



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/013,776	07/13/2016	8458610	DI32-016	1164
21567	7590	01/29/2019	EXAMINER	
Wells St. John P.S. 601 W. Main Avenue Suite 600 Spokane, WA 99201			DESAI, RACHNA SINGH	
			ART UNIT	PAPER NUMBER
			3992	
			MAIL DATE	DELIVERY MODE
			01/29/2019	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DISCUS ANALYTICS, LLC
Patent Owner and Appellant

Appeal 2019-000721
Reexamination Control 90/013,776
United States Patent 8,458,610 B2
Technology Center 3900

Before JOHN A. JEFFERY, MARC S. HOFF, and ERIC B. CHEN,
Administrative Patent Judges.

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. §§ 134 and 306 the Examiner's decision to reject claims 1–13, 15–37, 39, and 41–64. We have jurisdiction under 35 U.S.C. §§ 134 and 306.¹ We affirm.

STATEMENT OF THE CASE

This proceeding arose from a request for *ex parte* reexamination filed on June 30, 2016 of United States Patent 8,458,610 (“’610 patent”), issued to Kenney et al. on June 4, 2013.

The ’610 patent describes recording medical information by (1) displaying a graphical user interface (GUI), including a graphical representation of the human anatomy; (2) accessing user inputs interacting with representation; and (3) generating an electronic record comprising data pertaining to a patient's health using the user inputs. *See generally* Abstract. Claim 1 is illustrative of the invention and is reproduced below:

1. A computer-implemented medical information recording method comprising:
 - displaying a graphical user interface including a graphical representation of a plurality of joints of a human anatomy;
 - accessing user inputs interacting with the graphical representation of the joints of the human anatomy, the user inputs comprising data pertaining to a health of a patient including associations of different conditions with different ones of the joints;
 - [and]
 - generating an electronic record which includes the data pertaining to the health of the patient including the associations of the different conditions with the different ones of the joints; and

¹ Appellant identifies the real party in interest as Discus Analytics, LLC. App. Br. 4.

wherein the computer which implements the medical information recording method is a first computer, and further comprising generating and outputting a communication to a second computer, the communication comprising data of the patient for a plurality of quality measures which are indicative of the treatment of the conditions which are associated with the joints and for compensation for services of medical personnel treating the conditions which are associated with the joints of the patient.

THE REJECTIONS

The Examiner rejected claims 1, 2, 13, 17, 20–22, 24–27, 30, 33–37, 39, 41,² 42, 47–49, 55, 56, and 61–64 under 35 U.S.C. § 103 as unpatentable over Cedric Lukas et al., *METEOR as an Information Technology Tool to Assess Rheumatoid Arthritis Disease Activity in Clinical Practice and Improve Outcome via Tailor-Made Treatment*, 7 INT’L J. OF ADVANCES IN RHEUMATOLOGY 44 (2009) (“Lukas”) and Anderson et al. (US 2010/0191071 A1; published July 29, 2010). Final Act. 4–20.³

The Examiner rejected claims 1, 2, 4, 15–17, 20–22, and 24 under 35 U.S.C. § 103 as unpatentable over Deborah S. Collier et al., *A Rheumatology-Specific Informatics-Based Application With a Disease*

² Although the Examiner includes cancelled claim 40 in this rejection, we nonetheless omit that claim here for clarity, and treat the Examiner’s error in this regard as harmless.

³ Throughout this opinion, we refer to (1) the Final Rejection mailed October 18, 2017 (“Final Act.”); (2) the Appeal Brief filed May 16, 2018 (supplemented July 13, 2018) (“App. Br.”); (3) the Examiner’s Answer mailed August 24, 2018 (“Ans.”); and (3) the Reply Brief filed October 24, 2018 (“Reply Br.”).

Appeal 2019-000721
Reexamination Control 90/013,776
Patent US 8,458,610 B2

Activity Calculator, 61 ARTHRITIS & RHEUMATOLOGY 488 (2009) (“Collier I”)⁴ and Anderson. Final Act. 20–24.

The Examiner rejected claims 4–8 and 10–12 under 35 U.S.C. § 103 as unpatentable over Lukas, Anderson, and Heywood (US 2009/0131758 A1; published May 21, 2009). Final Act. 24–30.

The Examiner rejected claims 5–8 and 10–12 under 35 U.S.C. § 103 as unpatentable over Collier I, Anderson, and Heywood. Final Act. 30–35.

The Examiner rejected claims 3, 18, 19, 23, 31, 43, 44, 50, 57, and 58 under 35 U.S.C. § 103 as unpatentable over Lukas, Anderson, and Arnone (US 2008/0103825 A1; May 1, 2008). Final Act. 35–45.

The Examiner rejected claims 9, 45, and 46⁵ under 35 U.S.C. § 103 as unpatentable over Lukas, Anderson, Heywood, and Carmeli (US 2013/0035956 A1; published Feb. 7, 2013). Final Act. 45–48.

The Examiner rejected claims 28, 29, 32, 51–54, 59, and 60 under 35 U.S.C. § 103 as unpatentable over Lukas and Kouchi (US 2006/0265136 A1; Nov. 23, 2006). Final Act. 49–55.

⁴ Although only one Collier reference is at issue in this appeal, we nonetheless adopt the Examiner’s and Appellant’s nomenclature for clarity and consistency.

⁵ Although the Examiner’s statement of the rejection in the Final Rejection omits claim 46, the Examiner nonetheless includes claim 46 in the associated discussion. *Compare* Final Act. 45 *with* Final Act. 48. Accordingly, we present the correct claim listing here consistent with the Examiner’s corrected listing on page 4 of the Answer.

THE OBVIOUSNESS REJECTION OVER LUKAS AND ANDERSON

Regarding independent claim 1, the Examiner finds that Lukas discloses a computer-implemented medical information recording method including, among other things, (1) displaying a GUI including a graphical representation of anatomical joints, (2) accessing user inputs interacting with the representation, (3) generating an electronic record including data pertaining to a patient's health including associations of different conditions with different joints, and (4) generating and outputting a communication to a second computer, the communication comprising data of the patient for plural quality measures indicating condition treatment. Final Act. 4–6. Although the Examiner acknowledges that Lukas does not disclose explicitly that the communication is for compensation for services of medical personnel treating the conditions, the Examiner cites Anderson for teaching this feature in concluding that the claim would have been obvious. Final Act. 6.

Appellant argues the prior art does not teach or suggest the recited quality measures as the term is understood in the art, let alone generating and outputting a communication to a second computer comprising data for plural quality measures indicating treatment of the conditions associated with the joint and for compensation for services of medical personnel treating the conditions. App. Br. 13–19; Reply Br. 2–7.

Appellant adds that not only does Lukas' system send information to the patient's general practitioner who is not responsible for treatment compensation, there is no motivation to modify Lukas' communication to request compensation as the Examiner proposes, let alone include patient

data for quality measures, as claimed. App. Br. 16–17; Reply Br. 7–9. According to the Appellant, Anderson merely saves reimbursement requirements, procedures, and indications of previous success of reimbursement requests in a database, but does not disclose submitting reimbursement requests nor indicate how the requests are made. App. Br. 17–19; Reply Br. 7–9. As such, Appellant contends that the Examiner’s proposed combination lacks articulated reasoning with a rational underpinning and is based on improper hindsight. *Id.* Appellant argues other recited limitations summarized below.

ISSUES

I. Under § 103, has the Examiner erred by finding that Lukas and Anderson collectively would have taught or suggested:

(1) generating and outputting a communication to a second computer, where the communication comprises data of a patient for plural quality measures indicative of treatment of conditions associated with joints and for compensation for services of medical personnel treating the conditions as recited in claim 1?

(2) generating a report comprising the data pertaining to the health of the patient for submission to a medical agency with respect to compensation for services of medical personnel treating the patient as recited in claim 13?

