

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC., AMAZON.COM SERVICES LLC, and
AMAZON WEB SERVICES, INC.,
Petitioner,

v.

SOUNDCLEAR TECHNOLOGIES LLC,
Patent Owner.

IPR2025-00673
Patent 11,244,675 B2

Before MICHAEL R. ZECHER, DAVID C. MCKONE, and
IFTIKHAR AHMED, *Administrative Patent Judges*.

ZECHER, *Administrative Patent Judge*.

PRELIMINARY GUIDANCE
PATENT OWNER'S MOTION TO AMEND
37 C.F.R. § 42.121(e)

I. INTRODUCTION

On October 2, 2025, we instituted trial as to claims 1–7 of U.S. Patent No. 11,244,675 B2 (Ex. 1001, “the ’675 patent”). Paper 15. After institution, Patent Owner, SoundClear Technologies LLC (“SoundClear”), filed a Contingent Motion to Amend. Paper 21 (“Motion” or “Mot.”). SoundClear proposes replacing originally challenged claim 5 with proposed substitute claim 8, in the event we find claim 5 unpatentable in a final written decision. *See* Mot. 1, App. A. Petitioner, Amazon.com, Inc., Amazon.com Services LLC, and Amazon Web Services, Inc. (collectively “Amazon”), filed an Opposition to Motion to Amend. Paper 26 (“Opposition” or “Opp.”).

In the Motion, SoundClear requested that we provide preliminary guidance concerning the Motion in accordance with 37 C.F.R. § 42.121(a)(1)(ii). Mot. 1; *see* 37 C.F.R. § 42.121(e)(1); *see also Rules Governing Motion to Amend Practice and Procedures in Trial Proceedings under the America Invents Act before the Patent Trial and Appeal Board*, 89 Fed. Reg. 76,421 (Sept. 18, 2024) (“Final Rule”). We have considered SoundClear’s Motion and Amazon’s Opposition.

In this Preliminary Guidance, we provide information indicating our initial, preliminary, non-binding views on whether SoundClear has shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend in an *inter partes* review (“IPR”) and whether Amazon establishes a reasonable likelihood that the substitute claims are unpatentable. 37 C.F.R. § 42.121(e)(1), (2); *see also* 35 U.S.C. § 316(d) (statutory requirements for a motion to amend); 37 C.F.R. § 42.121(a)(2), (a)(3), (b) (regulatory requirements and burdens for a motion to amend); *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 (PTAB Feb. 25, 2019) (precedential) (providing information and guidance regarding motions to amend). The reasonable

likelihood standard this Preliminary Guidance applies is different than the preponderance of the evidence standard applied when ultimately deciding the Motion. *Compare* 37 C.F.R. § 42.121(e)(1), *with* § 42.121(d). Finally, this preliminary guidance is not a “decision” for purposes of rehearing under 37 C.F.R. § 42.71(d). 37 C.F.R. § 42.121(e)(2).

For purposes of this Preliminary Guidance, we focus on proposed substitute claim 8, and specifically on the amendments proposed in the Motion. *See* 37 C.F.R. § 42.121(e)(1); Final Rule, 89 Fed. Reg. at 76,425. We do not address the patentability of the originally challenged claims 1–7. *See id.* Moreover, in formulating our preliminary views on the Motion and Opposition, we have not considered the parties’ other substantive papers on the underlying merits of Amazon’s challenges. We emphasize that the views expressed in this Preliminary Guidance are subject to change upon consideration of the complete record, including any revision to the Motion filed by SoundClear. Thus, this Preliminary Guidance is not binding on the Board when rendering a final written decision or any other subsequent decision in this proceeding. 37 C.F.R. § 42.121(e)(2); *see Medytox, Inc. v. Galderma S.A.*, 71 F.4th 990, 1000 (Fed. Cir. 2023).

II. PRELIMINARY GUIDANCE

A. Statutory and Regulatory Requirements

SoundClear bears the ultimate burden to show that its motion to amend complies with the requirements of 35 U.S.C. § 316(d)(1), (3) and 37 C.F.R. § 42.121(a)(2), (a)(3), (b)(1), and (b)(2). 37 C.F.R. § 42.121(d)(1). For the reasons discussed below, at this stage of the proceeding, and based on the current record, it appears that SoundClear has not shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend. *See* 37 C.F.R. § 42.121(e)(1).

1. Reasonable Number of Substitute Claims

A motion to amend must propose a reasonable number of substitute claims. 35 U.S.C. § 316(d)(1)(B); 37 C.F.R. § 42.121(a)(3). SoundClear proposes no more than one substitute claim for each challenged claim. More specifically, SoundClear proposes one substitute claim (independent claim 8) to replace one challenged claim (dependent claim 5, which depends from independent claim 1). Mot. 2–3, App. A. Amazon does not argue that the Motion fails to propose a reasonable number of substitute claims. *See* Opp. Based on our review of the current record, SoundClear has shown it proposes a reasonable number of substitute claims.

