



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.
13/931,391	06/28/2013	THIRUNAVUKKARASU ARJUNAN	4366CSM-170	1098
48500	7590	07/27/2018	EXAMINER	
SHERIDAN ROSS P.C. 1560 BROADWAY, SUITE 1200 DENVER, CO 80202			KELLER, MICHAEL A	
			ART UNIT	PAPER NUMBER
			2446	
			NOTIFICATION DATE	DELIVERY MODE
			07/27/2018	ELECTRONIC

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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

cjacquet@sheridanross.com
pair_Avaya@firsttofile.com
edocket@sheridanross.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THIRUNAVUKKARASU ARJUNAN, VINOD SULLERI
PUTTASWAMY, and RAMANUJAN S. KASHI

Appeal 2018-000766
Application 13/931,391
Technology Center 2400

Before JOHN A. JEFFERY, LARRY J. HUME, and JOYCE CRAIG,
Administrative Patent Judges.

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants' invention sends real-time messages to recipients by using a pre-existing communication system in communication with a paging server. *See generally* Abstract; Spec. 5–9; Fig. 1. Claim 1 is illustrative:

¹ Appellants identify the real party in interest as Avaya Inc. App. Br. 2.

1. A method, comprising:
 - composing, by a microprocessor of a paging server, messages in real time;
 - sending, by the microprocessor, the messages in the real time to at least one recipient,
 - wherein the sending is accomplished by the microprocessor using a pre-existing communication system in communication with the paging server.

THE REJECTIONS

The Examiner rejected claims 1–20 under 35 U.S.C. § 101 as directed to ineligible subject matter. Final Act. 20–21.²

The Examiner rejected claim 2 under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. Final Act. 22.

The Examiner rejected claims 1, 2, 4, 7, 8, 10–13, and 16 under 35 U.S.C. § 103 as unpatentable over Fulton (US 2005/0041793 A1; Feb. 24, 2005) and Hassing (US 2010/0019910 A1; Jan. 28, 2010). Final Act. 23–28.

The Examiner rejected claim 3 under 35 U.S.C. § 103 as unpatentable over Fulton, Hassing, and Kugler (US 8,447,016 B1; May 21, 2013). Final Act. 28–29.

The Examiner rejected claim 5 under 35 U.S.C. § 103 as unpatentable over Fulton, Hassing, and Vendrow (US 2010/0099390 A1; Apr. 22, 2010). Final Act. 29–30.

² Throughout this opinion, we refer to (1) the Final Rejection mailed January 30, 2017 (“Final Act.”); (2) the Appeal Brief filed July 7, 2017 (“App. Br.”); (3) the Examiner’s Answer mailed August 31, 2017 (“Ans.”); and (4) the Reply Brief filed October 31, 2017 (“Reply Br.”).

The Examiner rejected claims 6 and 9 under 35 U.S.C. § 103 as unpatentable over Fulton, Hassing, and Wang (US 2010/0161771 A1; June 24, 2010). Final Act. 30–32.

The Examiner rejected claim 14 under 35 U.S.C. § 103 as unpatentable over Fulton, Hassing, and Akbar (US 2008/0084878 A1; Apr. 10, 2008). Final Act. 32–33.

The Examiner rejected claim 15 under 35 U.S.C. § 103 as unpatentable over Fulton, Hassing, and Nair (US 2009/0254589 A1; Oct. 8, 2009). Final Act. 34.

The Examiner rejected claim 17 under 35 U.S.C. § 103 as unpatentable over Fulton, Hassing, Reddy (US 2007/0083394 A1; Apr. 12, 2007), Iyer (US 2011/0282969 A1; Nov. 17, 2011), Wolff (US 6,833,848 B1; Dec. 21, 2004), and Vion-Dury (US 2010/0275117 A1; Oct. 28, 2010). Final Act. 35–37.

The Examiner rejected claim 18 under 35 U.S.C. § 103 as unpatentable over Fulton, Hassing, Reddy, Iyer, Wolff, Vion-Dury, and Kline (US 2008/0288770 A1; Nov. 20, 2008). Final Act. 37.

The Examiner rejected claim 19 under 35 U.S.C. § 103 as unpatentable over Fulton, Hassing, Reddy, Iyer, Wolff, Vion-Dury, and Gupta (US 2011/0093637 A1; Apr. 21, 2011). Final Act. 38.

The Examiner rejected claim 20 under 35 U.S.C. § 103 as unpatentable over Fulton, Hassing, and Kreiner (US 2012/0151561 A1; June 14, 2012). Final Act. 39–40.

THE INELIGIBILITY REJECTION

The Examiner finds that the claimed invention is directed to an abstract idea, namely communicating in real time. Final Act. 20. According to the Examiner, the claimed elements do not add significantly more to the abstract idea to render the claimed invention patent-eligible. Final Act. 20–22.

Appellants argue that the Examiner not only failed to make a prima facie case of ineligibility, the claims are not directed to an abstract idea because, among other things, sending a message using a communication system is an activity necessarily rooted in computer technology, and the claimed invention improves the way computers operate. App. Br. 9–13; Reply Br. 2–6. Appellants add that even if the claimed invention was directed to an abstract idea, the claims nevertheless recite additional elements that add significantly more to the abstract idea by, among other things, reciting a technology-based solution to communicate in real time and improve communication performance. App. Br. 13–15; Reply Br. 6–7.

ISSUE

Has the Examiner erred in rejecting claim 1 by concluding that it is directed to ineligible subject matter under § 101? This issue turns on whether the claimed invention is directed to a patent-ineligible abstract idea and, if so, whether the claim's elements—considered individually and as an ordered combination—transform the nature of the claim into a patent-eligible application of that abstract idea.