(3) accessing another user input selecting one of the different conditions, and controlling the GUI to only indicate the joints having the selected one of different conditions, and to not indicate the joints having the non-selected ones of the different conditions as recited in claim 30?

(4) a second GUI configured to assist a user with generating the report to include information regarding a medication used to treat the patient for submission to the medical agency as recited in claim 25?

II. Is the Examiner's combining the teachings of these references supported by articulated reasoning with some rational underpinning to justify the Examiner's obviousness conclusion?

ANALYSIS

Claims 1, 2, 41, and 42

We begin by construing the key disputed limitation of claim 1 that recites, in pertinent part, generating and outputting a communication comprising data of the patient for (1) plural *quality measures* indicating treatment of conditions associated with the joints, and (2) compensation for services of medical personnel treating the conditions. Our emphasis underscores that the recited quality measures are but one functional aspect of the patient data that is communicated to a second computer, the other for compensation. The Examiner, however, construes the recited "quality measures" as data that is *both* (1) indicative of treatment of conditions associated with the joints, *and* (2) for compensation for services of medical personnel treating those conditions. *See* Ans. 5.

Turning to the Specification, the '610 patent does not define the term "quality measures," but does describe the term in connection with providing incentives for complying with these measures via reports submitted to a medical agency. *See* '610 patent, col. 9, ll. 22–29. To this end, GUI 30 in

Figure 3 includes a “PQRI-RA”⁶ link 70 that, when selected, directs medical personnel to the window shown in Figures 6A and 6B.⁷ ’610 patent, col. 9, ll. 20–25; col. 10, ll. 43–64. This window assists medical personnel with generating reports submitted to a medical agency, such as Medicare, for incentives for complying with *quality measures* of treatment and/or payment of the services for treatment. ’610 patent, col. 9, ll. 25–29.

Apart from this reference to “quality measures” in terms of providing incentives to comply with those measures, the ’610 patent does not further explain what is meant by these “quality measures,” let alone define the term to so limit its interpretation. Nevertheless, Appellant contends that the term “quality measures” is understood in the medical profession as consisting of a numerator and denominator that permit calculating the percentage of a defined patient population that receive a particular process of care or achieve a particular outcome as evidenced by the 2008 Physician Quality Reporting Initiative Specifications Document (“PQRI Specifications”), made of record in this appeal. App. Br. 13; Reply Br. 3.

The first page⁸ of the PQRI Specifications document indicates that the document contains complete specifications for the 119 measures that make up the 2008 PQRI, and that each measure is assigned a unique number. The document’s first page adds that “[i]n general, the quality measures consist of

⁶ “PQRI-RA” stands for “Physician Quality Reporting Initiative – Rheumatoid Arthritis.” ’610 patent, col. 10, ll. 29–30.

⁷ Figure 6 shows the arrangement of Figures 6A and 6B, the latter of which is a continuation of Figure 6A. *See* ’610 patent, col. 1, ll. 46–49.

⁸ The first page of the PQRI Specifications document is not paginated, unlike other pages that follow the document’s table of contents (including page 1). For clarity, we refer to the unpaginated first page here.

a numerator and denominator that permit calculating the percentage of a defined patient population that receive a particular process of care or achieve a particular outcome.”

To be sure, the PQRI Specifications document’s first page explains what is meant by quality measures in the context of those particular specifications—at least *in general*. Nevertheless, the claim is not limited to these particular quality measures, despite the fact that the link 70 and associated window in Figures 6A and 6B of the ’610 patent pertain to complying with quality measures associated with PQRI. *See* ’610 patent, col. 9, ll. 22–29.

Although the PQRI Specifications document informs our construction of the term “quality measures,” at least with respect to that particular reporting protocol, we decline to import that description into the claim. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en banc). (“[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. . . . [C]laims may embrace different subject matter than is illustrated in the specific embodiments in the specification.”) (citations and internal quotation marks omitted). Therefore, we see no error in the Examiner’s construction of the term “quality measures” under its broadest reasonable interpretation as data that is (1) indicative of treatment of conditions associated with joints, and (2) for compensation for services of medical personnel treating those conditions. *See* Ans. 5.

Turning to the rejection, the Examiner finds that Lukas discloses, among other things, generating and outputting a communication to a second

computer, the communication comprising data of the patient for plural quality measures indicating condition treatment. Final Act. 4–6. In Lukas, a custom-made software tool, known as “METEOR,”⁹ allows rheumatologists to easily collect critical information to improve patient care by capturing patient data and recording outcomes over time, thus helping rheumatologists set goals and share treatment progress with patients. Lukas 44–45. The METEOR application, among other things, captures information on drug treatment for RA in a dedicated module. Lukas 46. To this end, METEOR enables users to enter treatment modalities and, after a drug is selected, administration modalities are presented and can be modified. *Id.* All entered data assists the physician in tailoring treatment by visualizing and comparing interventions (e.g., drug prescriptions and injections) with the trends of disease activity and functional status over time. *Id.* 46–47. This information, along with graphical representations, can be printed or stored in the patient dossier or sent to the general practitioner. *Id.* 47.

Based on this functionality, we see no error in the Examiner’s finding at least to the extent that Lukas at least suggests generating and outputting a communication to a second computer, where the communication comprises data of the patient *for* plural quality measures as claimed. Despite Appellant’s arguments to the contrary (App. Br. 4–5), nothing in the claim precludes the information that is sent to the general practitioner on pages 46 and 47 of Lukas for at least being *for* such quality measures even if such quality measures were limited to those in the PQRI Specifications

⁹ “METEOR” stands for “Measurement of Efficacy of Treatment in the ‘Era of Outcome’ in Rheumatology.” Lukas 44.

document—which they are not. Therefore, Appellant’s arguments regarding Lukas’ lacking the recited quality measures are unavailing and not commensurate with the scope of the claim. That Lukas on page 47 notes that certain information is entered and recorded in accordance with International Classification of Diseases (ICD-10) codes—the very codes used in the PQRI Specifications document¹⁰—only bolsters the notion that the information in METEOR, including that sent to the general practitioner, would be at least capable of being used *for* the recited quality measures.

To be sure, Lukas teaches sending this information to a general practitioner, and not an insurance company for compensation. But leaving aside the fact that information regarding a particular medical treatment, such as treating RA, that is sent to a general practitioner would be at least capable of being used *for* compensation for associated treatment services, the Examiner nonetheless relies on Anderson—not Lukas—for at least suggesting that feature. As the Examiner explains, sending medical treatment information to an insurance company for compensation for associated services is known in the art as evidenced by Anderson, and that such a transmission for RA-based treatment, such as that reflected in the transmitted information in Lukas, would have been obvious. Final Act. 6; Ans. 7–8.

The Examiner’s position has merit, for although Anderson’s system stores information regarding reimbursement procedures and their requirements in a database, the database also keeps track of the success of

¹⁰ See, e.g., PQRI Specifications Front Page, 2 (listing ICD codes in connection with denominator coding).

previous reimbursement requests based on associated patient data.

Anderson ¶ 89. Our emphasis underscores the fact that to maintain a record of *previously-successful* reimbursement requests made to insurance companies for particular medical treatments, those requests would have to have been made in the first instance. Otherwise, there would be no way to confirm the success of those requests, let alone record them in a database. The Examiner's point in this regard (Ans. 7) is well taken, for it is not improperly based on unsupported Official Notice as Appellant contends (App. Br. 18; Reply Br. 5), but rather based on inferences ordinarily skilled artisans would reasonably draw from Anderson.