2. Respond to Ground of Unpatentability

A motion to amend must respond to a ground of unpatentability involved in the proceeding. 37 C.F.R. § 42.121(a)(2)(i). SoundClear contends that proposed substitute claim 8 is responsive to the instituted grounds. *See* Mot. 3. More specifically, SoundClear contends that proposed substitute claim 8 “responds to [Amazon’s] unpatentability Grounds 1A, 1B, 2A, 2B, 4, and 5,” which “each rely on Shin, Shimomura, or Schuster to allegedly disclose the limitations of original claim 5.” *Id.* (citing Pet. 5). SoundClear adds the new limitations (in bold with underline and strikethrough) in proposed substitute claim 8 of “the voice classifying unit is further configured to determine the voice to be ~~the a~~ **determined to be** a predetermined voice when the voice spoken by the user is **determined to be** a whisper **based upon whether a peak frequency is equal to or lower than a threshold**,” and argues that “[n]one of the prior art discloses such elements.” Mot. 22 (App. A), 3; *see also id.* at 14–17. Amazon presents no argument that the Motion fails to respond to a ground of unpatentability involved in the proceeding.

See Opp. Based on our review of the current record, the Motion is responsive to a ground of unpatentability involved in this proceeding.

3. Scope of Amended Claims

A motion to amend may not enlarge the scope of the claims of the patent. 35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii). SoundClear contends that proposed substitute claim 8 “would retain all of the original limitations of claim 5, except for changing ‘the predetermined voice’ to ‘a predetermined voice’ to resolve the manner in which an antecedent basis is introduced” and “would recite additional narrowing elements,” i.e., “determining a voice to be a whisper ‘based [upon] whether a peak frequency is equal to or lower than a threshold.’” Mot. 5–6 (quoting *id.*, App. A) (citing Pet. 37–38). Based on the current record, we find the newly added limitations in SoundClear’s proposed substitute claim 8 do not broaden the scope of the originally challenged claims. *See Mot.*, App. A. Amazon does not argue otherwise. *See Opp.* Accordingly, based on the current record, the Motion has not enlarged the scope of the claims of the patent.

4. New Matter

A motion to amend may not introduce new subject matter. 35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii).

In the Motion, SoundClear provides tables ostensibly showing written description support for each limitation of proposed substitute claim 8 in the specification of the ’675 patent (*see Ex. 1001*). *See Mot.* 8–11.

As an initial procedural matter, we note that SoundClear’s Motion improperly cites the specification of the ’675 patent for written-description support instead of the originally filed disclosure of the subject patent. *See also Opp.* 16 n.5 (pointing out that, in support of its written description arguments, SoundClear provided only citations to the issued patent and this is improper (citing Mot. 8–11;

Lectrosonics, Paper 15 at 8; *Hisense USA Corp. v. Brightplus Ventures LLC*, IPR2023-01410, Paper 19 at 6 (PTAB Oct. 23, 2024))). A motion to amend is required to set forth the support “in the original disclosure of the patent.” 37 C.F.R. § 42.121(b)(1); *see also Lectrosonics*, Paper 15 at 7–8 (“[i]mportantly, to meet this requirement, citation should be made to the original disclosure of the application, as filed, rather than to the patent as issued”). The ’675 patent issued on February 8, 2022, from U.S. Patent Application No. 16/295,034 (Ex. 1007, 124–176, “the ’034 application”) filed on March 7, 2019. *See* Ex. 1001, codes (21), (22), (45).¹ The Motion does not set forth the support in the ’034 application, which is the original disclosure of the ’675 patent, as is required, but instead set forth disclosure in the patent as issued. *See* Mot. 8–11.

To provide further guidance, we address below whether SoundClear identifies sufficient written description support for the features added by amendment, in view of Amazon’s arguments to the contrary in the Opposition. The new limitation in proposed substitute claim 8 recites “the voice spoken by the user is determined to be a whisper based upon whether a peak frequency is equal to or lower than a threshold.” Mot., App. A (emphasis omitted).

SoundClear provides no explicit construction of “a peak frequency is equal to or lower than a threshold” recited in the newly added limitation. To construe these claim terms, we apply the same claim construction standard as would be used by a district court to construe a claim in a civil action involving the validity or infringement of a patent. 37 C.F.R. § 42.100(b). Under that standard, claim terms

¹ The ’675 patent also includes a claim of priority to Japanese Patent Application No. JP2018-044598, filed on March 12, 2018. Ex. 1001, code (30). To the extent the Japanese application constitutes the “original disclosure” of the ’675 patent, SoundClear should set forth support for proposed substitute claim 8 in the Japanese application.

are given their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *Id.*; see also *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc); *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365–66 (Fed. Cir. 2012).

According to one of the disclosures in the specification of ’675 patent cited by SoundClear for the newly added limitation in proposed substitute claim 8,

the voice classifying unit 42 acquires a time waveform of intensity of the voice V1, and performs Fourier-transformation on the time waveform, thereby acquiring a spectrum that indicates intensity of the voice V1 per frequency. The voice classifying unit 42 classifies the voice V1 either to the first voice V1A or the second voice V1B by using *a peak frequency that is equal to or higher than a predetermined intensity in the spectrum as a feature value*. For example, the voice classifying unit 42 *determines the voice as a whisper* to classify to the first voice V1A *when the peak frequency is equal to or lower than the threshold*, and determines the voice as not a whisper to classify to the second voice V1B when the peak frequency is larger than the threshold.

