UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/772,692	05/03/2010	Jean-Marc Coursimault	20091587USNP-XER2410US01	4407

62095 7590 01/08/2020	EXAMINER
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ART UNIT	PAPER NUMBER
3629	

MAIL DATE	DELIVERY MODE
01/08/2020	PAPER

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PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
_____

Ex parte JEAN-MARC COURSIMAULT,
MARIA ANTONIETTA GRASSO, FREDERIC ROULLAND,
and STEFANIA CASTELLANI
_____

Appeal 2017-009650
Application 12/772,692
Technology Center 3600
_____

Before JOSEPH L. DIXON, MICHAEL J. STRAUSS, and
IRVIN E. BRANCH, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE[1]

Pursuant to 35 U.S.C. § 134(a), Appellant[2] appeals from the Examiner's decision to reject claims 1 and 3–23. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

The claims are directed to flexible management of the escalation of support for devices. (Spec., Title.) Claim 1, reproduced below with a disputed limitation emphasized in *italics*, is illustrative of the claimed subject matter:

> 1. A method for determining when to escalate from one support level to a higher support level comprising:
>
> [(a)] by a computer, *storing information on a population of past users' interactions with a self help server during prior self help sessions*, the self help server providing a first remote support level for troubleshooting a problem with a device;
>
> [(b)] storing in computer memory, information on a current user's interactions with the self help server during a current self help session for troubleshooting the current user's problem with a device; and

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[(c)] with a computer processor configured for implementing software instructions for *determining when to provide for escalation to a higher remote support level*, determining when to provide for escalation to a higher remote support level for troubleshooting the current user's problem with the device based on the stored information on the past users' interactions and the current user's interactions.

REFERENCES

The prior art relied upon by the Examiner is:

Angel et al.	US 2005/0193055 A1	Sept. 1, 2005
Kannan et al.	US 2007/0198368 A1	Aug. 23, 2007
Nguyen et al.	US 2008/0228504 A1	Sept. 18, 2008
Duncan et al.	US 2009/0070314 A1	Mar. 12, 2009
Cohen et al.	US 7,673,340 B1	Mar. 2, 2010
Pasquale et al.	US 7,877,265 B2	Jan. 25, 2011
Peterson	US 8,452,668 B1	May 28, 2013

REJECTIONS

Claims 1 and 3–23 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. (Final Act. 2–3.)

Claims 1, 8–15, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of Kannan. (Final Act. 4–7.)

Claims 3–6, 16, 18, and 20–22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of Kannan further in view of Pasquale and Peterson. (Final Act. 7–17.)

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of Kannan further in view of Pasquale and Peterson further in view of Duncan. (Final Act. 17–18.)

Claim 17 stands rejected under 35 U.S.C. § 103(a) as being
unpatentable over Nguyen in view of Kannan further in view of Angel.
(Final Act. 18–19.)

Claim 23 stands rejected under 35 U.S.C. § 103(a) as being
unpatentable over Nguyen in view of Kannan further in view of Cohen.
(Final Act. 19–20.)

ANALYSIS

Except as noted, we adopt as our own the findings and reasons set
forth by the Examiner in (1) the action from which this appeal is taken (Final
Act. 2–3 and 16; Ans. 3–5) and (2) the Examiner's Answer in response to
Appellant's Appeal Brief (Ans. 3–5) and concur with the conclusions
reached by the Examiner. We highlight the following for emphasis.

35 U.S.C. § 101

Appellant's contentions are unpersuasive with regard to the rejection
of claims 1 and 3–23 under 35 U.S.C. § 101. Section 101 defines patentable
subject matter: "Whoever invents or discovers any new and useful process,
machine, manufacture, or composition of matter, or any new and useful
improvement thereof, may obtain a patent therefor, subject to the conditions
and requirements of this title." (35 U.S.C. § 101.) The U.S. Supreme Court,
however, has "long held that this provision contains an important implicit
exception" that "[l]aws of nature, natural phenomena, and abstract ideas are
not patentable." *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566
U.S. 66, 70 (2012) (quotation omitted). "Eligibility under 35 U.S.C. § 101 is

a question of law, based on underlying facts." *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018).

