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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LISA SEACAT DELUCA, IDO GUY, NILI GUY,
and BOAZ MIZRACHI¹

Appeal 2018-005122
Application 14/630,914
Technology Center 2100

Before ROBERT E. NAPPI, MATTHEW J. McNEILL, and JASON M.
REPKO *Administrative Patent Judges.*

NAPPI, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's non-final rejection of claims 21 through 40. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ According to Appellants, International Business Machines Corporation is the real party in interest. App. Br. 2.

INVENTION

The invention is directed to a technique for displaying an item from a collection of items based upon preference criteria of the user. Abstract.

Claim 21 is illustrative of the invention and is reproduced below.

21. A method for displaying a representative item for a collection of items, the method comprising:
- operating all of a processor, memory resources accessible to the processor, and a network interface to:
 - obtain a history of interests associated with a first user;
 - analyze the history of interests to produce preference criteria associated with the first user, the preference criteria comprising categorized topics that are associated with content of the history of interests;
 - with the network interface, access a collection of items posted online by a second, different user;
 - identify, based on the preference criteria for the first user, a representative item from among the collection of items; and
 - display, to the first user, the representative item corresponding to the collection of items.

EXAMINER'S REJECTIONS²

The Examiner rejected claims 21 through 40 under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter. Answer 4–11.

The Examiner provisionally rejected claims 21 through 40 on the ground of nonstatutory, obviousness-type, double patenting, for being

² Throughout this Decision we refer to the Appeal Brief filed September 9, 2017 (“App. Br.”); the Reply Brief filed April 16, 2018 (“Reply Br.”); Final Office Action mailed April 7, 2017 (“Final Act.”); and the Examiner’s Answer mailed February 26, 2018 (“Ans.”).

unpatentable over claims 31 through 49 of copending Application No. 14/252,539. Final Act. 3.

The Examiner has rejected claims 21, 22, 24, 25, 29, 30, 33 through 36, and 40 under 35 U.S.C. § 103(a) as being unpatentable over Guldogan et al. “*Personalized Representative Image Selection for Shared Photo Albums*” IEEE. 4pgs. (2013) (hereinafter “Guldogan”) and Tseng (US 2012/0166432 A1; June 28, 2012 (hereinafter “Tseng”)). Final Act. 6–15.

The Examiner has rejected claim 23 under 35 U.S.C. § 103(a) as being unpatentable over Guldogan, Tseng, and Bhargava et al. (US 2015/0293989 A1; Oct. 15, 2015 (hereinafter “Bhargava”)). Final Act. 15.

The Examiner has rejected claims 26, 27, 37, and 38 under 35 U.S.C. § 103(a) as being unpatentable over Guldogan, Tseng, and Kim (US 2014/0043355 A1; Feb. 13, 2014 (hereinafter “Kim”)). Final Act. 16–17.

The Examiner has rejected claims 28 and 39 under 35 U.S.C. § 103(a) as being unpatentable over Guldogan, Tseng, and Salto (US 2005/0262043 A1; Nov. 24, 2005 (hereinafter “Salto”)). Final Act. 17–18.³

The Examiner has rejected claim 32 under 35 U.S.C. § 103(a) as being unpatentable over Guldogan, Tseng, and Li (US 2014/0363075 A1; Dec. 11, 2014 (“Li”)). Final Act. 19.

ANALYSIS

We have reviewed Appellants’ arguments in the Briefs, the Examiner’s rejections, and the Examiner’s response to Appellants’ arguments. Appellants’ arguments have not persuaded us of error in the

³ The Examiner withdrew the art rejection of claim 31. Answer 3.

Examiner's rejections of 21 through 30 and 32 through 40 under 35 U.S.C. § 103(a) or of claims 21 through 40 under 35 U.S.C. § 101.

Double Patenting Rejection.

Appellants argue on page 10 of the Appeal Brief that the Examiner's double patenting rejection is provisional and requests the rejection be held in abeyance. We decline to reach the provisional rejection. *See Ex parte Moncla*, 95 USPQ 2d 1884, 1885 (BPAI 2010) (precedential).