Ex. 1001, 10:9–22 (emphasis added); see also Mot. 9 (citing Ex. 1001, 9:58–10:67). Based on his understanding of this disclosure, SoundClear’s declarant, Mr. Joseph C. McAlexander III, testifies that

[the Fourier transformation] can be used to produce a spectrum indicating the intensity of the voice input. The voice classifying unit then analyzes a peak frequency in that spectrum. *It then determines if the peak frequency is equal to or lower than a predetermined intensity. The voice classifying unit then determines the voice to be a whisper when the peak frequency is equal to or lower than a threshold value*. If the peak frequency is “larger” than a threshold value, the voice is determined to not be a whisper.

Ex. 2016 ¶ 171 (emphasis added) (citing Ex. 1001, 10:9–24); *see also* Mot. 13–14 (citing the same); Ex. 1201, 29:8–31:3 (“Q. And is this process that you lay out in the specification the same process that’s recited in claim 8?” “A. Yes. This – this characterization that I did in paragraph 171 [of my declaration] is basically referencing columns 9 through 10 in the specification [of the ’675 patent]. It identifies the way in which one can use a Fourier transform to establish a – something above or below a threshold.”).

During Mr. McAlexander’s deposition, he also testified that the claimed “threshold” recited in the newly added limitation of proposed substitute claim 8 is understood to be a threshold intensity, a threshold frequency, or a combination of both:

Q. So your view is, in claim 8, when we say -- when we say that the peak frequency is equal to or lower than a threshold, that threshold could be a threshold frequency or a threshold intensity or a threshold mel value, is that fair, or something else?

. . . .

A. Those are just values -- those are just values that you can claim as your feature value, and certainly whether or not it’s above or below. It’s not limited to those. It depends on the particular type of algorithm you’re using.

Basically, what you do is you employ an algorithm, you analyze the spectrum, and you make a determination as to whether, in that analytical approach, it’s above or below a particular set point.

That set point could be above or below a particular frequency that has that max intensity. It could be a combination of them both. So I don’t think it’s a limitation of one versus the other.

Ex. 1201, 44:2–22.

Based on the current record, SoundClear appears to provide insufficient written description support for the newly added limitation of proposed substitute

claim 8. As Amazon correctly points out, SoundClear’s declarant admits that “claim 8 encompasses determining a whisper based on whether the intensity at a peak frequency is less than a threshold *and* whether the peak frequency is less than a *frequency* threshold.” Opp. 15; *see also* Ex. 1201, 43:18–44:22. Amazon argues—and we agree—that

[t]he specification describes using a predetermined *intensity* (measured in dB) as a feature value, but never discloses what an appropriate intensity threshold would be to distinguish between whispers and non-whispers. It does not describe using a frequency threshold (measured in Hz) at all, let alone describe an appropriate frequency threshold for detecting whisper.

Opp. 16 (citing Ex. 1202 ¶ 48).

In short, based on the current record, SoundClear has not identified sufficient written description support for what Mr. Alexander testifies is the full scope of all embodiments covered by determining whether the voice spoken by the user is a whisper because it is not clear whether determining a whisper is based on whether the intensity at a peak frequency is less than an *intensity* threshold, a *frequency* threshold, or both.² Accordingly, at this stage of the proceeding, based on the limitation of “the voice spoken by the user is determined to be a whisper based upon whether a peak frequency is equal to or lower than a threshold” discussed above, SoundClear has not shown a reasonable likelihood that there is sufficient written description support in the original disclosure of the ’675 patent for this newly added limitation of proposed substitute claim 8.

² As discussed below, we also agree with Amazon’s argument that the scope of the claimed “peak frequency . . . equal to or lower than a threshold” is unclear, and determine based on the current record that there is a reasonable likelihood that proposed substitute claim 8 is indefinite because a person of ordinary skill in the art would not know, with reasonable certainty, which threshold to use to meet this limitation. *See infra* § II.B.2.b.

B. Unpatentability Arguments by Petitioner

Petitioner bears the ultimate burden to show that any proposed substitute claims are unpatentable. 37 C.F.R. § 42.121(d)(2). For the reasons discussed below, and based on the current record,³ Amazon has shown a reasonable likelihood that proposed substitute claim 8 is unpatentable. *See* 37 C.F.R. § 42.121(e)(1).

We note that SoundClear will have the opportunity to respond to the evidence cited in Amazon’s Opposition and this Preliminary Guidance by filing a Reply or, alternatively, by filing a Revised Motion in this proceeding.

1. Patent Eligible Subject Matter

Based on the current record, it appears that there is a reasonable likelihood of establishing that proposed substitute claim 8 is directed to patent ineligible subject matter under 35 U.S.C. § 101.

Amazon contends that proposed substitute claim 8 is directed to patent ineligible subject matter under § 101. *See* Opp. 1–12. SoundClear alerts us (Mot. 4–5) to an order in the parallel litigation in the U.S. District Court for the Eastern District of Virginia in which the court concludes, with respect to the ’675 patent, that “[w]hen considering [the deposition testimony of Philip Hilmes, Amazon’s Director of Audio Technology] and taking all factual inferences most favorably to SoundClear, a plausible claim for patent validity exists” so as to survive dismissal under 35 U.S.C. § 101 at the Rule 12(b)(6) stage. Ex. 2002, 2–3. We, however, agree with Amazon that a district court’s “[f]inding that a ‘plausible claim for validity exists’ to survive a motion to dismiss does not mean the claims

³ We express no view on the patentability of originally challenged claims 1–7 in this Preliminary Guidance. Instead, we focus on limitations added to originally challenged claim 5 in the SoundClear’s Motion to Amend.