To determine patentable subject matter, we undertake a two-part test. "First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts" of "laws of nature, natural phenomena, and abstract ideas." *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014). "The inquiry often is whether the claims are directed to 'a specific means or method' for improving technology or whether they are simply directed to an abstract end-result." *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017) (citation omitted). A court must be cognizant that "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas" (*Mayo*, 566 U.S. at 71), and "describing the claims at . . . a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016). Instead, "the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter." *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015).

If the claims are directed to an abstract idea or other ineligible concept, then we continue to the second step and "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, 78). The Court describes the second step as a search for "an 'inventive concept'—*i.e.*, an element or combination of elements that is

'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Id.* (quoting *Mayo*, 566 U.S. at 72–73).

The Office recently published revised guidance on the application of § 101. USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Revised Guidance"); *see also* USPTO, *October 2019 Update: Subject Matter Eligibility*, available at https://www. uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf (Oct. 17, 2019) ("Oct. 2019 Guidance"). Under the Revised Guidance, we look to whether the claim recites

(1) a judicial exception, such as a law of nature or any of the following groupings of abstract ideas:

(a) mathematical concepts, such as mathematical formulas;

(b) certain methods of organizing human activity, such as a fundamental economic practice; or

(c) mental processes, such as an observation or evaluation performed in the human mind;

(2) any additional limitations that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)); and

(3) any additional limitations beyond the judicial exception that, alone or in combination, were not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)).

See Revised Guidance, 84 Fed. Reg. at 52, 55, 56. Under the Revised Guidance, if the claim does not recite a judicial exception, then it is eligible under § 101, and no further analysis is necessary. *Id.* at 54. Similarly, under

the guidance, "if the claim as a whole integrates the recited judicial exception into a practical application of that exception," then no further analysis is necessary. *Id.* at 53, 54.

> In connection with Step 2A the Examiner determines:

> [T]he present claims, particularly those elements pointed to by the Applicant, do no more than break the identified abstract idea into basic steps and add token extra-solution activity; the claims add no meaningful limitations to convert the abstract idea into patent eligible subject matter. The ordered combination of steps including storing past and current interaction data, monitoring parameters (business rules) all describe an abstract idea, devoid of a concrete or tangible application. These concepts are no more than extensions of the abstract idea of escalating to higher support level and each step does no more than require a generic computer to perform generic computer functions. Claims 1, 3-23 are directed to a judicial exception (i.e., law of nature, natural phenomenon, or abstract idea), specifically the idea of determining when to escalate from one support level to a higher support level by storing information on user interaction with self-help server; storing current user interaction (Claim 1), which is certain method of comparing new and stored information and using rules to identify options, thus an abstract idea.

(Ans. 3.) The Examiner further maintains:

> The ordered combination of steps including storing past and current interaction data, monitoring parameters (business rules) all describe an abstract idea, devoid of a concrete or tangible application. These concepts are no more than extensions of the abstract idea of escalating to higher support level.

(Ans. 4.) In connection with Step 2B, the Examiner determines:

> With respect to applicant's argument regarding significantly more, . . . [t]he Examiner maintains that the limitations of the claims do not transform the abstract idea that they recite into patent-eligible subject matter because the claims simply instruct

the practitioner to implement the abstract idea with routine, conventional activity, such as with the use software running on a generic processor. The majority of claimed functions and steps comprise the abstract concept of escalating user to higher support level. Adding routine additional steps such as storing interaction data or applying business rules do not transform an otherwise abstract idea into patent-eligible subject matter. Instead, the claimed sequence of steps comprises only "conventional steps, specified at a high level of generality," which is insufficient to supply an "inventive concept."

(Ans. 4–5.)

Regarding Appellant's pre-emption argument (Appeal Br. 16–17; Reply Br. 20–21), the Examiner notes that this is merely one factor in determining if an abstract idea is significantly more than the abstract idea itself and is not dispositive of eligibility. The Examiner maintains that the claims recite a judicial exception. (Ans. 5.)

Appellant contends that because the claims amount to significantly more than an abstract idea, the claims meet the requirements of § 101. (Appeal Br. 8–9; Reply Br. 17.) Appellant further contends the Examiner has failed to establish that the claims simply recite functions that are well-understood in the art of customer service. (Appeal Br. 9–13.) Appellant also argues that even assuming that the claims are directed to an abstract idea, they include limitations that recite sufficiently more than "the idea of determining when to escalate from one support level to a higher support level." (Appeal Br. 13–16; Reply Br. 17) (underlining omitted.) Finally, Appellant contends the claims do not preempt the abstract idea. (Appeal Br. 16–17; Reply Br. 20–21.)