Rejection under 35 U.S.C. § 101.

PRINCIPLES OF LAW

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

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

There are, however, three judicially created exceptions to the broad categories of patent-eligible subject matter in 35 U.S.C. § 101: “[I]aws of nature, natural phenomena, and abstract ideas.” *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 75–77). In accordance with that framework, we first determine what concept the claim

is “directed to.” See *Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); see also *Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 192 (1981)); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; see also *id.* at 192 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological

environment.” *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221. “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

The United States Patent and Trademark Office “USPTO” recently published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance* (“Memorandum”). Under that guidance, we first determine whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum.

Abstract idea

The Examiner determines the claims are not patent eligible as they are directed to judicial exception without reciting significantly more. Answer 4. Specifically, the Examiner determines the claims are directed to the abstract idea of tailoring content based upon user preference criteria, and that the concept is similar to a concept identified as an abstract idea by the courts. Answer 4–5 (*citing Intellectual Ventures I LLC v. Capital One Bank.*, 792 F.3d 1363, 1369 (Fed. Cir. 2017)).

Appellants argue the Examiner’s rejection is in error as the claims do not recite an abstract concept but rather recite an improved user interface for a computer system. Reply Br. 16–17. Appellants assert in *Core Wireless Licensing S.A.R.L. v. LG Electronics Inc.*, 880 F.3d 1356 (Fed. Cir. 2018) “the court expressly held that an improved user interface for a computing devices is patent eligible subject matter.” Reply Br. 16. Appellants reason that since the claims in *Core Wireless* were found to improve a computer or technological system and were not abstract, so too are Appellants’ claims.

Reply Br. 16–17. Further, Appellants argue that as the claims are directed to an improvement in the user interface, a computer related technology which is not abstract, the claims are patent eligible in light of the court’s decision in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016). Appellants conclude that in light of the decisions in *Core Wireless* and *Enfish*, the claims are patent eligible without considering the “significantly more step.” Reply Br. 18.

Appellants’ arguments have not persuaded us of error in the Examiner’s rejection of representative claim 21. As discussed above, the Examiner has found that the claims are directed tailoring content based upon user preference criteria, which we consider to be a mental process (e.g., pointing out articles to a friend based upon observations and knowledge of their favorite team). Further, the Examiner has demonstrated that the claims recite a concept similar to that held as abstract by the court, citing *Intellectual Ventures I LLC v. Capital One Bank*.

We concur, representative claim 21 recites steps of obtaining a history of interests; analyzing the history to produce preference criteria, comprising categories of interests; and identifying items in a collection, based upon the preference criteria. Thus, the claim recites steps of gaining knowledge of a person’s interests and using it to select content. We consider this to be similar to concepts held to be abstract by the court in *Intellectual Ventures I LLC v. Capital One Bank* (where the court held that a claim to an interactive interface that displayed portions of a website as a function of the user’s characteristics as an abstract concept). *Intellectual Ventures I LLC v. Capital One Bank* at 1369. Appellants’ arguments have not discussed or differentiated their claims from those at issue in *Intellectual Ventures I LLC*

v. Capital One Bank, but rather, as discussed above, cite *Core Wireless* for the assertion that user interfaces are not abstract and as such are patent eligible technology. We do not consider *Core Wireless* to stand for the proposition that the recitation of a user interface, is an improvement in a computer related technology and as such is not abstract as is implied by Appellants' arguments. Our reviewing court found claims including user interfaces to be directed to abstract concepts in *Intellectual Ventures I LLC v. Capital One Bank*, discussed above and *FairWarning IP v. Iatric Sys. Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) ("the use of generic computer elements like a microprocessor or user interface do not alone transform an otherwise abstract idea into patent-eligible subject matter.") (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014)). The court's holding in *Core Wireless*, is much narrower than asserted by Appellants as the court analyzed specific limitations of the claimed interface such as: an application summary that can be reached through a menu, the data being in a list and being selectable to launch an application, and additional limitations directed to the actual user interface displayed and how it functions. *Core Wireless* at 1363. The court found that the claims were directed to an improved user interface and not the abstract concept of an index as the claim "limitations disclose a specific manner of displaying a limited set of information to the user, rather than using conventional user interface methods to display a generic index on a computer." *Id.* At the outset we note that representative claim 21 does not recite a user interface, but rather a method for displaying a representative item. Further, Appellants have not shown, nor do we find that the claim recites any specific manner of displaying the information, as in *Core Wireless*. Rather, the step of

displaying is merely reciting generic functions of displaying information using the abstract concept of tailoring information based upon user preferences and is not a step integrating the abstract idea into a practical application.. Thus, Appellants' arguments have not persuaded us the Examiner erred in concluding the claims are directed to an abstract concept.

Significantly more than an abstract idea/practical application

The Examiner finds that the claims do not recite significantly more than the abstract idea. Answer 5–11. Specifically, the Examiner finds:

The claim recites the additional limitations of a processor, memory resources and a network interface. Generic computer components recited as performing generic computer functions that are well-understood, routine and conventional activities amount to more than implementing the abstract idea with a computerized system. Regarding the second user, tailoring content based upon similarity with other people (such as through demographic information) is exactly the sort of content tailoring contemplated in *Intellectual Ventures v Cap One Bank* 382. Specifying that the person is a second "user" merely confines the claim to a particular technological environment without adding significantly more than the abstract idea itself. Thus, taken alone, the additional elements do not amount to significantly more than the above-identified judicial exception (the abstract idea). Looking at the limitations as an ordered combination adds nothing that is not already present when looking at the elements taken individually. There is no indication that the combination of elements improves the functioning of a computer or improves any other technology. Their collective functions merely provide conventional computer implementations.

Answer 5.

Appellants have not contested the Examiner's findings and conclusions directed to the second part of the *Alice* framework. As discussed

above Appellants' arguments merely concluded that in light of the decisions in *Core Wireless* and *Enfish*, the claims are patent eligible without considering the "significantly more step." Reply Br. 18. Further, in as much as Appellants' arguments discussed above are asserting that the claim recites significantly more than the abstract idea because a user interface is a computer related technology, we are not persuaded of error. As discussed above the representative claim is not so limited, but rather generically recites displaying an item identified by the abstract concept. Further, our reviewing courts have not held that the mere recitation of a user interface draws the claim to a computer related technology. Accordingly, we are not persuaded of error in the Examiner's determination that the claim does not recite significantly more than the abstract idea (or that the claim recites a practical application of the abstract idea).

In summary, Appellants' arguments have not persuaded us of error in the Examiner's determination that the claims are directed to an abstract idea of tailoring content based upon user preference criteria (a mental process). Further, Appellants' arguments have not persuaded us that the Examiner erred in determining that the claims are not: directed to an improvement in the functioning of the computer or to other technology or other technical field; directed to a particular machine; directed to performing or effecting a transformation of an article to a different state or thing; or directed to using a judicial exception in some meaningful way beyond linking the exception to a particular technological environment such that the claim as a whole is more than a drafting effort to monopolize the judicial exception. Accordingly, we sustain the Examiner's rejection of claims 21 through 40 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter.

Rejection of claims 21, 22, 24, 25, 29, 30, 33 through 36, and 40 under 35 U.S.C. § 103 based upon Guldogan and Tseng.

With respect to claim 21 Appellants argue that the combination of Guldogan and Tseng does not teach the limitation “analyze the history of interests to produce preference criteria associated with the first user, the preference criteria comprising categorized topics that are associated with content of the history of interests” as recited in claim 31. App. Br. 10–14. Specifically, Appellants argue that Guldogan teaches looking at a user’s history with respect to a set of images and picking the image that the user has previously visited the most as a representative image. App Br. 12. Further, Appellants argue Guldogan does not teach the user’s activity is used to produce preference criteria, rather Guldogan teaches user’s selected images are subject to visual modeling to identify images. Reply Br. 6–7. With respect to Tseng, Appellants state the reference teaches a user-profiles store that maintains interest information for users and Appellants argue this does not teach the disputed limitation. App Br. 13. Thus, Appellants argue the disputed limitation is not taught by the art of record.