are valid,” but rather “[i]t merely means that the court would decide the issue at a later date (e.g., on summary judgment).” Opp. 10. As we understand, a district court’s analysis whether to dismiss a patent infringement complaint under § 101 at the Rule 12(b)(6) stage is different than that performed in the context of a motion to amend filed in an IPR.

a. Principles of Law

An invention is patent eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. However, the Supreme Court has long interpreted § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” as not patentable. *See, e.g., Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, as described in *Mayo* and *Alice*. *Alice*, 573 U.S. at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). 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, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber

products” (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. (How) 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 67 (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 187; *see also id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). That said, 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 (quotation marks omitted). “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.* (alterations in original) (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.*

We consider proposed substitute claim 8 under the 2019 Revised Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (Revised Guidance), which is now incorporated in the Manual of Patent Examining Procedure (“MPEP”) at Section 2106 (9th ed. rev. 01.2024 Nov. 2024).

Under MPEP § 2106, if the claimed invention falls within one of the statutory categories under 35 U.S.C. § 101 (Step 1), we first look to whether a 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) (“Step 2A, Prong One”) (*see* MPEP § 2106.04); and

(2) additional elements that integrate the judicial exception into a practical application (“Step 2A, Prong Two”) (*see* MPEP §§ 2106.04, 2106.04(d), 2106.05(a)–(c), (e)–(h)).

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

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

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

See MPEP § 2106.05.

b. Step 1

Proposed substitute claim 8 relates to “[a]n output-content device comprising” certain “units” configured to perform specific functions so this claim at least nominally fits within the “machine” category of patent eligible subject matter. 35 U.S.C. § 101.

c. Step 2A, Prong One

Proposed substitute claim 8 recites the following: “acquir[ing] a voice spoken by a user”; “calculat[ing] a distance between the user and the output-content control device . . . to classify the voice into either a first voice or a second voice based on the calculated distance”; “analyz[ing] the voice acquired . . . to detect intention information indicating what kind of information is wished to be acquired by the user”; “acquir[ing] notification information which includes content information as a content information to be notified to the user based on the intention information”; “generat[ing] an output sentence as sentence data to be output to the user based on the notification information”; “generat[ing], when the voice is determined to be the first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word”; “generat[ing], when the voice is determined to be the second voice, a second output sentence which includes all of the intention information and the content information”; and “determin[ing] the voice to be a predetermined voice when the voice spoken by the user is determined to be a whisper based upon whether a peak frequency is equal to or lower than a threshold.” Mot., App. A (bold, underline, and strikethrough removed).

Based on the current record, we agree with Amazon’s contention that the aforementioned limitations in proposed substitute claim 8 are “analogous to a listener responding to a friend”:

The friend asks the listener where to meet. If the friend is close, the listener responds that they are meeting at “the Patent & Trademark Office” (first output sentence). If the friend is far away, the listener responds that they are meeting at “the agency” (second output sentence). This allows the listener to shout without informing others who could hear where the two are meeting. The listener can also

determine whether the friend is whispering and, if so, may respond with the first output sentence.

Opp. 4 (citing Ex. 1202 ¶ 36). In other words, these limitations are akin to “a fundamental practice humans have long used to communicate: tailoring the information provided based on the other person’s location/proximity,” which can be completely performed by humans visually and orally. *Id.* (citing Ex. 1202 ¶ 37). Accordingly, based on the current record, we determine that the limitations identified above are directed to the abstract ideas category of “certain methods of organizing human activity,” namely, “managing personal behavior or relationships or interactions between people (including . . . following rules or instructions).” MPEP § 2106.04(a); *see also Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015) (“There is no dispute that newspaper inserts had often been tailored based on information known about the customer—for example, a newspaper might advertise based on the customer’s location. Providing this minimal tailoring—e.g., providing different newspaper inserts based upon the location of the individual—is an abstract idea.”).

d. Step 2A, Prong Two

Based on the current record, we find that the additional limitations in proposed substitute claim 8 fail to integrate the abstract idea into a practical application. The additional limitations in proposed substitute claim 8 include “a voice acquiring unit,” “a voice classifying unit,” “an intention analyzing unit,” “a notification-information acquiring unit,” “an output-content generating unit,” and “a proximity sensor.” Mot., App. A. These additional limitations in proposed substitute claim 8 do no more than apply the aforementioned human activities to computer components. According to the disclosures in the specification of the ’675 patent cited by SoundClear, the above-listed claimed units are included in a

“controller,” “namely, a central processor (CPU),” and “perform processes . . . by reading software/program stored in the storage.” Ex. 1001, 3:55–67, Fig. 2; Ex. 1007, 129 (Spec. ¶ 15), 172 (Spec., Fig. 2); *see also* Mot. 10–11 (citing the same). We also agree with Amazon’s contention that the recited “proximity sensor” is a “generic” component and “the specification never explains the sensor or how it operates.” Opp. 7 (citing Ex. 1001, 10:32–39; Ex. 1202 ¶ 27). At this stage of the proceeding, we find that limiting proposed substitute claim 8 to the particular environment of a computing architecture does not make this claim patent eligible, and that nothing in proposed substitute claim 8 defines an improvement in how such computing architecture operates so as to lend eligibility to an otherwise patent-ineligible abstract idea. We see nothing in proposed substitute claim 8 “[a]pplying or using the [abstract idea] in some other meaningful way beyond generally linking the use of the [abstract idea] to a particular environment, such that the claim as a whole is more than a drafting effort designed to monopolize the [abstract idea].” MPEP § 2106.04(d). Instead, proposed substitute claim 8 does no more than “[g]enerally linking the use of [an abstract idea] to a particular technological environment or field of use.” *Id.*