To be sure, Anderson does not specify how these reimbursement requests were made nor detail their particulars as Appellant indicates. App. Br. 16; Reply Br. 6. Nevertheless, the Examiner does not rely solely on Anderson for teaching outputting this data for compensation to a second computer, but also Lukas, who teaches an online, internet-based RA information tool. *See* Lukas 45–47, 50. Given this internet-based capability, we see no reason why the Lukas system could not also send patient data for compensation for treating RA conditions to a second computer, such as that of an insurance company, in light of Anderson as the Examiner proposes for reimbursement purposes or otherwise. *See* Final Act. 5; Ans. 7–8.

The Examiner's proposed combination is not based on impermissible hindsight as Appellant contends (App. Br. 19; Reply Br. 8), but rather uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007). Appellant's arguments regarding Lukas' and Anderson's individual

shortcomings in this regard (*see* App. Br. 15–19; Reply Br. 4–6) do not show nonobviousness where, as here, the rejection is based on the cited references’ collective teachings. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). To the extent that Appellant contends that the Examiner’s proposed enhancement would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans, there is no persuasive evidence on this record to prove such a contention. *Cf. In re Salwan*, 681 F. App’x 938, 938–40 (Fed. Cir. 2017) (non-precedential) (discussing a system that transfers patient health information via a network to, among other things, submit insurance claims and transfer patient health records). The Examiner’s combining the teachings of Lukas and Anderson is, therefore, supported by articulated reasoning with some rational underpinning to justify the Examiner’s obviousness conclusion.

Accordingly, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 2, 41, and 42 not argued separately with particularity.

Claims 13, 26, 27, 47, and 48

We also sustain the Examiner’s rejection of independent claim 13 reciting, in pertinent part, generating a report comprising the data pertaining to the health of the patient *for* submission to a medical agency with respect to compensation for services of medical personnel treating the patient. *See* Final Act. 9–11; Ans. 12–14. Our emphasis on the word “for” underscores that claim 13 does not recite submitting the report to a medical agency, but

rather generating a report *for* submission to that agency—an intended use of the report that may or may not occur.

Nevertheless, despite Appellant’s arguments to the contrary (App. Br. 25–28; Reply Br. 16–19), we see no error in the Examiner’s reliance on Anderson and Lukas for collectively at least suggesting the recited report generation limitation. Although Lukas’ system electronically transfers data pertaining to a patient’s health for submission to a general practitioner, Anderson nevertheless at least suggests generating a report that would be at least capable of submission to an insurance company for reimbursement of associated treatment, including RA for the reasons noted previously and those indicated by the Examiner. *See* Ans. 12–14 (citing Lukas 47; Anderson ¶ 89). Leaving aside the fact that there is no evidence on this record that the patient health information transferred to a general practitioner in Lukas would somehow be *incapable* of submission to a medical agency with respect to compensation for associated services, we nonetheless see no error in the Examiner’s finding that Anderson at least suggests generating a report comprising data pertaining to a patient’s health for submission to a medical agency for compensation of associated services, particularly given the reference to *previously-successful* reimbursement requests made to insurance companies for particular medical treatments in paragraph 89 as noted previously.

To the extent that Appellant contends that these requests cannot at least include a report, we disagree. The term “report” is not defined in the Specification, so we interpret the term with its plain meaning, namely “a usu[ally] detailed account or statement.” *See* MERRIAM WEBSTER’S

COLLEGIATE DICTIONARY 992 (10th ed. 1993). Leaving aside the fact that a report is *usually*—not always—a detailed account or statement under this definition, generating such a statement pertaining to a patient’s health in connection with Anderson’s reimbursement requests would have nevertheless been at least an obvious variation to at least inform the insurance company of the patient’s health status necessitating the associated treatment. Indeed, it is difficult to envision how the requests in Anderson’s paragraph 89 would have been successful without some sort of associated report with respect to the patient’s health to justify the reimbursement for associated treatment. That Anderson’s system actually generates reports from a database in paragraph 113 only further bolsters the notion that generating the recited reports for submission to medical agency as claimed would have been at least an obvious variation. *Accord* Ans. 14 (noting that given Lukas’ and Anderson’s collective teachings, skilled artisans would understand that a communication can be sent to any interested or involved party with respect to a patient’s health, including another doctor or insurance company).

Lastly, despite Appellant’s arguments to the contrary (App. Br. 26–27; Reply Br. 17–19), we find the Examiner’s combining the teachings of Lukas and Anderson is supported by articulated reasoning with some rational underpinning to justify the Examiner’s obviousness conclusion for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 13, and claims 26, 27, 47, and 48 not argued separately with particularity.

Claims 17 and 20

We also sustain the Examiner's rejection of claim 17 reciting, in pertinent part, a computer comprising (1) processing circuitry configured to generate an electronic communication regarding treatment of the conditions which are associated with the joints, and (2) a communications interface configured to output the electronic communication regarding the treatment of those conditions to an insurer of the patient. *See* Final Act. 7; Ans. 14–16. Because Appellant's arguments regarding the alleged shortcomings of Lukas and Anderson and their combinability are similar to those made previously (*see* App. Br. 28–30; Reply Br. 19–21), we are unpersuaded by those arguments for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 17, and claim 20 not argued separately with particularity.

Claims 21, 22, 24, and 49

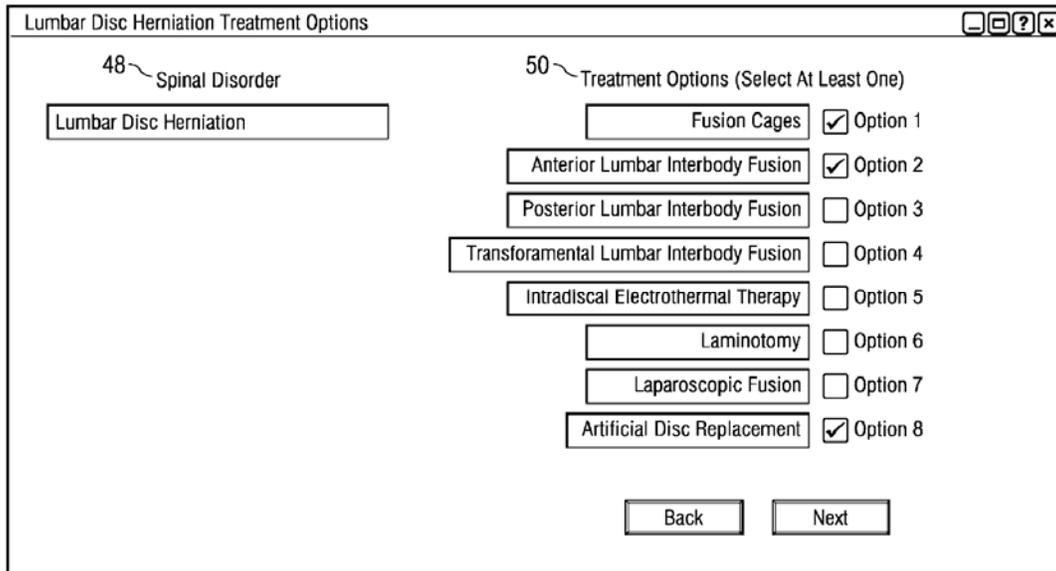
We also sustain the Examiner's rejection of claim 21 reciting, in pertinent part, generating and outputting a communication with respect to compensation for services of medical personnel treating the conditions which are associated with the joints of the patient. Final Act. 7; Ans. 19. Because Appellant's arguments regarding the alleged shortcomings of Lukas and Anderson and their combinability are similar to those made previously (*see* App. Br. 31–33; Reply Br. 22–23), we are unpersuaded by those arguments for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 21, and claims 22, 24, and 49 not argued separately with particularity.

Claims 30, 55, and 56

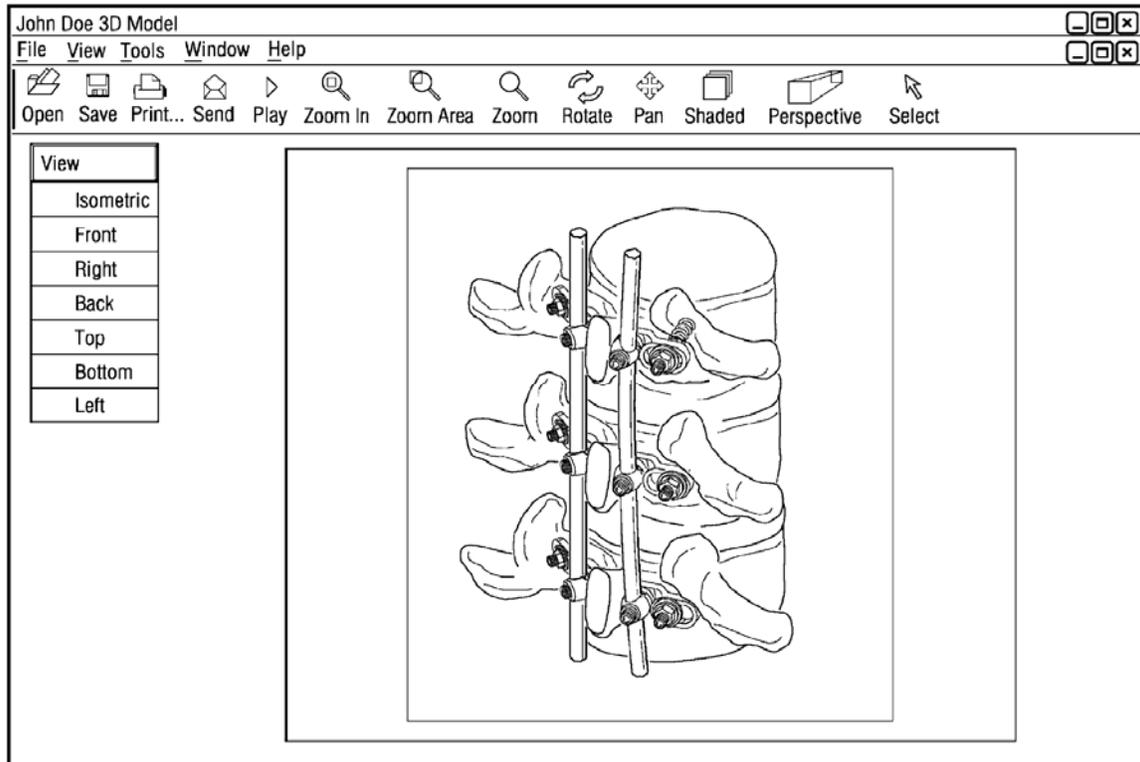
We also sustain the Examiner's rejection of claim 30 reciting, in pertinent part, (1) accessing another user input selecting one of the different conditions, and (2) controlling the GUI to only indicate the joints having the selected one of different conditions, and to not indicate the joints having the non-selected ones of the different conditions. *See* Final Act. 13–15; Ans. 21–22 (citing Anderson, Figs. 4, 7–9).

Despite Appellant's arguments to the contrary (App. Br. 37–39; Reply Br. 27–29), we see no error in the Examiner's reliance on Anderson's treatment identification and modeling functionality for at least suggesting the recited GUI control function. Anderson's Figure 2 outlines a method for diagnosing, treating, and monitoring a patient where, among other things, specific treatment options are (1) identified in step 28, and then (2) modeled in step 30. Anderson ¶¶ 60, 74–77. To this end, the treatment options are identified and selected using a software interface, such as that shown in Figure 8 reproduced below. Anderson ¶¶ 75–76.



Interface for identifying treatment options in Anderson's Figure 8

After selecting the treatment options, they are then modeled by retrieving and representing an associated model of the patient's anatomy in a GUI as shown in Anderson's Figure 10 reproduced below. Anderson ¶ 77; Figs. 9–10.



Interface with modeling representation in Anderson's Figure 10

Notably, the model displayed in Figure 10 showing a portion of the patient's spinal cord pertains to the selected treatment options which, in that example, are for treating a particular spinal condition. The clear import of this functionality, then, is that the GUI is effectively controlled to only indicate that part of patient's anatomy relevant to the conditions to be treated in connection with the selected treatment options, and not indicate other portions of the patient's anatomy that do not pertain to those selected options.

Given this functionality, we see no reason why this fundamental concept could not be applied to joint-based conditions and associated

treatments in the Lukas/Anderson system to indicate only selected joints (e.g., those associated with a particular condition and associated treatment option), and not display other joints associated with other conditions and treatment options as the Examiner proposes. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417. Appellant’s arguments regarding Anderson’s individual shortcomings in this regard (App. Br. 37–39; Reply Br. 27–29) do not show nonobviousness where, as here, the rejection is based on the cited references’ collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 30, and claims 55 and 56 not argued separately with particularity.

Claims 33, 61, and 62

We also sustain the Examiner’s rejection of claim 33 reciting, in pertinent part, outputting a communication to a second computer with respect to compensation for services of medical personnel treating the conditions which are associated with the joints of a patient. *See Final Act*. 15–17; Ans. 25. Because Appellant’s arguments regarding the alleged shortcomings of Lukas and Anderson and their combinability are similar to those made previously (*see App. Br. 42–43; Reply Br. 32*), we are unpersuaded by those arguments for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 33, and claims 61 and 62 not argued separately with particularity.

Claims 36, 63, and 64

We also sustain the Examiner's rejection of claim 36 reciting, in pertinent part, generating and outputting an electronic communication regarding treatment of the conditions which are associated with the joints to an insurer of the patient. *See* Final Act. 18–20; Ans. 25–26. Because Appellant's arguments regarding the alleged shortcomings of Lukas and Anderson and their combinability are similar to those made previously (*see* App. Br. 42–43; Reply Br. 32), we are unpersuaded by those arguments for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 36, and claims 63 and 64 not argued separately with particularity.

Claim 25

We also sustain the Examiner's rejection of claim 25 reciting, in pertinent part, a second GUI configured to assist a user with generating the report to include information regarding a medication used to treat the patient for submission to the medical agency. *See* Final Act. 11–12; Ans. 26–27. Despite Appellant's arguments to the contrary (App. Br. 45–46; Reply Br. 34–36), we see no error in the Examiner's reliance on Anderson's teaching in paragraph 89 that the software interface includes a field that allows treating physicians or medical personnel to describe the particular use of a medical product, and that the database can include whether the treatment was on-label or off-label use of that product. *See* Final Act. 11.

Not only does this teaching at least suggest that the medical product can be a medication given its on- or off-*label* use, but the fact that the GUI

in Anderson's Figure 4 that allows entry of field-based information may be multiple pages including, among other things, additional menus and other inputs in paragraph 62 at least suggests that providing a second GUI in connection with entering and retrieving data for a medical product associated with a particular treatment would have been at least an obvious variation. *Accord* Ans. 26–27 (noting this point).

Therefore, in addition to the reasons previously discussed regarding the Examiner's reliance on Lukas and Anderson in connection with independent claim 13 from which claim 25 depends, we are also unpersuaded of error in the Examiner's rejection of claim 25 for these additional reasons.

Claim 34

We also sustain the Examiner's rejection of claim 34 reciting, in pertinent part, the communication comprises information regarding the treatment of the conditions which are associated with the patient's joints. *See* Final Act. 17–18; Ans. 27. Because Appellant's arguments regarding the alleged shortcomings of Lukas and Anderson and their combinability are similar to those made previously (*see* App. Br. 46–47; Reply Br. 37–38), we are unpersuaded by those arguments for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 34.

Claim 35

We also sustain the Examiner's rejection of claim 35 reciting that the communication comprises information regarding a medication prescribed to treat the conditions associated with the patient's joints. *See* Final Act. 8; Ans. 27. Despite Appellant's arguments to the contrary (App. Br. 47–49; Reply Br. 38), we see no error in the Examiner's reliance on Lukas' pages 46 and 47 that at least suggests sending drug-based treatment information to a general practitioner, and that providing such information to a medical agency for reimbursement would have been obvious in light of Anderson's paragraph 89. *See* Final Act. 8; Ans. 27. Therefore, are unpersuaded of error in the Examiner's rejection of claim 35 for the reasons noted previously and those indicated by the Examiner.

Claim 37

We also sustain the Examiner's rejection of claim 37 reciting displaying a GUI configured to assist a user with inputting the data of the patient for the quality measures. *See* Final Act. 6; Ans. 27–28. Despite Appellant's arguments to the contrary (App. Br. 49–50; Reply Br. 38–39), we see no error in the Examiner's reliance on Lukas' data entry functionality on pages 46 and 47 for at least suggesting a GUI that can assist the user with inputting the patient data *for* the quality measures. *See* Final Act. 6. Leaving aside this functional recitation, we nonetheless find that the cited prior art at least suggests the recited quality measures for the reasons noted previously.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 37.

Claim 39

We also sustain the Examiner's rejection of claim 39 reciting that the communication comprises the associations of the conditions with the patient's joints. *See* Final Act. 8–9; Ans. 28. Despite Appellant's arguments to the contrary (App. Br. 50–51; Reply Br. 39), we see no error in the Examiner's reliance on Lukas' functionality on pages 46 and 47 for at least suggesting communicating the recited associations, particularly when considered in light of Anderson, for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 39.

THE REJECTION OVER LUKAS, ANDERSON, AND ARNONE

Claims 3, 18, 19, 43, and 44

We also sustain the Examiner's rejection of independent claim 3 reciting, in pertinent part, generating the electronic record includes a table having plural entries corresponding to the joints and including the associations of the different conditions with different ones of the joints. *See* Final Act. 35–37; Ans. 11–12. Despite Appellant's arguments to the contrary (App. Br. 22–24; Reply Br. 14–16), we see no error in the Examiner's reliance on Arnone for at least suggesting the recited table, particularly when considered in light of Lukas. As the Examiner explains

and as noted previously, Lukas teaches generating an electronic record pertaining to a patient's health that includes associations of different conditions with different joints. Final Act. 36 (citing Lukas 47). Although the Examiner acknowledges that Lukas does not state explicitly that this record of joint/condition associations is a table, we nonetheless see no reason why these associations could not be so presented, particularly in view of tabular presentation of anatomical information—including associated conditions—in Arnone's Figures 2 and 15 as the Examiner indicates. *See* Final Act. 36–37; Ans. 11–12. Certainly, summarizing the joint/condition associations in a table would assist in visualizing the information associated with various conditions and their respective joints as the Examiner indicates by organizing the information in rows and columns—a predictable result. *Accord* Lukas 47 (noting that the number of tender and swollen joints is counted and used to calculate the value of the disease activity score for the patient on graphs and *tables*).

Even assuming, without deciding, that the tables in Arnone's Figures 2 and 15 refer to only one part of the anatomy as Appellant contends (App. Br. 23–24; Reply Br. 14–15), the Examiner does not rely solely on Arnone in connection with the recited table-based electronic record, but rather the collective teachings of the cited prior art, including Lukas. *See* Final Act. 35–37; Ans. 11–12. That is, the Examiner cites Arnone merely to show that it is known to present anatomical information, including associated conditions, in a table, and that, in light of this known technique, presenting Lukas' joint/condition associations in a table would assist in visualizing the information—a predictable result. *See id.* Appellant's contention, then, that

modifying *Arnone*'s table to include plural entries for different parts of the human anatomy would somehow frustrate *Arnone*'s tabular arrangement and render it unsatisfactory for its intended purpose (Reply Br. 14–15) is not only unsubstantiated on this record, this argument is not germane to the Examiner's rejection that proposes to modify *Lukas* to present *Lukas*' joint/condition associations in a table, such as that shown in *Arnone*, to assist in visualizing the information by organizing the information in rows and columns. *See* Final Act. 35–37; Ans. 11–12. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417. On this record, then, the Examiner's combining the teachings of the cited references is supported by articulated reasoning with some rational underpinning to justify the Examiner's obviousness conclusion.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 3, and claims 18, 19, 43, and 44 not argued separately with particularity.

Claims 31, 57, and 58

We also sustain the Examiner's rejection of claim 31 reciting, in pertinent part, displaying a table having the joints listed in a first column, the conditions of the joints listed in plural additional columns, and plural visual indications which indicate the associations of the different conditions with the different ones of the joints. *See* Final Act. 42–44; Ans. 22–23. Despite Appellant's arguments to the contrary (App. Br. 39–40; Reply Br. 29–31),

we see no error in the Examiner's reliance on Arnone for at least suggesting the recited table, particularly when considered in light of Lukas.

As we noted previously in connection with claim 3, summarizing Lukas' joint/condition associations in a table in view of Arnone would assist in visualizing the information associated with various conditions and their respective joints as the Examiner indicates by organizing the information in rows and columns—a predictable use of prior art elements according to their established functions to achieve a predictable result. *See KSR*, 550 U.S. at 417. *Accord* Lukas 47 (noting that the number of tender and swollen joints is counted and used to calculate the value of the disease activity score for the patient on graphs and *tables*). Therefore, Appellant's arguments regarding Arnone's alleged shortcomings in this regard by referring to only one part of the anatomy (App. Br. 39; Reply Br. 29–30) are unavailing for the reasons noted previously.

To be sure, the cited references under the Examiner's proposed combination do not state explicitly that (1) the joints are listed in a first column of the table; (2) the conditions are listed in additional columns; and (3) visual indications indicate the respective associations of joints and conditions. But this particular tabular arrangement would have been at least an obvious variation within the level of ordinarily skilled artisans to visualize the data consistent with that arrangement. Given a certain number of joints and associated conditions in Lukas, there are only so many ways to represent those associations in a table, namely by designating information to be represented by the table's columns and rows, such that the intersection of a particular column and row identifies a corresponding cell with information

pertaining to both the associated column and row, as in a spreadsheet. *See, e.g., Enfish LLC v. Microsoft Corp.*, 822 F.3d 1327, 1340 (Fed. Cir. 2016) (discussing data representing rows and columns in a table in Microsoft Excel 5.0—a version of a well-known spreadsheet program that was in public use by early 1994).

Therefore, given a data set with a certain number of joints and their associated conditions as in *Lukas*, presenting this data in a table such that (1) the joints are listed in a first column; (2) the conditions are listed in additional columns; and (3) visual indications indicate the respective associations of joints and conditions would have been a creative step within the level of ordinarily skilled artisans to, among other things, visualize the data consistent with that arrangement—an obvious variation. *See KSR*, 550 U.S. at 421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”). To the extent that Appellant contends that designating the joints and associated conditions of *Lukas*’ in columns of a table would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans, there is no persuasive evidence on this record to substantiate such a contention. *Cf. Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007). And where, as here, there are a finite number of known identified, predictable solutions (e.g., representing the joint and condition data in columns or rows of a table), ordinarily skilled artisans would have had a good reason to pursue the known options within their grasp, including listing the joints in a first column, and the conditions in additional columns as claimed. *See KSR*, 550 U.S. at 421.

Lastly, nothing in the claim precludes the “visual indications” resulting from this tabular arrangement, including the intersection of a particular column and row. Not only can this intersection itself be a “visual indication” of an association, but nothing in the claim precludes other forms of visual indications—including text—associated with the displayed table that at least indicate the recited joint/condition associations.

On this record, then, we find that the cited references at least suggest the recited limitations, and the Examiner’s combining the teachings of these references is supported by articulated reasoning with some rational underpinning to justify the Examiner’s obviousness conclusion.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 31, and claims 57 and 58 not argued separately with particularity.

Claims 23 and 50

We also sustain the Examiner’s rejection of claim 23 reciting, in pertinent part, displaying a table having plural entries corresponding to the joints of the human anatomy and the different conditions associated with the different ones of the joints. *See* Final Act. 40–42; Ans. 26–27. Despite Appellant’s arguments to the contrary (App. Br. 51–53; Reply Br. 40), we see no error in the Examiner’s reliance on Arnone for at least suggesting the recited table, particularly when considered in light of Lukas, for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 23, and claim 50 not argued separately with particularity.

THE OBVIOUSNESS REJECTION OVER LUKAS AND KOUCHI

Claims 28, 51, and 52

We also sustain the Examiner's rejection of independent claim 28 reciting, in pertinent part, (1) determining, for each different condition, a percentage change value which compares the number of joints having the respective condition at different moments in time, and (2) displaying the percentage change values for the different conditions using the GUI. *See* Final Act. 49–51; Ans. 19–20. Notably, Appellant does not squarely address—let alone persuasively rebut—the Examiner's finding that Lukas' system tracks trends of disease activity over time on page 49. *See* Final Act. 51; Ans. 19.

Given this undisputed finding, we see no error in the Examiner's reliance on Kouchi for at least suggesting displaying a percentage change value of a medical condition over a period of time given the percentage-based metrics associated with treatment effect predictions in Figure 22, and the fact that the treatment effect over time can be displayed after one month, three months, six months, *and* a year. *See* Kouchi ¶¶ 145–46.

Although Kouchi's Figure 22 displays treatment effect predictions and probabilities of a patient achieving a blood sugar decrease given a particular treatment as Appellant indicates (App. Br. 34–36; Reply Br. 25), we nonetheless see no error in the Examiner's reliance on Kouchi for the limited purpose for which it was cited, namely merely to show that displaying percentage change values for a certain medical condition over time is known in the art, albeit in a predictive sense. Despite this predictive context, we nonetheless see no reason why a percentage-based display of a medical

condition that shows such changes over time, such as that in Kouchi, could not be used in connection with Lukas' system that *tracks trends of disease activity over time* on page 49—disease activity that pertains to the associations of joints and their respective conditions as noted previously. *See* Lukas 47 (noting that the number of tender and swollen joints is counted and used to calculate the value of the disease activity score for the patient on graphs and tables). To the extent that Appellant contends that providing a percentage-based display of a medical condition that shows such changes over time, such as that in Kouchi, in connection with Lukas' temporal disease activity tracking functionality would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans, there is no persuasive evidence on this record to substantiate such a contention. *Cf. Leapfrog*, 485 F.3d at 1162. Moreover, it is well settled that familiar items may have obvious uses beyond their primary purposes, and often ordinarily skilled artisans can fit multiple references' teachings together like puzzle pieces. *See KSR*, 550 U.S. 398 at 420.

In short, the Examiner's proposed combination uses prior art elements predictably according to their established functions—an obvious improvement. *See id.* at 417. Appellant's arguments regarding Kouchi's individual shortcomings in this regard (App. Br. 34–36; Reply Br. 25) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 28, and claims 51 and 52 not argued separately with particularity.

Claims 29, 53, and 54

We also sustain the Examiner’s rejection of claim 29 reciting, in pertinent part, (1) using the data pertaining to the health of the patient to determine values of an outcome measure at different moments in time for the patient; (2) determine a percentage change value which compares the values of the outcome measure at the different moments in time; and (3) displaying the percentage change value using the GUI. *See* Final Act. 51–53; Ans. 20–21. Despite Appellant’s arguments to the contrary (App. Br. 36–37; Reply Br. 26–27), we see no error in the Examiner’s reliance on Kouchi for at least suggesting the recited outcome measure determination and display, particularly when considered in light of Lukas, for the reasons noted previously and those indicated by the Examiner.

Although the term “outcome measure” is not defined in the Specification, the Specification nonetheless indicates that an exemplary outcome measure is “DAS28”¹¹ that uses data from plural parameters including conditions of tenderness (pain) and swelling of joints, laboratory information, and a physician’s evaluation of the patient’s general health in term of an amount of disease activity present in the patient resulting from examination and observation of the patient. ’610 patent, col. 6, ll. 46–59. Notably, this passage indicates that this particular outcome measure is *exemplary*, and other outcome measures may be used in other embodiments. *Id.*, col. 6, ll. 46–49.

Although this description informs our understanding of the recited outcome measure, it is not so limited. To the extent that Appellant contends

¹¹ “DAS-28” stands for “Disease Activity Score in 28 joints.” Collier I 488.

that the recited outcome measure must be limited to this particular description (*see* App. Br. 36), we decline to import that description into the claim. *See Phillips*, 415 F.3d at 1323 (“[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. . . . [C]laims may embrace different subject matter than is illustrated in the specific embodiments in the specification.”) (citations and internal quotation marks omitted).

Turning to the rejection, Appellant does not squarely address—let alone persuasively rebut—the Examiner’s finding that *Lukas* determines the values of an outcome measure at different moments in time. *See* Final Act. 52. Rather, Appellant’s arguments center on *Kouchi*’s alleged shortcomings with respect to the recited outcome measure—not *Lukas*. *See* App. Br. 36–37. Nor does Appellant squarely address—let alone persuasively rebut—the Examiner’s finding that *Lukas*’ system tracks trends of disease activity over time on page 49. *See* Final Act. 53; Ans. 21.

Given these undisputed findings, we see no error in the Examiner’s reliance on *Kouchi* for at least suggesting displaying a percentage change value of a medical condition over a period of time given the percentage-based metrics associated with treatment effect predictions in Figure 22, and the fact that the treatment effect over time can be displayed after one month, three months, six months, *and* a year. *See Kouchi* ¶¶ 145–46.

Although *Kouchi*’s Figure 22 displays treatment effect predictions and probabilities of a patient achieving a blood sugar decrease given a particular treatment as Appellant indicates (App. Br. 36–37; Reply Br. 26), we

nonetheless see no error in the Examiner's reliance on Kouchi for the limited purpose for which it was cited, namely merely to show that displaying percentage change values for a certain medical condition over time is known in the art, albeit in a predictive sense. Despite this predictive context, we nonetheless see no reason why a percentage-based display of a medical condition that shows such changes over time, such as that in Kouchi, could not be used in connection with Lukas' system that *tracks trends of disease activity over time* on page 49. Notably, this disease activity not only pertains to the associations of joints and their respective conditions as noted previously, but also determining the values of an outcome measure at different moments in time as the Examiner indicates. *See* Final Act. 52. To the extent that Appellant contends that providing a percentage-based display of a medical condition that shows such changes over time, such as that in Kouchi, in connection with Lukas' temporal disease activity tracking functionality would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans, there is no persuasive evidence on this record to substantiate such a contention. *Cf. Leapfrog*, 485 F.3d at 1162. Moreover, it is well settled that familiar items may have obvious uses beyond their primary purposes, and often ordinarily skilled artisans can fit multiple references' teachings together like puzzle pieces. *See KSR*, 550 U.S. 398 at 420.

Lastly, we note that Appellant also contends for the first time in the Reply Brief that the Examiner failed to provide articulated reasoning with rational underpinning for the proposed combination because Lukas already teaches visualizing and comparing interventions with trends of disease

activity, and therefore, there is allegedly no basis for further modification. *See* Reply Br. 26–27. This argument, however, was not made in the Appeal Brief. *Compare* Reply Br. 26–27 *with* App. Br. 36–37. These new arguments are, therefore, waived as untimely. *See* 37 C.F.R. § 41.41(b)(2) (2012). Nor has good cause been shown to raise these new combinability arguments in the first instance in the Reply Brief, particularly given the striking similarity between the Examiner’s response to arguments in the Answer for claim 29 and the rejection with respect to the references’ combinability. *Compare* Final Act. 53 *with* Ans. 21. Nevertheless, even if these arguments were timely submitted (which they were not), we still find them unpersuasive for the reasons noted previously and those indicated by the Examiner.

In short, the Examiner’s proposed combination uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. 398 at 417. Appellant’s arguments regarding Kouchi’s individual shortcomings in this regard (App. Br. 36–37) do not show nonobviousness where, as here, the rejection is based on the cited references’ collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 29, and claims 53 and 54 not argued separately with particularity.

Claims 32, 59, and 60

We also sustain the Examiner’s rejection of claim 32 reciting, in pertinent part, displaying a graph depicting a total number of joints of the patient having one of the conditions at different moments in time. Notably,

Appellant does not persuasively rebut the Examiner's finding that Lukas' system specifies and counts tender and swollen joints to calculate and display the patient's disease activity score value on follow-up graphs or tables. Ans. 24 (citing Lukas 47). Nor does Appellant persuasively rebut the Examiner's finding that Lukas' system tracks trends of disease activity over time on page 49. *See* Final Act. 55; Ans. 24.

Given these undisputed findings, we see no error in the Examiner's reliance on Kouchi for at least suggesting displaying a graph of the status of medical condition over a period of time in light of the graphs in Figures 10 to 16, particularly when considered in light of Lukas' disease activity graphing and tracking functionality noted by the Examiner. Although Kouchi's graphs pertain to simulation results as Appellant indicates (App. Br. 31–32), we nonetheless see no reason why the fundamental concept of graphing the status of a certain medical condition over time as shown in Kouchi, whether the graph represents a simulation or otherwise, could not be applied to Lukas' system that includes joint-based disease activity graphing and tracking functionality to depict visually the total number of joints having a particular condition over time via a graph.

To the extent that Appellant contends that the Examiner's proposed enhancement to Lukas would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans, there is no persuasive evidence on this record to substantiate such a contention. *Cf. Leapfrog*, 485 F.3d at 1162. Moreover, it is well settled that familiar items may have obvious uses beyond their primary purposes, and often ordinarily skilled

artisans can fit multiple references' teachings together like puzzle pieces.
See KSR, 550 U.S. 398 at 420.

In short, the Examiner's proposed combination uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. 398 at 417. Appellant's arguments regarding Kouchi's individual shortcomings in this regard (App. Br. 40–41; Reply Br. 31–32) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 32, and claims 59 and 60 not argued separately with particularity.

THE OTHER OBVIOUSNESS REJECTIONS BASED ON LUKAS

We also sustain the Examiner's obviousness rejections of claims 4–12, 45, and 46 based on Lukas. Final Act. 24–30, 45–48. Because these rejections are not argued separately with particularity, we are not persuaded of error in these rejections for the reasons previously discussed.

THE OBVIOUSNESS REJECTION OVER COLLIER I AND ANDERSON

Regarding independent claim 1, the Examiner finds that Collier I discloses a computer-implemented medical information recording method including, among other things, (1) displaying a GUI including a graphical representation of anatomical joints, (2) accessing user inputs interacting with the representation, (3) generating an electronic record including data pertaining to a patient's health including associations of different conditions

with different joints, and (4) generating and outputting a communication to a second computer, the communication comprising data of the patient for plural quality measures indicating condition treatment. Final Act. 20–22. Although the Examiner acknowledges that Collier I does not disclose explicitly that the communication is for compensation for services of medical personnel treating the conditions, the Examiner cites Anderson for teaching this feature in concluding that the claim would have been obvious. Final Act. 22.

Appellant argues the prior art does not teach or suggest the recited quality measures as the term is understood in the art, let alone generating and outputting a communication to a second computer comprising data for plural quality measures indicating treatment of the conditions associated with the joint and for compensation for services of medical personnel treating the conditions. App. Br. 20–22; Reply Br. 9–13.

Appellant adds that not only does Collier I's system send email to physicians who are not responsible for treatment compensation, Anderson merely saves reimbursement requirements, procedures, and indications of previous success of reimbursement requests in a database, but does not disclose submitting reimbursement requests nor indicate how the requests are made. App. Br. 17–19; Reply Br. 7–13. As such, Appellant contends that the Examiner's proposed combination lacks articulated reasoning with a rational underpinning and is based on improper hindsight. *Id.*

ISSUE

Under § 103, has the Examiner erred by finding that Collier I and Anderson collectively would have taught or suggested generating and outputting a communication to a second computer, where the communication comprises data of a patient for plural quality measures indicative of treatment of conditions associated with joints and for compensation for services of medical personnel treating the conditions as recited in claim 1?

ANALYSIS

Claims 1, 2, 4, 15, and 16

We begin by noting that, as with the rejection of claim 1 based on Lukas, the key disputed limitation recites, in pertinent part, generating and outputting a communication comprising data of the patient for (1) plural *quality measures* indicating treatment of conditions associated with the joints, and (2) compensation for services of medical personnel treating the conditions. As we noted in connection with the Lukas-based rejection, the '610 patent does not define the term “quality measures,” but does describe the term in connection with providing incentives for complying with these measures via reports submitted to a medical agency. *See* '610 patent, col. 9, ll. 22–29. To this end, GUI 30 in Figure 3 includes a “PQRI-RA” link 70 that, when selected, directs medical personnel to the window shown in Figures 6A and 6B. '610 patent, col. 9, ll. 20–25; col. 10, ll. 43–64. This window assists medical personnel with generating reports submitted to a medical agency, such as Medicare, for incentives for complying with *quality*

measures of treatment and/or payment of the services for treatment. '610 patent, col. 9, ll. 25–29.

Apart from this reference to “quality measures” in terms of providing incentives to comply with those measures, the '610 patent does not further explain what is meant by these “quality measures,” let alone define the term to so limit its interpretation. Nevertheless, Appellant contends that the term “quality measures” is understood in the medical profession as consisting of a numerator and denominator that permit calculating the percentage of a defined patient population that receive a particular process of care or achieve a particular outcome as evidenced by the PQRI Specifications document, made of record in this appeal. Reply Br. 9.

The first page of the PQRI Specifications document indicates that the document contains complete specifications for the 119 measures that make up the 2008 PQRI, and that each measure is assigned a unique number. The document's first page adds that “[i]n general, the quality measures consist of a numerator and denominator that permit calculating the percentage of a defined patient population that receive a particular process of care or achieve a particular outcome.”

To be sure, the PQRI Specifications document's first page explains what is meant by quality measures in the context of those particular specifications—at least *in general*. Nevertheless, the claim is not limited to these particular quality measures, despite the fact that the link 70 and associated window in Figures 6A and 6B of the '610 patent pertain to complying with quality measures associated with PQRI. *See* '610 patent, col. 9, ll. 22–29.

Although the PQRI Specifications document informs our construction of the term “quality measures,” at least with respect to that particular reporting protocol, we decline to import that description into the claim. *See Phillips*, 415 F.3d at 1323 (“[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. . . . [C]laims may embrace different subject matter than is illustrated in the specific embodiments in the specification.”) (citations and internal quotation marks omitted). Therefore, we see no error in the Examiner’s construction of the term “quality measures” under its broadest reasonable interpretation as data that is (1) indicative of treatment of conditions associated with joints, and (2) for compensation for services of medical personnel treating those conditions. *See Ans. 8.*

Turning to the rejection, the Examiner finds that Collier I discloses, among other things, generating and outputting a communication to a second computer, the communication comprising data of the patient for plural quality measures indicating condition treatment. Final Act. 20–22. Collier I discloses a rheumatology-specific application, known as “Rheumatology OnCall” (ROC), with an integrated disease activity calculator. Collier I Abstract. The application’s single Web page format includes a dashboard view of, among other things, (1) clinical and laboratory data relevant to rheumatic disease, (2) medication-related adverse effects graphed over time, (3) a DAS28 calculator and trend reporter; (4) laboratory results; (5) a current medication list; and (6) a medication history bar graph. Collier I 490. The application’s compact grouping of graphs allows a clinician to

quickly assess trends and facilitate tracking disease activity and monitoring for potential medication-related adverse effects. *Id.* The application also enables the clinician to label each joint as normal, swollen, tender, etc. *Id.*

In one aspect, an automated email correspondence is sent weekly to each clinician with a table of the previous week's calculated DAS28 scores for that clinician's patients. *Id.* 491. In one 12-week study, each physician who accessed the disease activity calculator during the previous week received an automated email correspondence with a summary table listing the proportion of DAS28 predictions that were in or out of range during the previous week and throughout the study. *Id.*

Based on this functionality, we see no error in the Examiner's reliance on Collier I at least to the extent that Collier I at least suggests generating and outputting a communication to a second computer, where the communication comprises data of the patient *for* plural quality measures as claimed. Despite Appellant's arguments to the contrary (App. Br. 20–22), nothing in the claim precludes the information that is sent to the clinician on pages 491 of Collier I for at least being *for* such quality measures even if such quality measures were limited to those in the PQRI Specifications document—which they are not. In any event, we find that the information in Collier I's ROC application, including information sent to the clinician, would be at least capable of being used *for* the recited quality measures.

In short, Appellant's arguments regarding Collier I's lacking the recited quality measures are unavailing and not commensurate with the scope of the claim. To the extent that Appellant contends that the summary table of the calculated DAS28 scores that is sent to a clinician on Collier I's

page 491 is an outcome measure—not a quality measure (*see* App. Br. 20), we disagree.

To be sure, the Specification indicates that an exemplary outcome measure is “DAS28” that uses data from plural parameters including conditions of tenderness (pain) and swelling of joints, laboratory information, and a physician’s evaluation of the patient’s general health in term of an amount of disease activity present in the patient resulting from examination and observation of the patient. ’610 patent, col. 6, ll. 46–59. But even assuming, without deciding, that *DAS28 scores themselves* that are sent to clinicians on Collier I’s page 491 can be considered “outcome measures” in light of the ’610 patent, nothing in the claim or the Specification precludes the summary table listing the proportion of these scores that were *in or out of range* during the relevant time period as being considered “quality measures” under the term’s broadest reasonable interpretation. Not only does this information indicate the effectiveness of the joint-based treatment, it would be at least capable of being used *for* the recited quality measures, including compensation for associated treatment services.

To be sure, Collier I teaches sending this information to a clinician, and not an insurance company for compensation. But leaving aside the fact that information regarding a particular medical treatment, such as treating RA, that is sent to a clinician would be at least capable of being used *for* compensation for associated treatment services, the Examiner nonetheless relies on Anderson—not Collier I—for at least suggesting that feature. As the Examiner explains, sending medical treatment information to an

insurance company for compensation for associated services is known in the art as evidenced by Anderson, and that such a transmission for RA-based treatment, such as that reflected in the transmitted information in Collier I, would have been obvious. Final Act. 22; Ans. 9–11.

The Examiner’s position has merit, for although Anderson’s system stores information regarding reimbursement procedures and their requirements in a database, the database also keeps track of the success of *previous* reimbursement requests based on associated patient data. Anderson ¶ 89. Our emphasis underscores the fact that to maintain a record of *previously-successful* reimbursement requests made to insurance companies for particular medical treatments, those requests would have to have been made in the first instance. Otherwise, there would be no way to confirm the success of those requests, let alone record them in a database. The Examiner’s point in this regard (Ans. 10) is well taken, for this finding is based on inferences ordinarily skilled artisans would reasonably draw from Anderson.

To be sure, Anderson does not specify how these reimbursement requests were made nor detail their particulars as Appellant indicates. App. Br. 21; Reply Br. 11. Nevertheless, the Examiner does not rely solely on Anderson for teaching outputting this data for compensation to a second computer, but also Collier I, who teaches a web-based RA information tool. *See* Collier I 490–91. Given this web-based capability, we see no reason why the Collier I system could not also send patient data for compensation for treating RA conditions to a second computer, such as that of an insurance

company, in light of Anderson as the Examiner proposes for reimbursement purposes or otherwise. *See* Final Act. 22; Ans. 9–12.

The Examiner’s proposed combination is not based on impermissible hindsight as Appellant contends (App. Br. 22; Reply Br. 13), but rather uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417. Appellant’s arguments regarding Collier I’s and Anderson’s individual shortcomings in this regard (*see* App. Br. 10–12; Reply Br. 20–22) do not show nonobviousness where, as here, the rejection is based on the cited references’ collective teachings. *See Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). To the extent that Appellant contends that the Examiner’s proposed enhancement would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans, there is no persuasive evidence on this record to prove such a contention. *Cf. Salwan*, 681 F. App’x at 938–40 (discussing a system that transfers patient health information via a network to, among other things, submit insurance claims and transfer patient health records). The Examiner’s combining the teachings of Collier I and Anderson is, therefore, supported by articulated reasoning with some rational underpinning to justify the Examiner’s obviousness conclusion.

Accordingly, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 2, 4, 15, and 16 not argued separately with particularity.

Claims 17 and 20

We also sustain the Examiner's rejection of claim 17 reciting, in pertinent part, a computer comprising (1) processing circuitry configured to generate an electronic communication regarding treatment of the conditions which are associated with the joints, and (2) a communications interface configured to output the electronic communication regarding the treatment of those conditions to an insurer of the patient. *See* Final Act. 23; Ans. 17–18. Because Appellant's arguments regarding the alleged shortcomings of Collier I and Anderson and their combinability are similar to those made previously (*see* App. Br. 30–31; Reply Br. 21–22), we are unpersuaded by those arguments for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 17, and claim 20 not argued separately with particularity.

Claims 21, 22, and 24¹²

We also sustain the Examiner's rejection of claim 21 reciting, in pertinent part, generating and outputting a communication with respect to compensation for services of medical personnel treating the conditions which are associated with the joints of the patient. *See* Final Act. 23; Ans. 19. Because Appellant's arguments regarding the alleged shortcomings of Collier I and Anderson and their combinability are similar to those made previously (*see* App. Br. 31–33; Reply Br. 22–23), we are unpersuaded by

¹² Although Appellant also includes claim 49 in this grouping (*see* App. Br. 33; Reply Br. 23), the claim was not so rejected. *See* Final Act. 20; Ans. 3.

Appeal 2019-000721
Reexamination Control 90/013,776
Patent US 8,458,610 B2

those arguments for the reasons noted previously and those indicated by the Examiner.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 21, and claims 22 and 24 not argued separately with particularity.

THE OTHER OBVIOUSNESS REJECTION BASED ON COLLIER I

We also sustain the Examiner's obviousness rejection of claims 5–8 and 10–12 over Collier I, Anderson, and Heywood. Final Act. 30–35. Because this rejection is not argued separately with particularity, we are not persuaded of error in this rejection for the reasons previously discussed.

CONCLUSION

The Examiner did not err in rejecting claims 1–13, 15–37, 39, and 41–64 under § 103.

DECISION

The Examiner's decision to reject claims 1–13, 15–37, 39, and 41–64 is affirmed.

Requests for extensions of time in this *ex parte* reexamination proceeding are governed by 37 C.F.R. § 1.550(c). See 37 C.F.R. § 41.50(f).

AFFIRMED