Appellant's indicates that the Reply Brief is in response to the Examiner's Answer, mailed November 19, 2015, and *can be substituted for*

the Appeal Brief, filed on August 12, 2015. (Reply Br. 5) (emphasis added.) We note that the Reply Brief may respond to new arguments by the Examiner, but should not "substitute" for the principal brief. In the absence of a showing of good cause by Appellant, arguments that could have been made in the Appeal Brief and are not responsive to any new evidence or finding set forth by the Examiner in the Answer are deemed untimely and are waived. 37 C.F.R. § 41.41(b)(2) (2017); *see also Ex parte Nakashima*, 93 USPQ2d 1834, 1837 (BPAI 2010) (informative) (explaining that arguments and evidence not presented timely in the principal brief will not be considered when filed in a reply brief, absent a showing of good cause explaining why the argument could not have been presented in the principal brief); *Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010) (informative) ("[T]he reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner's rejections, but were not.").

Appellant presents additional detailed arguments and argues that the present case of determining when to escalate to a higher level of support does not relate to interpersonal or intrapersonal activities. (Reply Br. 15.) Appellant argues "the steps are clearly not performable purely mentally. In particular, there is no suggestion that a human is capable of performing the steps required to make the present determination." (Reply Br. 16.) Appellant contends the rejection is improper because the "present claims, even if an abstract idea is identified, amount to significantly more than a patent upon an ineligible concept." (Appeal Br. 8.)

Appellant's arguments are unpersuasive of reversible Examiner error.

USPTO Step 2A, Prong 1

Claim 1 recites determining when to escalate from one support level to a higher support level (a) storing information on a population of past users' interactions; (b) storing in computer memory, information on a current user's interactions; and (c) determining when to provide for escalation to a higher remote support level, determining when to provide for escalation to a higher remote support level for troubleshooting the current user's problem with the device based on the stored information on the past users' interactions and the current user's interactions. Thus, steps (a)–(c) include mental processes that can be performed in the human mind and/or with the aid of pen and paper. Steps (a) and (b) require storing in memory. These step can also be performed in the human mind. For example, upon storing data (e.g., observing), the determining when to escalate from one support level to a higher support level, all of this decision processing can be performed in the human mind as a mental process. Thus, consistent with the Examiner's determination that the claims recite a certain method of comparing new and stored information and using rules to identify options (Ans. 3; *see generally* Spec. ¶¶ 6–16, incorporation by reference concerning knowledge base and troubleshooting), we find such processes can be accomplished as a series of mental processes in the human mind and/or using pen and paper.

For the reasons discussed above, claim 1 recites mental processes that are considered to be an abstract idea under the Revised Guidance.

USPTO Step 2A, Prong 2

We are unpersuaded the claims integrate the judicial exception into a practical application. In particular, claim 1 requires only generalized

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capabilities and functionalities of the self-help server and computer

processor and specifies types of data being stored in computer memory and

used to "provide for escalation." For example, claim 1 requires

"information" for determining when to escalate from one support level to a

higher support level and "information," a term that is not defined in the

Specification other than the requirement (*see* Spec. ¶¶ 17–30; ¶ 31

("diagnostic component 54 processes the information from the sensors 44

and other components of the printer 10 to determine a status of the printer

10").) In turn, according to claim 1, "information" can include data

describing time, use or activity, and individual, a product, or a service. (*See*

Spec. ¶¶ 70–72.) Thus, the claimed "information" can be a single item, such

as time duration, or merely a collection of data.