In response the Examiner finds that Guldogan teaches analyzing the history of interests to produce preference criteria associated with the first user and that Tseng teaches preference criteria has categories of topics. Answer 12–18 (citing Guldogan section III, and Tseng paragraphs 29, 30, 56, and 59).

We have reviewed the Examiner’s rejection, response to Appellants’ arguments, rationale and the cited teachings and concur with the Examiner’s finding. Appellants’ arguments which focus on the term “preference

criteria” not being used in Guldogan’s teachings and Tseng not teaching analyzing a user’s history, are not persuasive of error as the Examiner has relied upon the combined references to teach the disputed limitation. Appellants’ Specification discusses preference criteria being categorized topics associated with the user’s interest. (Specification para. 34). The Examiner has shown that Guldogan analyzes user history to determine interest (a form of preference), but not the limitation directed to categorizing the preferences. For the categorizing preferences, the Examiner cites to Tseng. Thus, we concur with the Examiner that the combined teachings of the references teach the disputed limitation. Accordingly, we sustain the Examiner’s rejection of claim 21.

With respect to independent 33, Appellants argue that the rejection is in error for the same reasons as claim 21. App. Br. 15. Accordingly, we similarly sustain the Examiner’s rejection of claim 33.

Appellants have not presented separate arguments with respect to dependent claims 22, 24, 29, 30, 34, 35, and 40 which are similarly rejected. Accordingly, we sustain the rejection of these claims for the same reasons as claim 21.

With respect to claims 25 and 36 Appellants argue the combination of Guldogan and Tseng do not teach changing “the representative item displayed based on a number of times a previously-selected representative item has been displayed to the first user” as recited in representative claim 25. App. Br. 15–16. Appellants argue that Guldogan only refers to picking a representative image based on the most picked image and not a previous representative image. App. Br. 16. Further, Appellants argue that Tseng’s teaching in paragraph 37 “has nothing to do with selecting a representative

item from a collection, but merely describes tracking a user's exposure to content objects as part of the user's profile." App. Br. 16.

The Examiner, in response to Appellants' arguments, finds that Tseng teaches exposure to an object can be used to determine whether to expose the user to the same content objects. Answer 18–19 (citing Tseng para. 37). We concur with the Examiner's finding that this teaching of Tseng meets the disputed limitation. Paragraph 37 of Tseng discusses controlling exposure to a content object based upon prior exposure. In the context of paragraph 37 the content objects are third party content items selected based upon a relevance score for the objects based upon the user's interests (i.e. objects selected based upon user interest), and thus, paragraph 37 does discuss changing the representative item based upon prior views of the previously selected item. *See e.g.*, discussion in paragraph 35. Thus, we disagree with Appellants' contention that paragraph 37 has nothing to do with selecting an item from a collection. We consider the Examiner's finding that Tseng's discussion of using the exposure information being used to adjust the ranking and selection of content objects in paragraph 37 to teach the disputed limitation to be reasonable. Thus, we are not persuaded of error by Appellants' arguments and we sustain the Examiner's rejection of claims 25 and 36.

Rejection of claim 23 under 35 U.S.C. § 103(a) as being unpatentable over Guldogan, Tseng, and Bhargava.

Appellants argue the Examiner's rejection of claim 23 is in error as the cited paragraph of Bhargava discusses the use of natural language processing to determine the sentiment of the user, but not to analyze the

history of interests of the user as claimed. App. Br. 17–18.

The Examiner responds stating that Bhargava teaches dynamic user generated input can be subject to sentiment analysis which can be performed by natural language processing. Answer 19–20 (citing Bhargava para. 30). The Examiner also finds that the user generated input can be things such as likes, check-ins, posts, comments, photos and updates (i.e. user interest). Answer 19–20 (citing Bhargava para. 28–29). Thus, the Examiner considers the sentiments generated from the analysis to represent preference criteria since they have been generated based on the analysis of the history of interests (user generated items). Answer 20.

We have reviewed the cited teachings of Bhargava, and concur with the Examiner’s findings and reasoning. Appellants’ arguments do not address all of the teachings of Bhargava cited by the Examiner. Further, we are not persuaded of error by Appellants’ argument that the sentiments of Bhargava cannot be equated to the preference criteria as they “do not have the function of determining a representative image from an image set.” Reply Br. 13. The Examiner has not relied upon Bhargava to teach the function of determine a representative image, just to show that a natural language processing can be used to determine criteria based upon analysis of the history of interests. It is this teaching in combination with the other references that show the preference criteria is used to select the representative image. Accordingly, we sustain the Examiner’s rejection of claim 23.

Rejection of claim 26, 27, 37, and 38 under 35 U.S.C. § 103(a) as

being unpatentable over Guldogan, Tseng, and Kim.

Initially, we note Appellants only presented arguments with respect to claims 27 and 38 on pages 18 and 19 of the Answer. These arguments do not apply to claims 26 and 37 as they are not commensurate with the scope of the claims 26 and 37. Thus, Appellants have not identified an error in the Examiner's rejection of claims 26 and 37 and we sustain the rejection of these dependent claims for the same reasons as the independent claims from, which they ultimately depend (claims 21 and 33).

With respect to claims 27 and 38, Appellants argue the claims recite the item displayed to the first user is changed in a round robin. App Br. 18. Appellants argue that the term "round robin" refers to a scheduling technique where each item takes an equal share of time being displayed. App. Br. 18 (citing Specification 103, 106, and 113), Reply Br. 14 (citing a definition from www.techopedia.com). Appellants argue the Examiner's cited teachings in Kim does not teach a round robin changing of items as claimed. App Br. 18.

The Examiner states that Appellants' Specification does not define the term round robin, and that the term is interpreted as the selection of another item. Answer 20–21. Based upon this interpretation, the Examiner finds that while Kim does not use the term "round robin" it nonetheless teaches changing displays in the manner. Answer 21 (citing Kim 26, 48, and 67).

We concur with the Examiner's claim interpretation and findings regarding Kim teaching changing displayed image. We have reviewed the cited portions of Appellants' Specification and find no definition of "round robin" meaning displayed for equal time nor do we find sufficient evident to show that the well-known definition requires such an interpretation. The

definition proffered by Appellants on page 14 of the Reply Brief does not identify equal time. Further, we reviewed, the Microsoft Computer Dictionary (4th ed. Copyright 1999) which defines “round robin” as “a sequential, cyclical allocation of resources to more than one process or device” and similarly find no requirement for equal time. As such Appellants arguments have not persuaded us of error in the Examiner’s claim interpretation or finding that Kim teaches the claimed round robin display. Accordingly, we sustain the Examiner’s rejection of claims 27 and 38.

Rejection of claims 28 and 39 under 35 U.S.C. § 103(a) as being unpatentable over Guldogan, Tseng, and Saito.

Initially, we note Appellants only presented arguments with respect to claim 31 on pages 19 and 20 of the Answer. These arguments do not apply to claims 28 and 39 as they are not commensurate with the scope of the claims 28 and 39. Thus, Appellants have not identified an error in the Examiner’s rejection of claims 28 and 39 and we sustain the rejection of these dependent claims for the same reasons as the independent claims from which they ultimately depend (claims 21 and 33).

As discussed above, the Examiner withdrew the rejection of claim 31, as such we have not considered Appellants’ arguments with respect to claim 31.

Rejection of claim 32 under 35 U.S.C. § 103(a) as being unpatentable over Guldogan, Tseng and Li.

Appellants argue the rejection of claim 32 is in error for the same reasons as discussed with respect to claim 21. App. Br. 20. As discussed above we are not persuaded of error in the rejection of claim 21,

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accordingly, we similarly sustain the Examiner's rejection of claim 32.

DECISION

We affirm the Examiner's rejection of claims 21 through 40 under 35 U.S.C. § 101.

We affirm the Examiner's rejection of claims 21 through 30 and 32 through 40 under 35 U.S.C. § 103.

Because we affirm at least one ground of rejection with respect to each claim on appeal, the Examiner's decision rejecting claims 30 through 49 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