Based on the current record, we are not persuaded by SoundClear’s argument that proposed substitute claim 8 is not directed to a judicial exception because “[t]he claims of the ’675 patent recite specific, tangible improvements to a specific device (output-content control device).” Mot. 4. The improvements to the claimed “output-content control device” are attributable to the use of processing units performing processes by reading the stored software/program (i.e., computer components are only used as tools to execute an abstract idea). SoundClear has not identified limitations in proposed substitute claim 8 that specifically define how the claimed “output-content control device” performs the alleged abstract idea in a

way that is different than how humans would perform it. *Cf. McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (determining that “[t]he computer here is employed to perform a distinct process to automate a task previously performed by humans,” unlike other cases “where the claimed computer-automated process and the prior method were carried out in the same way”).

e. Step 2B

Turning to Step 2B, the additional elements of proposed substitute claim 8—the claimed “voice acquiring unit,” “voice classifying unit,” “intention analyzing unit,” “notification-information acquiring unit,” “output-content generating unit,” and “proximity sensor”—whether considered individually or as an ordered combination—do not appear to provide an inventive concept that amounts to significantly more than the abstract idea when reading this claim as a whole. *See Alice*, 573 U.S. at 221; MPEP § 2106.05. As we note above, the claimed invention merely uses conventional and generic computing components to implement the abstract idea.

Here, the claimed “voice acquiring unit,” “voice classifying unit,” “intention analyzing unit,” “notification-information acquiring unit,” “output-content generating unit,” and “proximity sensor” are the additionally recited elements whose generic computing functionality was well-understood, routine, and conventional. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) (noting that using generic computing components like a microprocessor or user interface do not transform an otherwise abstract idea into patent eligible subject matter); *see also* Ex. 1001, 3:55–61 (“The controller 16 is an arithmetic unit, namely, a central processor (CPU),” which “includes a voice acquiring unit 30, a voice analyzing unit 32, an intention analyzing unit 34, a

notification-information acquiring unit 36, a processor 38, an output-content generating unit (voice-content generating unit) 40, a voice classifying unit 42, and an output controller 44.”), 3:61–67 (“The voice acquiring unit 30, the voice analyzing unit 32, the intention analyzing unit 34, the notification-information acquiring unit 36, the processor 38, the output-content generating unit 40, the voice classifying unit 42, and the output controller 44 perform processes . . . by reading software/program stored in the storage 20.”), 10:32–39 (“[A] proximity sensor can be provided in the output-content control device 1, a distance between the user H and the output-content control device 1 is calculated from a detection result of the proximity sensor.”), Fig. 2.

We are not persuaded by SoundClear’s argument that “[t]he use of distance calculation to classify voices in connection with such voice-control devices was not conventional as of the priority date of the ’675 patent.” Mot. 5. As Amazon correctly argues, “[a]side from the abstract idea, [proposed substitute] claim 8 recites only generic processing ‘units.’” Opp. 10 (citing Ex. 1202 ¶ 38). Amazon also argues—and we agree—that “distance calculation using a proximity sensor was conventional” and “[u]sing a conventional, generic ‘proximity sensor’ performing its routine function to implement an abstract idea cannot supply an inventive concept.” Opp. 10–11 (citing Ex. 1202 ¶ 39). Nevertheless, even if we were to find SoundClear’s non-conventional argument persuasive, a “claim for a new abstract idea is still an abstract idea.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (emphasis omitted). Therefore, based on the current record, we find that the additional limitations cover merely conventional activity and do not provide an inventive concept. See MPEP § 2106.05(d).

Accordingly, based on the current record, Amazon has established a reasonable likelihood that proposed substitute claim 8 is patent ineligible because it is directed to an abstract idea without significantly more.

2. *Indefiniteness*

Based on the current record, it appears that there is a reasonable likelihood of establishing that proposed substitute claim 8 is indefinite under 35 U.S.C. § 112(b).

In the context of a motion to amend filed in an IPR, we apply the same test for indefiniteness as applied in district courts, which is whether the “claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014); USPTO Memorandum on the Approach to Indefiniteness Under 35 U.S.C. § 112 in AIA Post-Grant Proceedings (Jan. 6, 2021) (“Indefiniteness Memorandum”), *available at* <https://www.uspto.gov/sites/default/files/documents/IndefinitenessMemo.pdf>.

a. “a predetermined voice”⁴

Amazon contends that proposed substitute claim 8 is indefinite because a person of ordinary skill in the art “would not know what ‘a predetermined voice’ means.” Opp. 12 (citing Ex. 1202 ¶ 43). In particular, noting that proposed substitute claim 8 recites classifying the voice as “a first voice” or “a second voice” based on the calculated distance, Amazon argues that “[i]t is unclear

⁴ As noted above, SoundClear explains that proposed substitute claim 8 was amended to change “‘the predetermined voice’ to ‘a predetermined voice’ to resolve the manner in which an antecedent basis is introduced.” Mot. 5 (citing Pet. 37–38).

whether the ‘predetermined voice’ refers to the first voice, second voice, or some other category of voice.” *Id.* (citing Ex. 1202 ¶ 43). Based on the current record, we are not persuaded by Amazon’s arguments.

The specification of the ’675 patent provides the following relevant disclosure:

The voice classifying unit 42 analyzes the voice V1 acquired by the voice acquiring unit 30, and *determines whether the voice is a predetermined voice*. In the present embodiment, the voice classifying unit 42 analyzes the voice V1 acquired by the voice acquiring unit 30, and classifies the voice V1 to either one of a first voice V1A and a second voice V1B. *The first voice V1A corresponds to a predetermined voice*. In the present embodiment, the voice classifying unit 42 classifies the voice V1 to the first voice V1A when *the voice V1 is determined to be a whisper as a result of analysis (determines as the predetermined voice)*.

Ex. 1001, 9:58–10:1 (emphasis added). We find the specification of the ’675 patent discloses ways in which the voice classifying unit determines the acquired voice to be “a predetermined voice.” As such, at this stage of the proceeding, we determine that the specification provides, with reasonable certainty, the scope of “a predetermined voice.”

We are not persuaded by Amazon’s argument that the specification of the ’675 patent does not explain whether or when “a predetermined voice” corresponds to the first voice and second voice. Opp. 13 (citing Ex. 1202 ¶ 44). Amazon’s argument is directed to breadth, not indefiniteness, of the claim. We note that “[b]readth is not indefiniteness” (*SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1341 (Fed. Cir. 2005) (citing *In re Gardner*, 427 F.2d 786, 788 (CCPA 1970))), provided the skilled artisan is reasonably apprised of the meaning of the claim. *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1366 (Fed. Cir. 2004). The fact that a claim is broad does not mean that it is indefinite,

that is, undue breadth is not indefiniteness. *In re Johnson*, 558 F.2d 1008, 1016 n.17 (CCPA 1977); *In re Miller*, 441 F.2d 689,693 (CCPA 1971). Moreover, Amazon’s arguments for indefiniteness merely identify different ways one could interpret “a predetermined voice.” “Just because a term is susceptible to more than one meaning does not render it indefinite.” *ClearOne, Inc. v. Shure Acquisition Holdings, Inc.*, 35 F.4th 1345, 1351 (Fed. Cir. 2022).

Accordingly, based on the current record, Amazon has not established a reasonable likelihood that “a predetermined voice” recited in proposed substitute claim 8 is indefinite.

b. “a peak frequency is equal to or lower than a threshold”

Amazon contends that “a peak frequency . . . equal to or lower than a threshold” recited in proposed substitute claim 8 is “indefinite because a [person of ordinary skill in the art] would not know the boundaries of this claim limitation.” Opp. 13. Referring to the disclosure in the specification of the ’675 patent of “a peak frequency that is equal to or higher than a predetermined intensity in the spectrum as a feature value” (Ex. 1001, 10:15–16) and the testimonies of Amazon’s and SoundClear’s declarants (Ex. 1202 ¶ 45; Ex. 2016 ¶ 171; Ex. 1201, 35:16–36:17), Amazon argues that, although “the claim limitation *includes* determining a whisper based upon whether the peak frequency’s *intensity* is equal to or lower than an *intensity* threshold,” “[w]hat is unclear is whether the claim element also covers determining a whisper based on other characteristics.” Opp. 14. In support of indefiniteness, Amazon points to the testimony of SoundClear’s declarant, Mr. McAlexander, that “the claimed threshold could include a threshold frequency, intensity, mel value, or some other threshold.” *Id.* at 14–15 (citing Ex. 1201, 43:1–44:22). Amazon argues that, “[b]ecause a [person

of ordinary skill in the art] would not know, with reasonable certainty, the scope of the claim, it is indefinite.” *Id.* at 15 (citing Ex. 1202 ¶ 46).

Based on the current record, we agree with Amazon’s argument that the scope of the claimed “peak frequency . . . equal to or lower than a threshold” is unclear, and determine that Amazon has established a reasonable likelihood that proposed substitute claim 8 is indefinite because a person of ordinary skill in the art would not know, with reasonable certainty, which threshold to use (i.e., intensity threshold, frequency threshold, or both) to meet the limitation of “a peak frequency . . . equal to or lower than a threshold” recited in claim 8.

3. *Lack of Written Description*

Based on the current record, it appears that there is a reasonable likelihood of establishing that proposed substitute claim 8 is unpatentable under 35 U.S.C. § 112(a) for lacking written description.

Amazon contends that proposed substitute claim 8 lacks written description support. Opp. 16. For the reasons discussed above in connection with our discussion of the new matter (*see supra* § II.A.4), we preliminarily determine that SoundClear fails to meet its burden of showing that proposed substitute claim 8 does not add new subject matter. For the reasons discussed above, we also agree with Amazon that the newly added limitation of “the voice spoken by the user is determined to be a whisper based upon whether a peak frequency is equal to or lower than a threshold” appears to lack sufficient written description support. *See* Opp. 15–16. Accordingly, based on the current record, Amazon has shown a reasonable likelihood that proposed substitute claim 8 is unpatentable under § 112(a) for lacking written description.

4. *Lack of Enablement*

Based on the current record, it does not appear that there is a reasonable likelihood of establishing that proposed substitute claim 8 is unpatentable under 35 U.S.C. § 112(a) for lacking enablement.

Amazon contends that the newly added limitation of “the voice spoken by the user is determined to be a whisper based upon whether a peak frequency is equal to or lower than a threshold,” recited in proposed substitute claim 8, is not enabled “because the [’675] patent never describes what threshold intensity or frequency would distinguish between whispers and non-whispers.” Opp. 16. However, Amazon’s argument is not persuasive because it provides no substantive analysis, such as a *Wands* analysis, to support its position. The *Wands* factors to determine whether a disclosure requires undue experimentation are: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). Amazon’s Opposition does not appear to adequately address any of these factors in support of its non-enabling contention. See Opp. 15–17. Accordingly, based on the current record, Amazon has not established a reasonable likelihood that proposed substitute claim 8 is unpatentable under § 112(a) for lacking enablement.

5. *Obviousness*

Based on the current record, Amazon appears to have shown a reasonable likelihood that proposed substitute claim 8 is unpatentable under 35 U.S.C. § 103 as obvious over prior art of record.

Proposed substitute claim 8 recites the following newly added limitation:

the voice classifying unit is further configured to determine the voice to be ~~the~~ a predetermined voice when the voice spoken by the user is **determined to be a whisper based upon whether a peak frequency is equal to or lower than a threshold.**

Mot., App. A. As discussed above (*see supra* § II.A.4), SoundClear’s declarant, Mr. McAlexander, testified that the claimed “threshold” could be a threshold intensity, a threshold frequency, or a combination of both. *See* Ex. 1201, 43:18–44:22; *see also* Opp. 15 (arguing that “[a]ccording to [SoundClear]’s expert, claim 8 encompasses determining a whisper based on whether the intensity at a peak frequency is less than a threshold *and* whether the peak frequency is less than a *frequency* threshold”).

Amazon contends that, “[t]o the extent the Board finds that determining whisper using a peak frequency threshold was not known as a ‘suitable method’ *and* determines that the specification [of the ’675 patent] adequately describes and enables that limitation,” proposed substitute claim 8 still would have been obvious in view of Raitio,⁵ Chen,⁶ Basye,⁷ or Jain.⁸ Opp. 18–22. Amazon further contends that “[a person of ordinary skill in the art] would have been motivated to combine the teachings of one or more of the prior art references discussed above (Raitio, Chen, Basye, or Jain) with the prior art discussed in the Petition to create a device capable of classifying voice as a whisper based on a peak frequency threshold,”

⁵ US 2017/0358301 A1, published Dec. 14, 2017, filed Sept. 15, 2016 (Ex. 1209, “Raitio”).

⁶ US 2016/0360372 A1, published Dec. 8, 2016, filed June 2, 2016 (Ex. 1211, “Chen”).

⁷ US 2016/0379638 A1, published Dec. 29, 2016, filed June 26, 2015 (Ex. 1208, “Basye”).

⁸ US 2006/0085183 A1, published Apr. 20, 2006, filed Oct. 19, 2005 (Ex. 1210, “Jain”).

and “would have reasonably expected success in combining the teachings.” *Id.* at 23, 25 (citing Ex. 1202 ¶¶ 60–64).

a. Obviousness Based on Raitio

Amazon contends that Raitio teaches the newly added limitation of proposed substitute claim 8. *See* Opp. 19–20. Amazon points to the disclosure of Raitio that “the non-whispered speech input and the whispered speech input can have differing spectrums,” as shown in Figures 8B and 8C of Raitio reproduced below. *Id.* at 19 (quoting Ex. 1209 ¶ 244) (citing Ex. 1202 ¶ 53) (internal quotation marks omitted).

SPECTRUM OF A NON-WHISPERED SPEECH INPUT

832

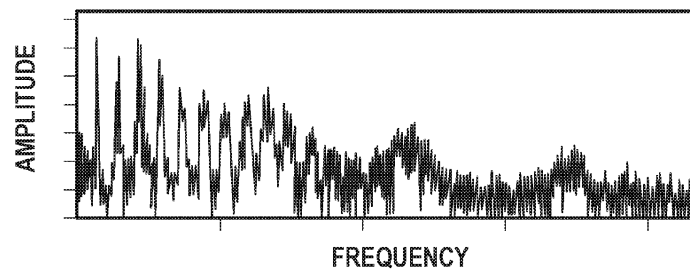


FIG. 8B

SPECTRUM OF A WHISPERED SPEECH INPUT

834

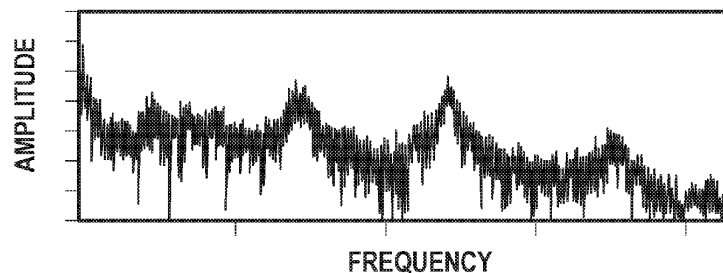


FIG. 8C

Raitio discloses “determin[ing] whether the speech input includes a whispered speech input . . . based on one or more spectrum characteristics, such as

the amplitude, the energy, the volume, the slope, or a combination thereof” (e.g., “if the amplitude of the spectrum of the speech input is smaller than a threshold amplitude below pre-determined frequency (e.g., 800 Hz)”). Ex. 1209 ¶ 245; *see also* Opp. 19 (quoting the same). Raitio further discloses “determin[ing] whether a speech input includes a whispered speech input using any desired classification methods and/or spectral estimation methods.” Ex. 1209 ¶ 250; *see also* Opp. 20 (quoting the same). Based on these disclosures of Raitio, Amazon contends that Raitio teaches “determining the voice to be a predetermined voice (e.g., whisper or ‘first voice’) when the voice spoken by the user is determined to be a whisper based upon whether the peak frequency intensity (amplitude) is equal to or lower than a threshold.” *Id.* at 19–20 (citing Ex. 1202 ¶ 54). Amazon also contends that, to the extent SoundClear argues that the newly added limitation is “limited to detecting whisper when the peak frequency is equal to or less than a *frequency* threshold, . . . Raitio renders it obvious because it discloses detecting whispered voice using a threshold frequency (e.g., 800 Hz).” *Id.* at 20 (citing Ex. 1202 ¶ 55; Ex. 1209 ¶ 245). In other words, Amazon argues that Raitio teaches determining a whisper based on whether the intensity at a peak frequency is less than an *intensity* threshold, as well as whether the peak frequency is less than a *frequency* threshold.

We have reviewed the disclosures of Raitio and they appear to support Amazon’s arguments. Based on the current record, Amazon has shown a reasonable likelihood that Raitio teaches or suggests the newly added limitation of proposed substitute claim 8.

Amazon provides rationales to combine the teachings of Raitio with the prior art discussed in the Petition to support its obviousness argument. Opp. 23–25. For example, Amazon reasons that because Raitio teaches “the benefits of detecting whispered speech,” “a [person of ordinary skill in the art] would have

been motivated to configure Shin and Shimomura’s devices to detect whisper, and do so by comparing peak frequency intensity to a threshold as taught by Raitio . . . to achieve the benefits of detecting whispered speech.” *Id.* at 23–24 (citing Ex. 1209 ¶ 3; Ex. 1202 ¶ 61). Amazon further contends that “[a person of ordinary skill in the art] would have reasonably expected success in combining the teachings,” because “Raitio’s device can be ‘any suitable electronic device’ including ‘portable multifunctional device’ or ‘personal electronic device.’” *Id.* at 25 (quoting Ex. 1209 ¶ 36).

In our Institution Decision, we determined Amazon has demonstrated a reasonable likelihood that it would prevail on its assertions that the subject matter of independent claim 1 and dependent claim 5 would have been obvious over the combined teachings of Shin⁹ and Aoyama.¹⁰ *See* Paper 15, 15–28.

Based on the current record, Amazon has shown a reasonable likelihood that the combination of Shin, Aoyama, and Raitio renders obvious proposed substitute claim 8, which includes the limitations of original claims 1 and 5 and the new limitation added by SoundClear in the Motion.

We acknowledge that SoundClear has not yet had the opportunity to address fully Amazon’s arguments with regard to the combination of Shin, Aoyama, and Raitio. SoundClear will have the opportunity to do so by filing a reply to Amazon’s Opposition (or, alternatively, by filing a Revised Motion to Amend).

⁹ US 2017/0083281 A1, published Mar. 23, 2017, filed Sept. 19, 2016 (Ex. 1003, “Shin”).

¹⁰ US 2017/0337921 A1, published Nov. 23, 2017, Patent Cooperation Treaty application filed Nov. 26, 2015 (Ex. 1010, “Aoyama”).

b. Remaining Obviousness Grounds

At this stage in the proceeding, because Amazon demonstrates a reasonable likelihood of success in showing that proposed substitute claim 8 is unpatentable under at least one obviousness ground, we do not address the remaining obviousness grounds raised in Amazon's Opposition.

6. Summary

In summary, based on the current record, Amazon has shown a reasonable likelihood that proposed substitute claim 8 is unpatentable.

III. CONCLUSION

This concludes our Preliminary Guidance. SoundClear has the option (1) to file a reply to this Preliminary Guidance or (2) to file a revised MTA by DUE DATE 3. 37 C.F.R. § 42.121(e)(3), (f); Papers 16, 13. SoundClear's reply or revised MTA may only respond to this Preliminary Guidance or Amazon's Opposition and may be accompanied by new evidence (including declarations). 37 C.F.R. § 42.121(e)(3). Amazon has the option to file a sur-reply responsive to this Preliminary Guidance or SoundClear's reply. 37 C.F.R. § 42.121(e)(3). Amazon may also file a reply to the preliminary guidance in the case SoundClear does not file a reply or revised MTA. 37 C.F.R. § 42.121(e)(4). If SoundClear files a revised MTA, that motion replaces the original MTA and Amazon may file an opposition to the revised MTA in accordance with any new scheduling order issued after the filing of a revised motion to amend. 37 C.F.R. § 42.121(f)(1)–(3).

In addition, SoundClear is reminded that amendments of the challenged claims may also be pursued in a separate reissue or reexamination proceeding before, during, or after an IPR, including subsequent to the issuance of the Final Written Decision. We draw SoundClear's attention to the April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or

Reexamination During a Pending AIA Trial Proceeding. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If SoundClear chooses to file a reissue application or a request for reexamination of the challenged patent, we remind SoundClear of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

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