Claim 1 additionally requires a computer, computer memory, and a

computer processor. The Specification does not provide a detailed

description of the server, processors or memory other than to depict and

generally describe receiving user interaction data (with a problem with a

printing device) (*see, e.g.*, Fig. 2; Spec. ¶¶ 30– 32, ¶ 30 ("The software is

executed by an associated processor 34. The session server 30 can comprise

any suitable computing device and may be linked, directly or indirectly, to

the network 28 through an input/output device 35"); ¶ 43 ("Each of the

illustrated support servers 70, 80 may include any suitable computing device

with memory and an associated computer processor configured for executing

instructions stored in the memory as software for implementing the

operations of these components as described herein. Although the servers

30, 70, 80 are shown as separate components, two or more of them may

alternatively be combined").) Thus, the server, processors, and memory for

the step of determining when to provide for escalation to a higher remote support level merely requires generic data input, processing and storage capabilities. "[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention." *Alice*, 573 U.S. at 223. Thus, these limitations do not constitute additional elements that integrate the judicial exception into a practical application. *See* MPEP § 2106.05(a)–(c), (e)–(h).[3]

Appellant contends the decision of when to escalate to a higher support level is not token extra-solution activity but rather a significant improvement over the conventional method and a tangible application is in providing for escalation to a higher remote support level for troubleshooting the current user's problem with the device based on the stored information on the past users' interactions and the current user's interactions when the determination is made. (Appeal Br. 10–11.)

We find Appellant's argument is unsupported by sufficient evidence or explanation to be persuasive. Appellant fails to direct our attention to and we do not ascertain any technological aspect recited by the claims other than the generic automation of a mental process of storing data and determining when to escalate. The present case is different from *Enfish* because the focus of the claims here is not on an improvement in computers as tools or upon an innovative way to use computers or other devices; instead, the claims are directed to an abstract idea that uses generic computer processing equipment as tools.

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[3] We further note that the claim language does not recite any specific action to be performed beyond "determining *when* to provide for escalation." (Emphasis added.)

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Claim 1 provides a method of storing data and determining when to escalate, but Appellant provides insufficient evidence or reasoning explaining how computer functionality itself is improved. Contrary to Appellant's argument, we find the method is claimed as a functionality that merely enables the underlying concept of storing data and determining when to escalate rather than improving the technology implementing the remote support.

For the reasons discussed, the claims do not include additional elements that integrate the judicial exception into a practical application because the additional elements: (1) do not improve the functioning of a computer or other technology; (2) are not applied with any particular machine (except for a generic computer); (3) do not effect a transformation of a particular article to a different state; and (4) are not applied in any meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* MPEP § 2106.05(a)–(c), (e)–(h). Instead, any improvement is to the underlying idea of when to provide for escalation to a higher remote support level for troubleshooting the current user's problem with the device based on the stored information on the past users' interactions and the current user's interactions by collecting information, analyzing it, and displaying certain results of the collection and analysis. Thus, claim 1 does not integrate the judicial exception into a practical application.

USPTO Step 2B

Because claim 1 recites a judicial exception and does not integrate that exception into a practical application, we reach the issue of whether the

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claim adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field. Revised Guidance, 84 Fed. Reg. at 56.

The Examiner finds the claim recites general purpose computer to perform generic computer functions that are well-understood in the art of customer service. Final Act. 2–3; *see also* Ans. 3–4.

We agree with the Examiner. Appellant has not identified any specific limitations of claim 1 that is not "well-understood, routine, conventional" in the field as per MPEP § 2106.05(d). Instead, Appellant describes the invention in a manner consistent with its being "well-understood, routine, [and] conventional," such that the claimed server, processors, and memory of claim 1 requires no more than a general-purpose computer processor and generic memory executing computer program instructions on information in a generic memory. (*See* Spec. ¶ 43.) Consistent with the Specification, the claim 1 processor fails to go beyond that which is well-understood, routine, and conventional. This is indicative of the absence of an inventive concept where the claims simply append well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. Revised Guidance, 84 Fed. Reg. at 56. Furthermore, the functionalities recited by claim 1 are recited at a high level of generality that do not set forth limited rules for implementing the functionalities sufficient to confer patent eligibility.

Therefore, we conclude claim 1, viewed "both individually and as an ordered combination," does not recite significantly more than the judicial exception to transform the claim into patent-eligible subject matter. *See*

Alice, 573 U.S. at 217 (internal quotations omitted) (quoting *Mayo*, 566 U.S. at 79).

Accordingly, for the reasons discussed, claim 1 is directed to mental processes identified as abstract ideas. Furthermore, the claims do not recite limitations that amount to significantly more than the abstract idea itself. Accordingly, we sustain the rejection of independent claim 1 under 35 U.S.C. § 101 and, for the same reasons, the rejection of independent claims 18, 19, and 22, together with the rejection of dependent claims 3–17, 20, 21, and 23 which are not argued separately with particularity.

