitations directed to the content of information and lacking a requisite functional relationship to the substrate upon which they are applied are not entitled to patentable weight because such information is not patent eligible subject matter under 35 U.S.C. § 101.” *Praxair Distribution, Inc. v. Mallinckrodt Hosp.*, 890 F.3d 1024, 1032 (Fed. Cir. 2018). To be given patentable weight, the printed matter must be “functionally related to the substrate on which the printed matter is applied. E.g., *In re DiStefano*, 808 F.3d 845, 848 (Fed. Cir. 2015); *In re Gulack*, 703 F.2d 1381, 1385 (Fed. Cir. 1983).” *Praxair*, 890 F.3d at 1031–1032. In this case, the “survey” does not have the requisite functional relationship to the substrate because it does not change how the method is performed or have any function, other than the informational content, itself, of the survey. Consequently, we conclude that having a program that displays a survey is not distinguishable from the applications described in Segawa.

The claim requires that the patient responds to the survey via the input region of the electronic assistant. Any person can interface with console 10 of Segawa. We consider the limitation of claim 28 to be satisfied because the console is capable of being used by a patient. We reach this conclusion because claim 17 is directed an imagining system, and does not require the

performance of a specific method. Therefore, Segawa satisfies the requirements of claim 28.

Accordingly, the obviousness rejection of claim 28 is affirmed. Because this claim depends from claim 17, however, we designate the affirmance a new ground of rejection for the reasons set forth above with respect to claim 17.

Claim 29

Appellant separately argues (Appeal Br. 27) dependent claim 29, which depends from claim 17 and further “recites wherein the type of the person includes at least one selected from a group comprising of an operator, a service technician, and a manufacturing technician.”

Segawa teaches that a technician uses the console 10 to control (i.e., operate) the imagining apparatus. Segawa ¶ 32. The type of person is therefore an “operator” as recited in the claim. The rejection is therefore affirmed. Because this claim depends from claim 17, however, we designate the affirmance a new ground of rejection for the reasons set forth above with respect to claim 17.

Summary

Because our rationale for affirming the obviousness rejection of claim 17 and dependent claim 19–30 differs from the Examiner’s, we designate it as a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Claims 17 and 19–30 are rejected under 35 U.S.C. § 103 as obvious in view of Segawa.

The obviousness rejection of 17, 19–30 based on Segawa and Miller is reversed.

REJECTION BASED ON SECTION 101

Principles of Law

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” However, not every discovery is eligible for patent protection. *Diamond v. Diehr*, 450 U.S. 175, 185 (1981). “Excluded from such patent protection are laws of nature, natural phenomena, and abstract ideas.” *Id.* The Supreme Court articulated a two-step analysis to determine whether a claim falls within an excluded category of invention. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014); *Mayo Collaborative Servs. v. Prometheus Labs, Inc.*, 566 U.S. 66, 75–77 (2012).

In the first step, it is determined “whether the claims at issue are directed to one of those patent-ineligible concepts.” *Alice*, 573 U.S. at 217. If it is determined that the claims are directed to an ineligible concept, then the second step of the two-part analysis is applied in which it is asked “[w]hat else is there in the claims before us?” *Id.* The Court explained that this step involves

a search for an ‘inventive concept’ — *i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’

Alice, 573 U.S. at 217–18 (citing from *Mayo*, 566 U.S. at 75–77).

Alice, relying on the analysis in *Mayo* of a claim directed to a law of nature, stated that in the second part of the analysis, “the elements of each claim both individually and ‘as an ordered combination’” must be considered “to determine whether the additional elements ‘transform the

nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217.

The PTO has published revised guidance on the application of 35 U.S.C. § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 51–57 (2019) (“Eligibility Guidance”). This guidance provides additional direction on how to implement the two-part analysis of *Mayo* and *Alice*.

Step 2A, Prong One, of the 2019 Eligibility Guidance, looks at the specific limitations in the claim to determine whether the claim recites a judicial exception to patent eligibility. In Step 2A, Prong Two, the claims are examined to identify whether there are additional elements in the claims that integrate the exception in a practical application, namely, is there a “meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” Eligibility Guidance, 84 Fed. Reg. 54 (2. Prong Two).

If the claim recites a judicial exception that is not integrated into a practical application, then as in the *Mayo/Alice* framework, Step 2B of the Eligibility Guidance instructs us to determine whether there is a claimed inventive concept to ensure that the claims define an invention that is significantly more than the ineligible concept, itself. Eligibility Guidance, 84 Fed. Reg. 56. In making this determination, we must consider whether there are specific limitations or elements recited in the claim “that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present” or whether the claim “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial

exception, indicative that an inventive concept may not be present.”
Eligibility Guidance, 84 Fed. Reg. 56 (footnote omitted).

With these guiding principles in mind, we proceed to determine whether the claimed subject matter in this appeal is eligible for patent protection under 35 U.S.C. § 101.

Claim 1

Discussion

Claim 1 recites that it is a “method.” A method is one of the broad statutory categories of patent-eligible subject matter under 35 U.S.C. § 101. We thus proceed to Step 2A, Prong One, of the Eligibility Guidance to determine whether the method is directed to a judicial exception to patent eligibility.

Step 2A, Prong One

In Step 2A, Prong One, of the Eligibility Guidance, the specific limitations in the claim are examined to determine whether the claim recites a judicial exception to patent eligibility, namely whether the claim recites an abstract idea, law of nature, or natural phenomenon.

The Examiner found that the claims are directed to an abstract idea.
Final Act. 2.

In step [1] of the claim, the presence of a person is detected by a motion detector. In response, identification of the person is requested in step [2] and a signal indicative of the response is received with a computer processor in step [3].

The method further comprises comparing the signal with an electronic schedule (step [4]). Although this step is performed by a computer, it could

be accomplished in the human mind by making an observation or evaluation. This step therefore falls within the mental processes grouping of abstract ideas. Eligibility Guidance, 84 Fed. Reg. 52 (“(c) Mental Processes— concepts performed in the human mind (including an observation, evaluation, judgment, opinion)”). The next step of the claim, step [5], is “confirming the identification of the person with the configured processor in response to the signal matching the identification from the electronic schedule.” This step could also be performed in the human mind by making the evaluation that the identity of the person matches a person in the electronic schedule.

We, therefore, conclude that the claim recites “Mental processes” in at least steps [4] and [5], which is grouping (c) of the three categories of abstract ideas set forth in the Eligibility Guidelines. We, therefore, proceed to Step 2A, Prong Two, of the analysis to determine whether the abstract ideas are integrated into a practical application.

Step 2A, Prong Two

Prong Two of Step 2A under the Eligibility Guidelines asks whether there are additional elements that integrate the exception into a practical application. As in the *Mayo/Alice* framework, we must look at the claim elements individually and “as an ordered combination” to determine whether the additional elements integrate the recited abstract idea into a practical application. As discussed in the Eligibility Guidelines, “[a] claim that integrates a judicial exception into a practical application will apply, rely on, or use the judicial exception in a manner that impose a meaningful limit on the judicial exception, such that the claim is more than a drafting effort

designed to monopolize the judicial exception.” Eligibility Guidance, 84 Fed. Reg. 54.

Integration into a practical application is evaluated by identifying whether there are additional element individually, and in combination, which go beyond the judicial exception. *Id.* at 54–55. As explained in the October 2019 Update to Subject Matter Eligibility³ “first the specification should be evaluated to determine if the disclosure provides sufficient details such that one of ordinary skill in the art would recognize the claimed invention as providing an improvement.” PEG Update 12. According to the Eligibility Update, the “specification need not explicitly set forth the improvement, but it must describe the invention such that the improvement would be apparent to one of ordinary skill in the art.” *Id.*

Appellant cites to the Specification as describing the advantages of the claimed method and the technological improvement to the field of medical imaging. Appeal Br. 9–10. Specifically, the Specification discloses:

When used to present imaging examination information to a patient, a radiology technician (or other authorized person) can prepare the imaging apparatus 100 for scanning the patient concurrently as the interactive electronic assistant 120 goes over various information with the patient such as verifying the patient’s identification, explaining the examination, providing instructions for the examination, etc. This may reduce the amount of time a patient is in the examination room, which may improve the examination experience for the patient. Moreover, the information presented to the patient may depend on various factors such as patient age, a language of the patient, and/or other patient specific information, which may facilitate

³ Available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf (last accessed Nov. 15, 2019) (“PEG Update.”)

reducing any patient anxiety and/or improving the likelihood that the instructions will be followed. Furthermore, the information presented can be used to facilitate patient verification.

Spec. 5:21–31.

The technological improvement described by the Specification, and in the Appeal Brief, is therefore “scanning the patient,” verifying the patient’s identity, and providing patient specific information to the patient. The step of verifying the patient’s identity corresponds to the abstract idea of step [5]. The improvement cannot be to the abstract idea, itself. An additional element beyond the judicial exception is necessary to establish integration of the exception into a practical application. Eligibility Guidance, 84 Fed. Reg. 54–55. Therefore, step [5] cannot alone impart eligibility to the claims.

The Specification describes “scanning the patient” to verify the patient’s identity. Spec. 5:21–31 (reproduced above). This corresponds to step [1] of claim 1 of “detecting a presence of a person interacting with a medical imaging apparatus by at least one of a motion sensor directly detecting motion by the person.” The motion sensor performs as a motion sensor would conventionally perform, namely detecting the motion of the person to determine the presence of the person at the medical imaging apparatus. The subsequent steps in the claim do not improve how the detection is accomplished. Appellant did not provide evidence of a technological improvement to the “motion sensor.” Thus, the claims are distinguishable from those in *Thales Visionix, Inc. v. U.S.*, 850 F.3d 1343 (Fed. Cir. 2017) in which claims directed to using inertial sensors were found to be patentable under § 101. In *Thales*, the improvement was found to be in the placement of inertial sensors on a moving platform and the

reference frame in which the gravitational field is measured. The court found that the *Thales* claims were patent eligible under § 101 because they “are directed to systems and methods that use inertial sensors in a non-conventional manner to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame.” *Id.* at 1348. Evidence was not presented here that the motion sensor, itself, was used in an unconventional way to improve the motion detection.

After detection is accomplished, a request is made to confirm “identification of the person via an output region of a display of the medical imaging apparatus” and then receive “a signal indicative of a response by the person to the request via an input region of the display” that includes identification of the person. Steps [2], [3] of claim 1. In the subsequent steps, the signal in step [4] is compared to an electronic schedule and then a match is confirmed in step [5] between the identified person and the electronic schedule. In response, [6] information is presented to the person based on the confirmed identification.

Appellant contends that these steps integrate the judicial exception into a practical application. They cite *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) and *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) in support of their contention. Appeal Br. 10; Reply Br. 7.

This argument does not persuade us that the Examiner erred in rejecting the claims as ineligible for a patent. In *McRO*, the court found that, although the *McRO* claims involved the manipulation of data, e.g., generating morph weight sets to animate lip and facial expressions of three dimensional characters, the claimed “automation goes beyond merely

‘organizing [existing] information into a new form’ or carrying out a fundamental economic practice.” *McRO*, 837 F.3d at 1315 (citation omitted). Instead, the court found that the “claimed process uses a combined order of specific rules that renders information into a specific format that is then used and applied to create desired results: a sequence of synchronized, animated characters.” *Id.* *McRO* found that the recited rules “are limiting in that they define morph weight sets as a function of the timing of phoneme sub-sequences.” *McRO*, 837 F.3d at 1313. The claims were found to be directed to a “technological improvement over the existing, manual 3-D animation techniques,” *McRO*, 837 F.3d at 1316.

In finding the claim patent-eligible, *McRO* noted that the “abstract idea exception has been applied to prevent patenting of claims that abstractly cover results where ‘it matters not by what process or machinery the result is accomplished.’ [*O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 113,]; *see also Mayo*, 132 S.Ct. at 1301.” *McRO*, 837 F.3d at 1314. *McRO* stated that therefore, a court must “look to whether the claims in these patents focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.” *McRO*, 837 F.3d at 1314.

Here, the claims recite a specific order of steps that result in the display of information to person “based on the confirmed identification of the person.” Claim 1. However, the steps themselves do not recite how the identification request is made, nor how the identification signal is received, nor how the information is presented to the confirmed person. Unlike in *McRO* where the rules dictated how the result was achieved (e.g., “generating morph weight sets to animate lip and facial expressions of three

dimensional characters” *McRO*, 837 F.3d at 1315), the claims here do not invoke a specific means for accomplishing the identification of the person and display of information, but rather claim the desired result (“requesting” identification; “receiving” a signal; “presenting information”).

Appellant states that the steps “act in concert” and that each step is “specifically defined.” Appeal Br. 11. We agree that the steps are “specifically defined”; however, the specificity is only with respect to the desired result, not to how the result is accomplished. The steps recited in the claim do not, as in *McRO*, recite a specific way in which the result is accomplished. As to the steps “acting in concert,” Appellant has not explained the steps as a whole result in a technological improvement. Appellant makes statements that the claims are “‘building blocks’ into ‘something’” that “reflect a specific implementation.” Appeal Br. 11. We do not agree. The steps as a whole result in presenting information to the identified person. A “technical effect” is not achieved as in *McRO* (*Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1167 (Fed. Cir. 2019)). Here, the presented “information” is just an output and unrelated to the steps in the claim, except by being selected “based on” the identification of the person. The outputted information is not an improvement to existing information as was the 3D-animation in *McRO*.

Appellant also cites *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350–51 (Fed. Cir. 2016). In *BASCOM*, the court held the claims eligible for a patent because:

The claims do not merely recite the abstract idea of filtering content along with the requirement to perform it on the Internet, or to perform it on a set of generic computer components. Such claims would not contain an inventive concept. . . . [Rather] the patent describes how its particular arrangement of elements is a

technical improvement over prior art ways of filtering such content.”

Id.

Here, Appellant failed to identify a particular arrangement of elements that results in a technological improvement. It is true that the steps are performed in particular order, but this order of steps does not improve a motion sensor, a computer’s function, or the manner in which information displayed to the person.

Appellant argues that the claims require a computer and computer and computer implementation. Appeal Br. 9. However, “[s]teps that do nothing more than spell out what it means to ‘apply it on a computer’ cannot confer patent-eligibility. *Alice*, 134 S. Ct. at 2359.” *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370–71 (Fed. Cir. 2015).

For the foregoing reason, we conclude that the identified judicial exceptions of claim 1 are not integrated into a practical application.

Step 2B

Because we determined that the judicial exception is not integrated into a practical application, we proceed to Step 2B of the Eligibility Guidelines, which asks whether there is an inventive concept. In making this Step 2B determination, we must consider whether there are specific limitations or elements recited in the claim “that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present” or whether the claim “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.”

Eligibility Guidance, 84 Fed. Reg. 56 (footnote omitted). We must also consider whether the combination of steps perform “in an unconventional way and therefore include an ‘inventive concept,’ rendering the claim eligible at Step 2B.” *Id.* In this part of the analysis, we must also consider “the elements of each claim both individually and ‘as an ordered combination’” must be considered “to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217.

Appellant argues:

Conventional practice does not include detecting a person interacting with the medical imaging system. Conventional practice relies on a radiological technician or other person to initiate interaction with the medical imaging device through a device that the person understands how to operate.

Appeal Br. 10.

Appellant argues that the “claimed aspects provide an *improvement* to the technical field of medical imaging, including providing the advantages discussed above, via the executing the series of process ‘rules’ or steps as defined by the claims and paraphrased above.” Appeal Br. 10

Appellant’s contention that “[c]onventional practice does not include detecting a person interacting with the medical imaging system” is not supported the evidence. Appeal Br. 10. As discussed above, Segawa describes using card reader to detect the presence of a person at an imagining apparatus. Segawa 50 (“When the patient A entering the examination room brings his IC card 80 near that position [on the gantry of the imaging apparatus], identification information on the patient A is automatically read.”). Although Segawa does not describe a motion sensor, the publication established that it was known in the art to detect a person at

an imaging apparatus. Thus, Appellant's argument does not persuade us that "detecting" the presence of the person at the imaging apparatus provides an inventive step to the claims. In making this determination, we recognize that the rejection was reversed based on *Segawa and Miller*, but this was because the Examiner characterized the card reader in *Segawa* as a "motion detector," an interpretation of the term which we found to be erroneous. Thus, our determination was not based on the finding it was unconventional to detect a person interacting with a medical imaging system, but rather on the Examiner's failure to show the specific device recited in the claims.

In considering the claim as an ordered combination, we have not been specifically directed to a combination of additional elements that act in concert in an unconventional manner to identify the patient and present information on the display to the person. Steps [2] and [3] of the claim identify the person in response to receiving an input on the display. Appellant has not explained how this process is unconventional. Instead, it appears to be a conventional use of generic computer components to ask a question (e.g., "are you John Doe?") and respond to it ("Yes, I am"). Once the confirmation is made as a part of this ordered process, information is presented in step [5]. But Appellant has not argued that the manner in which the information is presented is unconventional. For example, the Specification discloses that the information can be obtained from an electronic media library, but does not describe how such information is retrieved. Spec. 6:31-7:5.

For the foregoing reasons, the § 101 rejection of claim 1 is affirmed. Claim 31 has similar limitations and is affirmed for the same reasons.

Dependent claims 2–7 and 10–16 were not separately argued and therefore fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

Claim 17

Claim 17 is directed to an imaging system comprising an imaging apparatus and electronic assistant that includes configured processors. The apparatus and processors are “machines,” a statutory category of invention listed in 35 U.S.C. § 101. The Examiner did not identify limitations in claim 17 which recited abstract ideas. Final Act. 2–3. Consequently, we reverse the rejection of claim 17, and dependent claims 19–30.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed	New Ground
1–7, 10–17, 19–31	103	Miller, Segawa		1–7, 10–17, 19–31	
17, 19–30	103	Segawa			17, 19–30
1–7, 10–17, 19–	101	Eligibility	1–7 and 10–16, 31	17, 19–30	
Overall Outcome			1–7 and 10–16, 31		17, 19–30

TIME PERIOD FOR RESPONSE

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that the Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. . . .

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

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