ANALYSIS

Claim 1

To determine whether claims are patent eligible under § 101, we apply the Supreme Court’s two-step test articulated in *Alice Corp. Proprietary Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014). First, we determine whether the claims are directed to a patent-ineligible concept: laws of nature, natural phenomena, and abstract ideas. *Id.* at 2354–55. If so, we then proceed to the second step and examine the claim’s elements—both individually and as an ordered combination—to determine whether the claim contains an “inventive concept” sufficient to transform the claimed abstract idea into a patent-eligible application. *Id.* at 2357.

Alice Step One

Applying *Alice* step one, we agree with the Examiner that the claimed invention is directed to an abstract idea, namely communicating in real time. Final Act. 20–21; Ans. 3–10. Independent claim 1 recites a method where a paging server’s microprocessor (1) composes messages in *real time*, and (2) sends the messages in the *real time* to at least one recipient using a pre-existing communication system in communication with the paging server.

Our emphasis underscores a key aspect of the claimed invention, namely that messages are composed and sent in “real time.” Notably, Appellants’ Specification does not define the term “real time,” unlike other terms whose concrete definitions leave no doubt as to their meaning. *See, e.g.*, Spec. 2–4 (defining various terms).

We, therefore, construe the term “real time” with its plain meaning as understood in the art. The term “real-time” is defined in a communications

context as “that which occurs without a discernable delay. For instance, telephonic voice conversations, real-time chats, or real-time broadcasts.”

Steven M. Kaplan, *WILEY ELECTRICAL & ELECTRONICS ENGINEERING DICTIONARY* 639 (2004) (“the Wiley definition”). Another special-purpose dictionary defines the term “real-time processing” as follows:

A method of using a computer where the time at which the output is produced is of importance. The computer must be able to respond to some external event (for example, some movement in the physical world) and be able to perform calculations and control functions with a specified and usually very brief time limit. This response time, i.e. the lag between input and output time, can range from a few seconds to less than a microsecond.

John Daintith & Edmund Wright, *THE FACTS ON FILE DICTIONARY OF COMPUTER SCIENCE* 187 (Revised ed. 2006) (“the Facts on File definition”). Although real-time communications occur without a *discernable* delay under the Wiley definition, the Facts on File definition acknowledges that real-time processing is not instantaneous, but rather can be a few seconds. In short, even real-time processes incur delays, albeit indiscernible.

Nevertheless, according to the Specification, existing paging systems—systems that message or notify a user at an endpoint (*see* Spec. 4)—cannot send real-time messages, including audio messages with text, image, or video attachments. Spec. 1. Appellants’ disclosed invention is said to overcome this drawback by using a “paging engine” 102, namely an encapsulated block of hardware and/or software, with paging functionality that can configure and transmit audio, text, images, video, and/or other data messages in real time to one or more “endpoints” or receivers, such as pagers, telephones, and mobile devices. Spec. 5; Fig. 1.

The paging engine can interface with pre-existing communication equipment, such as servers and broadcast systems to, among other things, make audio announcements in real time that are broadcast on an equipment's speaker using a one-way speech path. Spec. 6. For example, the sender can send a message by speaking into a mobile device, and the recipients will hear the message via their respective receiving-device speakers. *See* Spec. 16–17.

In essence, the claimed invention uses a server to communicate with a recipient in real time using a pre-existing communication system. Despite Appellants' arguments to the contrary (App. Br. 10–13; Reply Br. 2–7), we agree with the Examiner that claim 1 is directed to an abstract idea that, in essence, is a fundamental communication activity. *See* Ans. 3 (noting that a phone conversation or video conference is real-time communication between humans using a pre-existing communication system); Ans. 4 (noting that it is long-prevalent practice for a car salesman to communicate with potential customers in real time using a pre-existing communication system such as email, phone, text messaging service, etc.); Ans. 8 (noting that humans have long communicated in real time by, for example, face-to-face verbal communication messages).³

Although claim 1 recites that a paging server's microprocessor is used to compose and send messages, where the messages are sent using a pre-

³ Even smoke signals—one of the oldest forms of long-distance communication—involves composing and sending messages in real time to recipients using a pre-existing communication system, namely fire and air. *See* THE WORDSWORTH CONCISE ENGLISH DICTIONARY 941 (G.W. Davidson et al. eds. 1994) (defining “smoke signal” as “a signal or message conveyed by means of patterns of smoke”).

existing communication system, the claim does not specify how these generic computer components achieve these functional results in a non-abstract way. *Cf. Two-Way Media Ltd. v. Comcast Cable Comm'ns, LLC*, 874 F.3d 1329, 1337–38 (Fed. Cir. 2017) (noting that claim reciting functional results of “converting,” “routing,” “controlling,” “monitoring,” and “accumulating records” did not describe sufficiently how to achieve these results in a non-abstract way); *Easyweb Innovations, LLC v. Twitter, Inc.*, 689 F. App'x 969, 970–71 (Fed. Cir. 2017) (unpublished) (holding ineligible claims directed to publishing format-converted portions of received messages as directed to an abstract idea of receiving, authenticating, and publishing data); *FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1092–98 (Fed. Cir. 2016) (holding ineligible claim reciting, in pertinent part, using a microprocessor to notify if an event occurs); *Affinity Labs of Texas, LLC v. DirectTV, LLC*, 838 F.3d 1253, 1255–63 (Fed. Cir. 2016) (holding ineligible claims directed to out-of-region delivery of broadcast content via conventional devices without offering any technological means of effecting that concept).

That the recited microprocessor composes and sends messages *in real time* does not render the claims non-abstract. *See Two-Way Media*, 874 F.3d at 1340 (holding claims directed to monitoring delivery of *real-time* information to users or measuring such delivery as directed to an abstract idea); *see also id.* (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351–53 (Fed. Cir. 2016) (noting that collecting information, analyzing it, and displaying results is an abstract idea, even when undertaken *in real time*)). That the recited server is used for paging does not change our conclusion, for it is well settled that merely limiting the field of use of an

abstract idea does not render the claims any less abstract. *See Affinity*, 838 F.3d at 1259.

Nor are we persuaded that the claimed invention improves the computer components' functionality or efficiency, or otherwise changes the way those devices function, at least in the sense contemplated by the Federal Circuit in *Enfish LLC v. Microsoft Corporation*, 822 F.3d 1327 (Fed. Cir. 2016), despite Appellants' arguments to the contrary (App. Br. 11–12; Reply Br. 3–4). The claimed self-referential table in *Enfish* was a specific type of data structure designed to improve the way a computer stores and retrieves data in memory. *Enfish*, 822 F.3d at 1339. To the extent Appellants contend that the claimed invention uses such a data structure to improve a computer's functionality or efficiency, or otherwise change the way that device functions (*see* Reply Br. 3–4), there is no persuasive evidence on this record to substantiate such a contention.

Appellants' reliance on *DDR Holdings, LLC v. Hotels.Com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) on pages 10 and 11 of the Appeal Brief is unavailing. There, instead of a computer network operating in its normal, expected manner by sending a website visitor to a third-party website apparently connected with a clicked advertisement, the claimed invention in *DDR* generated and directed the visitor to a hybrid page that presented (1) product information from the third party, and (2) visual "look and feel" elements from the host website. *DDR*, 773 F.3d at 1258–59. Given this particular Internet-based solution, the court held that the claimed invention did not merely use the Internet to perform a business practice known from the pre-Internet world, but rather was necessarily rooted in computer

technology to overcome a problem specifically arising in computer networks. *Id.* at 1257.

That is not the case here. As noted previously, Appellants' claimed invention, in essence, uses a server to communicate with a recipient in real time using a pre-existing communication system. In short, the claimed invention does not focus on an improvement in computers as tools, but rather certain independently abstract ideas that use computers as tools. *See In re Chorna*, 656 F. App'x 1016, 1022 (Fed. Cir. 2016) (unpublished) (quoting *Elec. Power*, 830 F.3d at 1354).

Nor do we find Appellant's reliance on *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) (Reply Br. 1–4) persuasive. There, the claimed process used a combined order of specific rules that rendered information in a specific format that was applied to create a sequence of synchronized, animated characters. *McRO*, 837 F.3d at 1315. Notably, the recited process *automatically animated characters* using particular information and techniques—an improvement over manual three-dimensional animation techniques that was not directed to an abstract idea. *Id.* at 1316.

But unlike *McRO*, the claimed invention here uses a server to communicate with a recipient in real time using a pre-existing communication system. Although the claimed invention requires computer components, it is the incorporation of those components—not a claimed rule—that purportedly improves the existing technological process. *Cf. FairWarning*, 839 F.3d at 1095.

Appellants' reliance on *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253 (Fed. Cir. 2017) is likewise unavailing. There, the court held

eligible claims directed to a computer memory system with a main memory connected to a bus with a cache connected thereto, where the system's programmable operational characteristics determined the type of data stored by the cache. *Visual Memory*, 867 F.3d at 1257–62. Notably, the court emphasized the recited improvement in computer capabilities in that case, namely by using programmable operational characteristics that were configurable based on the processor's type. *Id.* at 1259–60.

That is not the case here. To the extent that Appellants contend that the claimed invention is directed to such improvements in computer capabilities (*see* Reply Br. 2–3), there is no persuasive evidence on this record to substantiate such a contention.

We, therefore, agree with the Examiner that the claimed invention is directed to an abstract idea.

Alice Step Two

Nor do the recited elements—considered individually and as an ordered combination—transform the nature of claim 1 into a patent-eligible application of the abstract idea to ensure that the claim amounts to significantly more than that idea. *See Alice*, 134 S. Ct. at 2357.

That the recited method includes a microprocessor and a paging server does not change our conclusion. As the Examiner indicates, the claimed invention merely uses generic computing components to perform the recited abstract idea, namely communicate in real time. Final Act. 21; Ans. 3–4, 6–10. Merely reciting these generic computing components cannot transform a patent-ineligible abstract idea into a patent-eligible invention. *Id.* at 2358. In other words, merely reciting an abstract idea while adding the words

“apply it with a computer” does not render an abstract idea non-abstract: there must be more. *See Alice*, 134 S. Ct. at 2359; *see also Mortgage Grader Inc. v. First Choice Loan Services, Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (noting that components such an “interface,” “network,” and “database” are generic computer components that do not satisfy the inventive concept requirement); *buySAFE v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (“That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive.”).

Nevertheless, even assuming, without deciding, that the recited components add efficiency, any speed increase comes from the capabilities of the generic computer components—not the recited process itself. *See FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing *Bancorp Services, LLC v. Sun Life Assurance Co.*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.”)). Like the claims in *FairWarning*, the focus of claim 1 is not on an improvement in computer processors as tools, but on certain independently abstract ideas that use generic computing components as tools. *See FairWarning*, 839 F.3d at 1095 (citations and quotation marks omitted).

Appellants’ reliance on *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1351 (Fed. Cir. 2016) on pages 13 to 15 of the Appeal Brief is unavailing. There, the court held eligible claims directed to a technology-based solution to filter Internet content that overcame existing problems with other Internet filtering systems by making

a known filtering solution—namely a “one-size-fits-all” filter at an Internet Service Provider (ISP)—more dynamic and efficient via individualized filtering at the ISP. *BASCOM*, 827 F.3d at 1351. This customizable filtering solution improved the computer system’s performance and, therefore, was patent-eligible. *See id.*

But unlike the filtering system improvements in *BASCOM* that added significantly more to the abstract idea in that case, the claimed invention here uses a server to communicate with a recipient in real time using a pre-existing communication system. That claim 1 does not specify how the microprocessor composes messages in real time, let alone specify how it uses the pre-existing communication system to send those messages, only further undercuts Appellants’ arguments in this regard.

Lastly, we find unavailing Appellants’ contention that the claims do not preempt all ways for sending messages in real time. App. Br. 15. Where, as here, the claims cover a patent-ineligible concept, preemption concerns “are fully addressed and made moot” by an analysis under the *Alice* framework. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

For the foregoing reasons, then, the recited elements—considered both individually and as an ordered combination—do not contain an “inventive concept” sufficient to transform the claimed abstract idea into a patent-eligible application. Therefore, we are not persuaded that the Examiner erred in rejecting claim 1.

Claims 2–20

We also sustain the Examiner’s ineligibility rejection of claims 2–20. Although Appellant contends that the Examiner failed to address each element of the independent and dependent claims and, therefore, purportedly failed to establish a prima facie case of ineligibility (App. Br. 10), the Examiner nonetheless addressed the claims by finding that (1) the ineligibility analysis for claim 1 also applies to independent claims 11 and 12 due to their similarity, and (2) the additional elements recited in dependent claims 2–10 and 13–20 did not add significantly more to the abstract idea in their respective base claims. Final Act. 21.

Apart from Appellants’ bare allegation that the Examiner did not address each recited element (App. Br. 10), Appellants do not persuasively rebut the Examiner’s findings and conclusions regarding these claims in the Appeal Brief. Although Appellants argue for the first time on pages 6 and 7 of the Reply Brief that other claims purportedly recite additional specific improvements in the way computer systems operate and/or non-abstract elements, and specifically quote various recited limitations that are said to be eligible for these reasons, Appellants did not make these particular arguments in the Appeal Brief. *Compare* Reply Br. 6–7 with App. Br. 10–15. Because there is no good cause for presenting these arguments in the first instance in the Reply Brief, these new arguments are waived as untimely. *See* 37 C.F.R. § 41.41(b)(2) (2012).

THE WRITTEN DESCRIPTION REJECTION

The Examiner finds that Appellants’ Specification does not support the recited equipment not having an ability to send messages in real time

prior to the pre-existing communication system communicating with the paging server. Final Act. 22; Ans. 11–12.

Appellants argue that not only is this limitation supported by the Specification’s Background and Summary sections, but also various other passages in the Specification describing that a pre-existing communication system may not have had an ability to send a real-time message, and that embodiments of the present invention can send such messages using those systems. App. Br. 15–16; Reply Br. 8–9.

ISSUE

Has the Examiner erred in rejecting claim 2 under § 112, first paragraph by finding that the original disclosure fails to convey with reasonable clarity to skilled artisans that Appellants possessed the claimed invention as of the filing date?

ANALYSIS

We begin by noting that dependent claim 2 recites, in pertinent part, that at least one message is *sent to* a “specific type of equipment,” where that equipment type did not have an ability to *send* the messages in real time before the pre-existing communication system communicates with the paging server. Our emphasis underscores that the message is not only *sent to* the unspecified equipment type, but that this equipment type could not *also send* messages in real time *before* the pre-existing communication system communicates with the paging server.

In other words, claim 2 recites limitations regarding the equipment type’s ability to *receive* the message *and* its inability to *send* messages in

real time under before a certain time, namely before the pre-existing communication system communicates with the paging server.

Despite Appellants' arguments to the contrary (App. Br. 15–16; Reply Br. 8–9), we see no error in the Examiner's finding that Appellants' original disclosure does not convey with reasonable clarity to ordinarily skilled artisans that Appellants possessed the limitations of claim 2 as of the filing date. Leaving aside the fact that neither claim 2 nor the Specification specifies the specific equipment type claimed, Appellants' reliance on the Specification's Background and Summary sections is unavailing in this regard. Although the Specification's Background section on page 1 explains that previously-existing paging systems (1) cannot *send* real time messages, including those with attached text, image, or video; (2) cannot *send* messages using certain groups and/or priorities; and (3) have problems in integrating existing messaging capabilities with messaging needs, this section says nothing about a specific equipment type's ability to *receive* messages, let alone that this equipment type could not *also* send messages before a pre-existing communication system communicates with the paging server, as claimed.

Appellants' reliance on the ten additional cited portions of the disclosure (App. Br. 16; Reply Br. 8–9) is likewise unavailing. Notably, these additional cited portions of the disclosure are not explained with particularity, let alone tied to the particular limitations of claim 2 to show support for those limitations. This omission renders our task all the more difficult given that one of these portions spans thirteen figures, another nearly six pages, and another nearly three pages. *See, e.g.*, App. Br. 8 (citing

Figs. 1–13, Spec. 10:11–16:7, and Spec. 20:27–23:24); Reply Br. 8–9 (same).

Nevertheless, even assuming, without deciding, that these cited portions support the notion that a pre-existing communication system may have been incapable of sending a real time message, and that disclosed embodiments can send such messages using those systems as Appellants contend (App. Br. 16; Reply Br. 9), this disclosure does not convey with reasonable clarity to ordinarily skilled artisans that Appellants possessed the particular limitations of claim 2 as of the filing date. As noted above, claim 2 recites that the message is not only *sent to* the unspecified equipment type, but that this equipment type could not *also send* messages in real time *before* the pre-existing communication system communicates with the paging server.

To the extent Appellants contend that these particular limitations would have been obvious from the cited passages from Appellants' disclosure, such a contention is unavailing, for it is well settled that a description that merely renders the invention obvious does not satisfy the written description requirement. *See Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) (en banc) (citations omitted).

Therefore, we are not persuaded that the Examiner erred in rejecting claim 2 as failing to satisfy the written description requirement.

THE OBVIOUSNESS REJECTION OVER FULTON AND HASSING

The Examiner finds that Fulton's voice Instant Messaging (IM) functionality in Figure 21 teaches a server-based microprocessor that (1) composes messages in real time, and (2) sends the messages in real time to

at least one recipient using a pre-existing communication system communicating with the server. Final Act. 23–24; Ans. 12–13. Although the Examiner acknowledges that Fulton’s messages are not composed by a paging server, the Examiner cites Hassing as teaching this feature in concluding that the claim would have been obvious. Final Act. 24; Ans. 13.

Appellants argue that the cited prior art does not teach or suggest a paging server microprocessor that composes and sends messages in real time using a pre-existing communication system. App. Br. 16–17; Reply Br. 9–10. According to Appellants, the Examiner’s reliance on Fulton and Hassing in this regard is misplaced because Fulton’s client and facilitator application does not relate to a pre-existing communication system, and Hassing does not send paging events or generate messages in real time. Reply Br. 10. Appellants argue other recited limitations summarized below.

ISSUES

I. Under § 103, has the Examiner erred by finding that Fulton and Hassing collectively would have taught or suggested (1) the real-time composing and sending steps recited in claim 1, and (2) the limitations of claims 2–20?

II. Is the Examiner’s proposed combination of the cited references supported by articulated reasoning with some rational underpinning to justify the Examiner’s obviousness conclusion?

ANALYSIS

Claims 1, 11, and 12

As noted previously, a key aspect of claim 1 is that messages are composed and sent *in real time* using a pre-existing communication system that communicates with a paging server. As we noted in connection with the eligibility rejection, the ordinary and customary meaning of “real-time” in a data processing and communications context does not require that events occur instantaneously, but rather that they occur without a *discernable* delay which, as noted previously, can be a few seconds.

Given this construction, we see no error in the Examiner’s reliance on Fulton’s voice IM functionality in Figure 21 for at least suggesting composing and sending messages in real time to a recipient. Final Act. 23–24; Ans. 12–13. Fulton’s Figure 21 is a flow diagram for sending a voice IM to a recipient who enables a Public Address (PA) communications mode. As shown in that figure, a voice IM is sent from an originator to a recipient via a server or “facilitator.” As explained in Fulton’s paragraph 139, upon receiving a voice IM request from an originator’s handset, the facilitator forwards an alert message to a selected contact’s handset, where the alert message provides an interface to listen to the voice message. Notably, the voice IM is played *immediately* if the recipient’s handset has the PA mode enabled. Fulton ¶¶ 136, 139; Fig. 21 (“In this case [when the recipient enables the PA mode] the voice message is played over the handset speaker *immediately*.”) (emphasis added).

Given this functionality, we see no error in the Examiner’s reliance on Fulton’s voice IM functionality for at least suggesting composing and sending messages in real time to a recipient. That these messages are

labeled as *instant* in Fulton’s paragraph 132 only bolsters the Examiner’s findings in this regard. And as the Examiner indicates, Fulton’s Figures 3 and 21 at least suggest sending these real-time messages using a pre-existing communication system that communicates with the server. *See* Final Act. 24 (noting that Fulton’s Figure 3 teaches multiple networks connected to Internet 104a).

Nor do we see error in the Examiner’s reliance on Hassing merely to show that paging servers conventionally generate messages that are delivered to recipients in paragraphs 25 and 26, and that using a paging server to compose messages in connection with Fulton’s real-time messaging functionality would have been obvious. Final Act. 24; Ans. 13. To be sure, the Examiner also maps the recited paging server to Fulton’s voice IM server (Final Act. 24; Ans. 12)—a mapping that reasonably comports with Appellants’ definition of “paging,” namely “messaging or notifying a user at an endpoint.” *See* Spec. 4:17–19. That is, Fulton’s voice IM server or “facilitator” fully meets a “paging server” under its broadest reasonable interpretation.

Although Hassing is technically cumulative to Fulton in this regard given the Examiner’s mapping, we nevertheless see no error in the Examiner’s additional reliance on Hassing merely to show that it is known in the art to use paging servers to compose messages that are delivered to recipients, and that using paging servers in connection with Fulton’s voice IM functionality would have been obvious. Such an enhancement 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). Appellants’ arguments regarding Fulton’s and Hassing’s individual

shortcomings in this regard (App. Br. 9–10; Reply Br. 17) 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).

Appellants’ contention that Hassing does not send paging events or generate messages in real time is likewise unavailing. *See* Reply Br. 10. Not only does Fulton at least suggest real-time communications as noted previously, but Hassing does as well, particularly given the paging system’s notifications of *alarm* conditions, such as patient emergencies. *See* Hassing ¶¶ 2, 4.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 11 and 12 not argued separately with particularity.

Claim 2

We also sustain the Examiner’s rejection of claim 2 reciting, in pertinent part, that at least one message is sent to a “specific type of equipment,” where that equipment type did not have an ability to send the messages in real time before the pre-existing communication system communicates with the paging server. Despite Appellants’ arguments to the contrary (App. Br. 17–18; Reply Br. 10–11), we see no error in the Examiner’s reliance on Hassing for at least suggesting this inability given the interconnection of various types of equipment that communicate via a real-time clinical network in paragraph 25. Final Act. 24–25; Ans. 15. This network-based interconnection at least suggests that messages could not be sent before this pre-existing communication system communicates with the server, at least with respect to that particular interconnection.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 2.

Claim 4

We also sustain the Examiner's rejection of claim 4 reciting that at least two of the messages are sent to the recipient at the same time using a same communications modality, where at least two of the messages each has a priority, and the microprocessor determines one of those messages to send to the recipient in real time based on the priorities. Despite Appellants' arguments to the contrary (App. Br. 17–18; Reply Br. 10–11), we see no error in the Examiner's reliance on Fulton for at least suggesting these limitations, particularly in view of Fulton's paragraph 138 whose (1) selective transmission of voice IMs to groups at least suggests sending messages to each member of the group simultaneously, and (2) selecting priorities for messages at least suggests that at least one of these messages is sent based at least partly on these priorities. *See* Final Act. 25; Ans. 15–16.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 4.

Claim 7

We also sustain the Examiner's rejection of claim 7 reciting, in pertinent part, sending one message with a high priority either after *or* at the same time as a second message with a low priority, where the microprocessor configures the sending to ensure that the recipient receives the one message before the second message. Despite Appellants' arguments to the contrary (App. Br. 18; Reply Br. 12), we see no error in the

Examiner's reliance on Fulton for at least suggesting these limitations, particularly in view of the functionality in Fulton's paragraph 138 whose (1) selective transmission of voice IMs to groups at least suggests sending messages to each member of the group simultaneously, and (2) selecting priorities for messages at least suggests that these messages are sent based at least partly on these priorities. *See* Final Act. 25–26.

This priority-based voice IM request, which includes three priority levels (“normal,” “important,” and “critical”), at least suggests configuring sending the associated voice IM to reflect these levels to ensure that the recipient receives higher priority messages before lower priority messages, particularly given the user's ability to filter messages based on those priority levels. *See* Fulton ¶ 88 (noting that selecting the priority filter indicates the minimum level for which the user wants to receive message notifications). That is, Fulton at least suggests that unfiltered messages, such as those designated “Important” and “Critical” in the example in Fulton's paragraph 88, would be received before those that are filtered, namely “Normal” messages. *Accord* Final Act. 26; Ans. 17 (finding that Fulton's unblocked messages are received before blocked messages). Appellants' arguments to the contrary (App. Br. 18; Reply Br. 12) are unavailing and not commensurate with the scope of the claim.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 7.

Claim 8

We also sustain the Examiner's rejection of claim 8 reciting that the microprocessor is notified of the recipient (1) receiving the messages in real

time, and (2) choosing not to view the messages in real time. Despite Appellants' arguments to the contrary (App. Br. 18; Reply Br. 12), we see no error in the Examiner's reliance on Fulton's paragraphs 112 and 75 for at least suggesting these limitations. *See* Final Act. 26; Ans. 17 (noting that a caller will receive delivery confirmation once a message is delivered, and later may receive an indication that a voice IM has not been listened to). Although this "no listen" indication may be due to various factors other than the recipient's affirmative *choice* to not listen to those messages (and view their associated alert messages in paragraph 139) in real time, such a choice would nevertheless result in receiving the "no-listen" indication in that scenario.

Appellants' arguments are unavailing. Notably, Appellants' arguments regarding Fulton's paragraph 105 (App. Br. 19) fail to squarely address—let alone persuasively rebut—the Examiner's reliance on a *different* paragraph from Fulton in the rejection, namely paragraph 112. *Compare* App. Br. 19 *with* Final Act. 26. Nevertheless, to the extent that Appellants attempt to address the Examiner's relied-upon passages from Fulton on pages 13 and 14 of the Reply Brief, such arguments are unavailing and not commensurate with the scope of the claim.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 8.

Claim 10

We also sustain the Examiner's rejection of claim 10 reciting the pre-existing communication system can use audio and/or visual communications to send the messages in real time, where at least two messages require one of

a visual and audio privacy requirement, and where one pre-existing communication system is chosen based on the visual privacy requirements, and another pre-existing communication system is chosen based on the audio privacy requirement.

Apart from summarily asserting that the cited prior art fails to disclose the recited features of claim 10 (App. Br. 19), Appellants do not particularly show error in the Examiner's findings and conclusions in rejecting these claims. *See* 37 C.F.R. § 41.37(c)(1)(vii) (noting that an argument that merely points out what a claim recites is unpersuasive). *Accord In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[T]he Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”).

Although Appellants add substantive arguments regarding Hassing's alleged shortcomings on page 13 of the Reply Brief, these arguments were raised for the first time in the Reply Brief and 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 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 10 and the rejection. *Compare* Final Act. 26 *with* Ans. 17.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 10.

Claim 13

We also sustain the Examiner's rejection of claim 13 reciting that the recipient is a group where at least one message is a real-time paging message using multicast routing. Apart from summarily asserting that the cited prior art fails to disclose the recited features of claim 13 (App. Br. 19; Reply Br. 14), Appellants do not particularly show error in the Examiner's findings and conclusions in rejecting these claims. *See* 37 C.F.R. § 41.37(c)(1)(vii) (noting that an argument that merely points out what a claim recites is unpersuasive). *Accord In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[T]he Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”).

Although Appellants add substantive arguments regarding Hassing's alleged shortcomings on page 14 of the Reply Brief, these arguments were raised for the first time in the Reply Brief and 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 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 14 and the rejection. *Compare* Final Act. 27–28 *with* Ans. 20–21.

Claim 16

We do not sustain the Examiner's rejection of claim 16 reciting, in pertinent part, the microprocessor determines that (1) a presence of a first recipient is *at* the first desktop computer, and (2) a presence of a second

recipient is *away* from the second desktop computer *and* in a room having a speaker that enables only a one-way speech path, where the microprocessor sends messages to the first desktop computer *and* to the speaker, but *not* to the second desktop computer based on this determination.

To be sure, Fulton's communication devices can be personal computers, and Fulton determines a target device's presence and availability state in paragraph 266. And we also acknowledge that Fulton delivers voice IMs depending on the recipient's availability state and a communications mode enabled on a handset in paragraph 133 as the Examiner indicates. Final Act. 28. But we fail to see—nor has the Examiner shown—how Fulton determines that a second recipient is (1) *away* from a second desktop computer, *and* (2) in a room having a speaker enabling only a one-way speech path, let alone that messages are sent to this speaker and *not* the second computer based on this determination.

Notably, Fulton's voice IM messages are sent to handsets where the receiver is available and the PA mode is enabled, and the PA mode includes *external speakers* in paragraph 133. This functionality at least suggests sending messages to a room having a speaker that enables only a one-way speech path, particularly given Fulton's teaching that voice IMs are one-way messages that do not necessitate a response in paragraph 132.

But we cannot say that this functionality that sends voice IMs to a *handset* depending on the recipient's availability and communications mode enabled on that *handset* in paragraphs 133 and 136 further determines that the recipient is *also* away from a *desktop computer* such that these voice IMs are not sent to that computer, but rather to the room-based speaker as claimed. To the extent that the Examiner finds that the recipient has *both* a

handset *and* a desktop computer for which the recipient's presence is determined and used as a basis for sending messages to different devices in the manner claimed, there is insufficient evidence on this record to substantiate such a finding.

The Examiner's reliance on Fulton's paragraph 138 and Figure 21 on page 20 of the Answer fares no better in this regard. As Appellants indicate (Reply Br. 14), Fulton's voice IM prioritization scheme does not teach or suggest the particular recited determination involving presence of recipients at both desktop computers *and* in rooms with speakers, let alone sending messages to those particular devices based on that determination as claimed.

Therefore, we are persuaded that the Examiner erred in rejecting claim 16.

THE REJECTION OVER FULTON, HASSING, AND KUGLER

We sustain the Examiner's rejection of claim 3 reciting, in pertinent part, the pre-existing communication system's infrastructure accomplishes the sending without adding an application to a receiving device, where at least one message is broadcast on a speaker using a one-way speech path. Despite Appellants' arguments to the contrary (App. Br. 20; Reply Br. 14–15), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 28–29; Ans. 21–22 (citing Fulton ¶¶ 73, 79, 275–277, 286–287, 299, 133).

Therefore, we are not persuaded that the Examiner erred in rejecting claim 3.

THE REJECTION OVER FULTON, HASSING, AND VENDROW

We also sustain the Examiner's rejection of claim 5 reciting that each priority is based on a job function or membership of the recipient, where the microprocessor receives a status of each message after sending that dynamically updates when the recipient listens to first and second message portions, respectively. Despite Appellants' arguments to the contrary (App. Br. 21–22; Reply Br. 15), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 29–30; Ans. 22–23 (citing Fulton ¶ 138; Fig. 10; Vendrow ¶ 64).

Therefore, we are not persuaded that the Examiner erred in rejecting claim 5.

THE REJECTION OVER FULTON, HASSING, AND WANG

We also sustain the Examiner's rejection of claims 6 and 9. Claim 6 recites that the microprocessor uses a virtual IP address assigned to the paging server to enable hosting for multiple applications with only one logical IP address, where the paging server fails during sending and the virtual IP address uses an alternative computer or network interface card to complete the sending. Claim 9 adds that at least one message is delayed such that the recipient does not receive that message in real time, and the microprocessor is notified of recipients that do and do not receive the messages in real time.

Despite Appellants' arguments to the contrary (App. Br. 22–23; Reply Br. 16), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by

the Examiner. Final Act. 30–32; Ans. 24–25 (citing Wang ¶¶ 2, 6 (claim 6) and Fulton ¶ 105 (claim 9)).

Therefore, we are not persuaded that the Examiner erred in rejecting claims 6 and 9.

THE REJECTION OVER FULTON, HASSING, AND AKBAR

We also sustain the Examiner’s rejection of claim 14 reciting the group comprises (1) a multicast audio transmitter or receiver, and (2) types of endpoints comprising multicast IP addresses and phone numbers, where the microprocessor chooses endpoints that include a recipient’s endpoint to determine different multicast addresses for different messaging sessions in real time, and where the microprocessor sends a join request to the endpoint. Despite Appellants’ arguments to the contrary (App. Br. 23–24; Reply Br. 17), we see no error in the Examiner’s reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 32–33; Ans. 25–28 (citing Fulton ¶¶ 304, 138; Hassing ¶¶ 3, 26, 29–30; Akbar ¶ 49).

Although Appellants add substantive arguments regarding Hassing’s alleged shortcomings on page 17 of the Reply Brief, these arguments were raised for the first time in the Reply Brief and 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 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 14 and the rejection. *Compare* Final Act. 32–33 *with* Ans. 25–28.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 14.

THE REJECTION OVER FULTON, HASSING, AND NAIR

We also sustain the Examiner's rejection of claim 15 reciting that prior to sending at least one message, the microprocessor (1) determines existing paging sessions, (2) determines whether to override any of the existing paging sessions based on their priorities and those of the messages, (3) sends a HTTP notification feature to inquire a database to receive endpoint details, and (4) formulates at least one message as a push message based on the endpoint details. Despite Appellants' arguments to the contrary (App. Br. 24–25; Reply Br. 18), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 34; Ans. 28–29 (citing Hassing ¶ 30; Nair ¶ 71).

Therefore, we are not persuaded that the Examiner erred in rejecting claim 15.

THE REJECTION OVER FULTON, HASSING, REDDY, IYER, WOLFF, AND VION-DURY

We also sustain the Examiner's rejection of claim 17 reciting prior to sending at least one message, the microprocessor transmits a push message to the recipient comprising a valid XML file comprising a valid <Response> tag where the valid <Response> tag comprises a valid <Audio> tag comprising a <Url> tag with a href attribute beginning with "RTPx://." Despite Appellants' arguments to the contrary (App. Br. 25–28; Reply Br.

18–19), we see no error in the Examiner’s reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 35–37; Ans. 29–32 (citing Reddy ¶ 111; Iyer ¶ 137; Wolff Fig. 5A⁴; Vion-Dury ¶ 19).

Nor are we persuaded of error in the Examiner’s articulated reason to combine the references (Final Act. 35–37; Ans. 32–36) despite Appellants’ contention that the Examiner engaged in impermissible hindsight reconstruction in combining the cited references. *See* App. Br. 27–28; Reply Br. 18–19. Although Appellant contends that it would not have been obvious to combine the references as proposed because they are ostensibly not directed to the same goal (App. Br. 28; Reply Br. 19), 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 enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See id.* at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 17.

⁴ Although the particular <Audio> tag relied upon by the Examiner (Final Act. 36; Ans. 31) appears in Wolff’s Figure 5B—not Figure 5A—we nonetheless deem this error harmless particularly since both figures appear on the same page of drawings.

THE REJECTION OVER FULTON, HASSING, REDDY, IYER, WOLFF,
VION-DURY, AND KLINE

We also sustain the Examiner’s rejection of claim 18 reciting that at least one message is checked while playing to ensure that it is from a “remote_ip_address” of a transmitter indicated in the href attribute. Despite Appellants’ arguments to the contrary (App. Br. 28–29; Reply Br. 19–20), we see no error in the Examiner’s reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 37; Ans. 42 (citing Kline ¶ 55).

Nor are we persuaded of error in the Examiner’s articulated reason to combine the references (Final Act. 37; Ans. 32–42) despite Appellants’ contention that the Examiner engaged in impermissible hindsight reconstruction in combining the cited references. *See* App. Br. 27–28; Reply Br. 18–19. Although Appellant contends that it would not have been obvious to combine the references as proposed because they are ostensibly not directed to the same goal (App. Br. 28; Reply Br. 19), 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. at 420. In short, the Examiner’s proposed enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See id.* at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 18.

THE REJECTION OVER FULTON, HASSING, REDDY, IYER, WOLFF,
VION-DURY, AND GUPTA

We also sustain the Examiner's rejection of claim 19 reciting that the <Audio> tag further comprises <AudioTimer> and <Promptline> tags, where the <AudioTimer> tag is used as an inter-packet timer for at least one message that set every time the recipient receives a message packet. Despite Appellants' arguments to the contrary (App. Br. 30–31; Reply Br. 20–21), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 38; Ans. 43–44 (citing Gupta ¶ 57).

Nor are we persuaded of error in the Examiner's articulated reason to combine the references (Final Act. 38; Ans. 32–44) despite Appellants' contention that the Examiner engaged in impermissible hindsight reconstruction in combining the cited references. *See* App. Br. 31; Reply Br. 20. Although Appellant contends that it would not have been obvious to combine the references as proposed because they are ostensibly not directed to the same goal (App. Br. 29–30; Reply Br. 20), 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. at 420. In short, the Examiner's proposed enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See id.* at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 19.

THE REJECTION OVER FULTON, HASSING, AND KREINER

We also sustain the Examiner's rejection of claim 20 reciting that prior to sending the messages the microprocessor sends group information comprising a multicast group to join to an endpoint of the recipient, where the multicast group is defined on the paging engine, and where the microprocessor receives a join request to join the multicast group such that the endpoint registers a multicast address without other changes to the endpoint.

Despite Appellants' arguments to the contrary (App. Br. 20; Reply Br. 21–22), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 39–40; Ans. 44–46 (citing Kreiner ¶ 17).

Therefore, we are not persuaded that the Examiner erred in rejecting claim 20.

CONCLUSION

The Examiner did not err in rejecting (1) claims 1–20 under § 101; (2) claim 2 under § 112, first paragraph; and (3) claims 1–15 and 17–20 under § 103. The Examiner, however, erred in rejecting claim 16 under § 103.

DECISION

We affirm the Examiner's decision to reject claims 1–20.

Because the rejection of each appealed claim is affirmed on at least one of the grounds specified in the Office Action from which the appeal was

Appeal 2018-000766
Application 13/931,391

taken, the Examiner's decision to reject claims 1–20 is affirmed. *See* 37 C.F.R. § 41.50(a)(1).

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