35 U.S.C. § 103

With respect to the obviousness rejection of independent claim 1, Appellant contends that the combination of Nguyen with Kannan does not suggest *determining when to provide for escalation to a higher remote support level for troubleshooting a current user's problem with a device based on stored information on past users' interactions and the current user's interactions*. (Appeal Br. 18.) Appellant further contends that the Examiner's reliance upon Nguyen is in error because the relied upon paragraphs clearly refer to a single user, not past users (plural). (Appeal Br. 18.) Appellant argues that the system of Nguyen uses the past interactions of only the same user, and while prior users may have had their problems resolved by the knowledgebase 212, this information is not stored. Nor is there any suggestion that the ticket management system store information on

a population of past users' interactions with a self-help server during prior self-help sessions, but the system stores incident tickets. (Appeal Br. 20.)

Appellant acknowledges that the Examiner relies upon Kannan for the storing limitations. (Appeal Br. 20.) But, Appellant argues that Kannan merely stores the queries entered by the customers. Kannan does not use the queries to determine when to provide for escalation to a higher support level for troubleshooting a current user's problem with a device. (Appeal Br. 21.) Appellant also argues that Kannan tracks the time spent by the customer to resolve a query though automated response systems provided by the company and enables the company to provide an option to the customer to establish contact through another mode of contact when the time spent exceeds a threshold time (citing paragraphs 16 and 33), but Kannan does not suggest using past user's interactions to determine when to provide an option to the customer to establish contact through another mode of contact. (Appeal Br. 21.)

In response to Appellant's arguments, the Examiner merely repeats the rejection with citations to paragraph 78 of the Kannan reference. (Ans. 5–7.)

We agree with Appellant and find that the Examiner's reliance upon the combination of the Nguyen and Kannan references does not teach or suggest the claimed method for determining when to escalate from one support level to a higher support level.

Consequently, we find the Examiner has not substantively responded to the arguments and has not shown that the claimed invention recited in independent claim 1 is taught or suggested by the combination of the Nguyen and Kannan references.

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Independent claim 19 recites a similar limitation to that argued in connection with claim 1 and the Examiner has not shown that the applied prior art teaches or suggests the claimed invention. Therefore, we do not sustain in the rejection of independent claims 1 or 19 which recite similar limitations.

The Examiner has not shown that any of the additional prior art references remedy the noted deficiency, and we do not sustain the rejection of dependent claims 3–17, 20, 21, and 23.

With respect to independent claim 18, the Examiner also relies upon the base combination of the Nguyen and Kannan references to teach and suggest the step of "determining when to provide for escalation to a higher remote support level for troubleshooting the current user's problem with the device based on the stored information on the past users' interactions and the current user's interactions" (Final Act. 11–15.) The Examiner additionally cites to paragraphs 16, 33, 35, 39, 58, and 78 of the Kannan reference in the statement of the rejection and merely repeats the statement of the rejection in the response to argument section. (Ans. 8–12.) We find that the Examiner does not specifically and substantively respond to Appellant's argument regarding the claimed "determining when to provide for escalation to a higher remote support level for troubleshooting the current user's problem with the device *based on the stored information on the past users' interactions and the current user's interactions.*" Consequently, the Examiner has not shown that the applied prior art references teach or suggest the invention recited in the language of independent claim 18. Independent claim 22 recites a similar limitation, and we cannot sustain the rejection thereof.

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DECISION

We affirm the Examiner's rejection under 35 U.S.C. § 101, but reverse the Examiner's rejections under 35 U.S.C. § 103(a).

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 3–23	101	Eligibility	1, 3–23	
1, 8–15, 19	103(a)	Nguyen, Kannan		1, 8–15, 19
3–6, 16, 18, 20–22	103(a)	Nguyen, Kannan, Pasquale, Peterson		3–6, 16, 18, 20–22
7	103(a)	Nguyen, Kannan, Pasquale, Peterson, Duncan		7
17	103(a)	Nguyen, Kannan, Angel		17
23	103(a)	Nguyen, Kannan, Cohen		23
Overall Outcome			1, 3–23	

FINALITY AND RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED