

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SECURUS TECHNOLOGIES, INC.,
Petitioner,

v.

GLOBAL TEL*LINK CORP.,
Patent Owner.

Case PGR2016-00044
Patent 9,225,838 B2

Before MICHAEL W. KIM, THOMAS L. GIANNETTI, and
BARBARA A. BENOIT, *Administrative Patent Judges*.

KIM, *Administrative Patent Judge*.

DECISION
Granting Institution of Post-Grant Review
37 C.F.R. § 42.208

I. INTRODUCTION

Securus Technologies, Inc. (“Petitioner”) filed a Petition (“Pet.”) for post-grant review of claims 1–20 of U.S. Patent No. 9,225,838 B2 (“the ’838 patent”) (Ex. 1001) pursuant to 35 U.S.C. §§ 321–329. Paper 1. Global Tel*Link

Corp. (“Patent Owner”) filed a Preliminary Response (“Prelim. Resp.”). Paper 6;¹ We have jurisdiction under 35 U.S.C. § 324, which provides that a post-grant review may be instituted only if “the information presented in the petition . . . demonstrate[s] that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.”

Petitioner challenges the patentability of claims 1–20 of the ’838 patent under 35 U.S.C. §§ 101, 112, and 103. After considering the Petition and the Preliminary Response, as well as all supporting evidence, we determine that the Petition does demonstrate that it is more likely than not that Petitioner would prevail in showing that claims 1–20 are unpatentable. Accordingly, we institute a post-grant review on claims 1–20.

A. The ’838 patent

The ’838 patent relates generally to detecting three-way call attempts in controlled telecommunications systems, such as at prisons, nursing homes and mental institutions. Ex. 1001, 1:14–16, 35–37. According to the ’838 patent, there are systems and methods known in the art for detecting three-way call attempts, however, many of these systems are inaccurate and subject to both false positives and false negatives. Ex. 1001, 2:4–9. In particular, the ’838 patent asserts that it is directed to a solution for the problem of preventing a user from successfully circumventing or masking a three-way call attempt by generating a continuous or constant noise. Ex. 1001, 1:16–19. To purportedly solve this problem, the ’838

¹ Although the cover page captions of the Patent Owner Preliminary Response (Paper 6) and the Patent Owner’s Updated Mandatory Notices (Paper 5) refer to “Value-Added Communication, Inc.” Patent Owner, Global Tel*Link Corporation’s Mandatory Notices (Paper 5) assert that “[t]he patent owner and real party-in-interest is Global Tel* Link Corporation.” Paper 5, 2. Accordingly, we refer to Global Tel* Link Corporation as Patent Owner.

patent “monitors the presence of audio signals generated by the central office switching activity (hereinafter, ‘clicks’) indicative of a three-way call initiation attempt. Ex. 1001, 4:55–59. Specifically, the ’838 patent discloses the following:

The present invention provides for a method to detect circumvention attempts during a three-way call attempt. Specifically, during each call, the system monitors for periods of silence (e.g., by examining a number of samples from an audio stream to determine whether the sample is below a certain, pre-determined threshold). When the system preferably detects that the samples are below the pre-determined threshold, it continues to monitor the audio samples until the pre-determined threshold is exceeded. After the pre-determined threshold is reached, the system continues to examine the audio stream for the next period of silence. The system then determines whether it exceeds the maximum allowable duration for continuous audio. If the elapsed time is greater than a pre-determined maximum duration, the system determines that an attempt to circumvent the three-way call system has occurred and appropriate action is taken.

Ex. 1001, 5:8–24.

B. Related Matters

Petitioner and Patent Owner identify the following related pending patent application: serial no. 14/919,401. Pet. 1; Paper 4, 1.

C. Illustrative Claim

Claims 1–20 are pending and challenged, of which claims 1, 8, and 15 are independent. Independent claim 1, which is representative, is reproduced below:

1. A method for detecting an attempted three-way call that takes places during a telephone call, the method comprising:

the steps of:

monitoring an audio stream of the telephone call;
detecting a hook-flash signal in the audio stream; and

determining, in response to detecting the hook-flash signal, whether a call progress tone is present in the audio stream that is indicative of the attempted three-way call, the determining including:

calculating an elapsed time during which a power level of the audio stream exceeds a pre-determined threshold during a time period following the detection of the hook-flash signal; and

determining whether said elapsed time exceeds a maximum allowable time period.

D. The Alleged Grounds of Unpatentability

The information presented in the Petition sets forth Petitioner's contentions of unpatentability of claims 1–20 of the '838 patent based on the following specific grounds (Pet. 28–96):

References	Basis	Challenged Claims
Kitchin ² , Hodge ³ , McNitt ⁴ , Gainsboro ⁵ , Li ⁶ , and Gupta ⁷	§ 103(a)	1–20
	§ 112(a)	1–20
	§ 112(b)	1–20
	§ 101	1–20

² U.S. Patent No. 5,319,702, issued June 7, 1994 (Ex. 1005).

³ U.S. Patent No. 8,396,200 B2, issued Mar. 12, 2013 (Ex. 1006).

⁴ U.S. Patent No. 7,079,637 B1, issued July 18, 2006 (Ex. 1008).

⁵ U.S. Patent No. 5,926,533, issued July 20, 1999 (Ex. 1007).

⁶ U.S. Patent No. 6,549,587 B1, issued Apr. 15, 2003 (Ex. 1009).

⁷ U.S. Patent No. 5,483,593, issued Jan. 9, 1996 (Ex. 1010).

Petitioner also cites the Declaration of Dr. Tim A. Williams (Ex. 1003; “the Williams Dec.”).

E. Eligibility of Patent for Post-Grant Review

The post-grant review provisions of the Leahy-Smith America Invents Act (“AIA”)⁸ apply only to patents subject to the first inventor to file provisions of the AIA. AIA § 6(f)(2)(A). Specifically, the first inventor to file provisions apply to any application for patent, and to any patent issuing thereon, that contains or contained at any time a claim to a claimed invention that has an effective filing date on or after March 16, 2013. AIA § 3(n)(1). Furthermore, “[a] petition for a post-grant review may only be filed not later than the date that is 9 months after the date of the grant of the patent or of the issuance of a reissue patent (as the case may be).” 35 U.S.C. § 321(c); *see also* 37 C.F.R. § 42.202(a).

Petitioner asserts that the instant Petition is being filed within nine months of the December 29, 2015 issue date of the ’838 patent. Pet. 2. Petitioner asserts further that the application that resulted in the ’838 patent was filed on August 2, 2013. On this record, we agree with Petitioner that the ’838 patent is eligible for post-grant review.

II. ANALYSIS

We turn now to Petitioner’s asserted grounds of unpatentability to determine whether Petitioner has met the threshold standard, under 35 U.S.C. § 324(a), for instituting review.

A. Claim Construction

As a step in our analysis for determining whether to institute a review, we determine the meaning of the claims for purposes of this Decision. In a post-grant

⁸ Pub L. No. 112-29, 125 Stat. 284 (2011).

review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.200(b); *see also* *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under the broadest reasonable construction standard, claim terms are generally given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). However, a “claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history.” *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). We determine that it is unnecessary to construe expressly any claim terms at this time.

B. Person of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art at the time of the effective filing date of the '838 patent “would have had at least a bachelor’s degree in electrical engineering, computer engineering, or the equivalent and two or more years of industry experience in a relevant field, or the academic equivalent thereof,” and that “[s]uch a person would have been familiar with the standard components, methods, and protocols used at the time of the invention of the '838 patent for networking, data transmission, and data storage.” Pet. 23 (citing Ex. 1003 ¶¶ 89–101). Patent Owner does not challenge Petitioner’s assertion at this juncture. On these facts, we determine that Petitioner’s definition of a person of ordinary skill in the art is credible, and we, therefore, adopt it for our analysis.

*C. Claims 1–20 as Obvious over Kitchin,
Hodge, McNitt, Gainsboro, Li, and Gupta*

Petitioner contends that claims 1–20 are obvious over a combination of Kitchin, Hodge, McNitt, Gainsboro, Li, and Gupta. Pet. 24–77 (citing Exs. 1003, 1005–1010). Patent Owner disagrees. Prelim. Resp. 34–42 (citing Exs. 1005, 1006). As an initial matter, Patent Owner asserts that the manner in which Petitioner has set forth the asserted grounds are so confusing, that this ground of unpatentability should be dismissed outright. While we do agree that Petitioner’s presentation of the asserted grounds is less than ideal, we are unpersuaded that outright dismissal on this basis alone is warranted.

Based on our review, we discern, using independent claim 1 as an example, that, essentially, Petitioner is asserting that (1) Kitchin and Hodge, collectively, account for all of the claim limitations except for those related to “call progress tone” (Pet. 24–29), (2) Gainsboro, Li, and Gupta, collectively, account for those “call progress tone” limitations (Pet. 29–41), and (3) that McNitt is relied on by Petitioner as the rationale for modifying Kitchin/Hodge in view of Gainsboro/Li/Gupta (Pet. 29–41). *See also* Pet. 74–77 (confirming the above framework). With this understanding, we evaluate Petitioner’s and Patent Owner’s assertions.

2. Whether Hodge Teaches Away from Being Combined with Kitchin

Hodge is directed to detecting three-way call attempts in controlled telecommunications systems. Ex. 1004, 1:15–17. Patent Owner asserts that “Hodge ‘criticize[s], discredit[s], or otherwise discourage[s]’ the system and method disclosed by Kitchin, and, thus, teaches away from being combined with Kitchin.” Prelim. Resp. 40–42 (quoting *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004)). More specifically, Patent Owner asserts:

Hodge, in the “Background of the Invention,” describes several known “systems and methods . . . for detecting three-way call attempts.” (Hodge, 2:7-9.) Hodge explains that “[m]any of these systems . . . are *inaccurate and subject to both false positives and false negatives*. Also, many of these systems are effective only in certain types of telecommunication systems.” (*Id.* at 2:9-12 (emphasis added).) While not referring to Kitchin by name, the first system that Hodge describes, and rejects, is the system disclosed by Kitchin. (*Compare id.* at 2:13-39, *with*, Kitchin, 2:32-3:47; *see also* Hodge, (56) (listing Kitchin on its face as one of the reference cited by the patent applicant, i.e., not cited by the examiner).)

Hodge “criticize[s], discredit[s], or otherwise discourage[s]” the system and method disclosed by Kitchin. *In re Fulton*, 391 F.3d at 1201. Hodge states that Kitchin’s “system, by simply monitoring for a pulse composed of certain frequencies, *is often inaccurate and cannot operate in digital systems*.” (Hodge, 2:37-39 (emphasis added).) Hodge’s criticism of Kitchin would have discouraged a POSITA from combining the references.

Prelim. Resp. 40–41. We agree with Patent Owner. In particular, we compare below portions of Hodge and Kitchin identified by Patent Owner.

The apparatus of the present invention includes a low pass filter (or filter means) for passing energy having frequencies below about 500 Hz (preferably below 300 Hz) and an energy detector (energy detection means) for detecting a specific electrical energy pulse having been filtered by i.e. passed through the low pass filter and having a predetermined minimum magnitude.

Ex. 1005, 2:32–38 (emphasis added). From the above bolded portion of Kitchin, it is clear that this is what Kitchin considers the invention. Hodge discloses the following:

Specifically, the system includes a low pass filter for passing energy signals having frequencies below 500 Hertz (“Hz”), preferably in the range of 100 to 300 Hz, and an energy detector for detecting specific electrical energy pulses passing through the filter and having a predetermined minimum magnitude . . . **The system, by simply**

monitoring for a pulse composed of certain frequencies, is often inaccurate and cannot operate in digital systems.

Ex. 1006, 2:17–39 (emphasis added). A comparison of the non-bolded portions of the aforementioned passages indicates that they are almost identical, and analysis of the portions of Hodge and Kitchin that respectively follow the above quoted portions are also very similar in content, even if more divergent in form.

These similarities in content and substance, combined with the listing of Kitchin as a reference cited by applicant in Hodge, are compelling evidence that the aforementioned portion of Hodge is describing the invention of Kitchin. And as the bolded portion of the passage from Hodge expressly indicates that the system of Kitchin is “inaccurate and cannot operate in digital systems,” we are persuaded that Patent Owner is correct; that Hodge criticizes, discredits, or otherwise discourages and, thus, teaches away from the system and method disclosed by Kitchin.

3. *Whether Gainsboro Teaches Away From Being Combined with Kitchin*

Gainsboro discloses a computer-based method and apparatus for controlling, monitoring, recording and reporting access to outside telephone lines in a controlled, institutional environment, such as a prison, military base, hospital, school, business or government organization. Ex. 1007, 1:17–22. Our analysis of Gainsboro is similar to that of Hodge, but simpler. Gainsboro expressly mentions and extensively analyzes Kitchin at column 3, line 65 through column 5, line 57 in the BACKGROUND OF THE INVENTION SECTION of Gainsboro. Gainsboro then discloses the following:

This is important because that is the entire focus of the Kitchin patent—to detect hook flashes, or the energy pulses associated therewith. This approach is problematic, as it relies on the detection of a pulse—not the detection of certain tones. While **the Kitchin patent** may appear to be an elegant solution to the problem of blocking third party calls, it **is**

needlessly complex, and if anything, complicates the process of detecting the attempted establishment of third party calls.

Ex. 1007, 5:27–34 (emphases added) *see also* Ex. 1007, 1:22–29 (“this invention relates to apparatus for detecting when a called party has proceeded to bridge together one telephone call with another telephone call . . . **without the necessity of sensing or detecting hook switch or flash signals, which may be problematic**”) (emphasis added). It is difficult to assert that the above citations can be characterized as anything other than Gainsboro criticizing, discrediting, or otherwise discouraging and, thus, teaching away from the system and method disclosed by Kitchin.

3. *Kitchin*

Kitchin relates to pulse-dial and hook-flash detection apparatus for use with computer controlled telephones. Ex. 1005, 1:7–9. More specifically, Kitchin discloses that “[t]he apparatus is capable of detecting when a called party has opened the telephone circuit by dialing a digit with a pulse-dial phone or by flashing (momentarily depressing) the hook switch of either a pulse-dial or tone-dial telephone or by depressing the hook-switch which occurs when one hangs up the telephone by placing the handset of the telephone back on its hookswitch.” Ex. 1005, 1:9–16.

4. *Li*

Li is directed to a system for interfacing telephony devices with packet based networks. Ex. 1009, 1:53–55. Li further discloses:

Telephone systems provides users with feedback about what they are doing in order to simplify operation and reduce calling errors. This information can be in the form of lights, displays, or ringing, but is most often audible tones heard on the phone line. These tones are generally referred to as call progress tones, as they indicate what is happening to dialed phone calls. Conditions like busy line, ringing called party, bad number, and others each have distinctive tone frequencies and cadences

assigned them from which some standards have been established. A precise tone signal includes one of four tones. The frequencies used for precise tone encoding and detection, namely 350, 440, 480, and 660 Hz, are defined by the international telecommunication under and are widely accepted around the world.

Ex. 1009, 37:34–47.

5. *Gupta*

Gupta is directed “to a call progress status detector . . . for detecting a cadenced tone progress status of a telephone call in any one of a plurality of telephone networks.” Ex. 1010, 1:10–14.

6. *Analysis*

With the elimination of Hodge and Gainsboro as references, we are left with the following grounds of unpatentability asserted by Petitioner: (1) Kitchen accounts for all of the claim limitations except for those related to “call progress tone” (Pet. 24–29), (2) each of Li and Gupta individually accounts for those “call progress tone” limitations (Pet. 29–41), and (3) McNitt provides the rationale for modifying Kitchen in view of Li or Gupta (Pet. 29–41). *See also* Pet. 74–77 (confirming the above framework). To that end, Petitioner provides a mapping of the limitations of claims 1–20 to the disclosures of Kitchen, and Li or Gupta. For example, independent claim 1 recites “monitoring an audio stream of the telephone call; detecting a hook-flash signal in the audio stream.” Petitioner cites Kitchen for disclosing that signal 120 is activated by the loop-current detection Block 100 when “the called party flashes . . . the hookswitch.” Pet. 29 (citing Ex. 1005, 11:8–24). Independent claim 1 recites further “determining, in response to detecting the hook-flash signal, whether a call progress tone is present in the audio stream that is indicative of the attempted three-way call.” Petitioner cites Kitchen for disclosing “a ‘three-way call detection algorithm’ in Figures 2 and 2A that ‘determines if the pulse detected by Block 450 has been caused by some occurrence other than a

three-way call setup request by the called party’ by analyzing the ‘sound coming from the called party.” Pet. 31 (citing Ex. 1005, 12:65–13:3). Independent claim recites additionally “calculating an elapsed time during which a power level of the audio stream exceeds a pre-determined threshold during a time period following the detection of the hook-flash signal; and determining whether said elapsed time exceeds a maximum allowable time period.” Petitioner cites Kitchin for disclosing most of these claim limitations except for the specifics of the power levels and time thresholds, for which each of Li and Gupta are cited individually. Pet. 34–41. For the rationale for modifying Kitchin in view of each of Li and Gupta, Petitioner asserts, in part, the following:

Design incentives called for enabling a telephone service provider to allow and charge for the completion of calls from a controlled environment, such as a prison, “while preventing three-way calling.” Kitchin, 2:17–20; *see also* Williams Decl. ¶¶ 310–11 (explaining the design incentives expressed in Hodge). McNitt suggests implementing a “plurality of different techniques for detecting unauthorized call attempts.” McNitt, 9:20–28. Different techniques included hook-flash detection, tone detection, and silence period detection. McNitt, 9:28–40, 9:64–10:6; *see also* Williams Decl. ¶ 310.

Pet. 75.

But none of Kitchin, Hodge, or McNitt expressly teach calculating an elapsed time (or a noise pattern) during which the power level of the audio stream exceeds a predetermined threshold, or determining whether the elapsed time exceeds a maximum allowable period of time, among other claimed limitations related to call progress tone detection. Williams Decl. ¶ 306. As a matter of simple substitution, therefore, Gainsboro, Li, and Gupta resolve these differences yielding no more than a predictable improvement in the tone detection of the system and method of Kitchin. *Id.* ¶¶ 298, 312.

Like McNitt and Hodge, Kitchin followed detection of a hook-flash signal with further monitoring, including silence detection and detection of continuous noise, including voice and tones. *Id.* ¶ 312. Like McNitt and Hodge, the disclosed system of Kitchin used different

ways to confirm that a high energy signal event was indeed a hook-flash signal, including utilizing a call progress tone detector. *Id.* Gainsboro, Li, and Gupta would have furthered the design incentives driving persons of ordinary skill in the art to diversify the techniques utilized in three-way call detection, increase the accuracy of three-way call detection, and decrease false positives and false negatives. *Id.* ¶ 314.

Pet. 76. Petitioner performs a similar analysis for claims 2–20. Pet. 41–77.

Patent Owner asserts that any alleged rationale to combine these references improperly focuses on what a person of ordinary skill *could* have done, not what a person of ordinary skill *would* have done. Prelim. Resp. 37–40. We agree with Patent Owner that the Petition, at times, does use the term “could,” and there is some ambiguity as to whether something that “could have been done” is sufficient to support an obviousness determination. Patent Owner’s assertions are ultimately misplaced, however, in that at least the above-cited paragraphs do not use such “could” language, and we are therefore persuaded, on this record, and for purposes of institution, that they provide a sufficient rationale to modify Kitchen in view of each of Li and Gupta in the manner set forth in the Petition.

7. Conclusion

For the foregoing reasons, we determine that the Petition does demonstrate sufficiently that it is more likely than not that Petitioner would prevail in showing that claims 1–20 are unpatentable on this ground.

D. Claims 1–20 as Lacking Written Description Support

Petitioner contends that the following claim limitation, recited in each of independent claims 1 and 8, lacks adequate written description support under 35 U.S.C. § 112(a): “determining, in response to detecting the hook-flash signal,

whether a call progress tone is present.”⁹ Pet. 77–82 (citing Exs. 1001, 1003). Patent Owner disagrees. Prelim. Resp. 21–31 (citing Exs. 1001, 1003). Claims 1, 8 and 15 are independent.

More specifically, Petitioner asserts that the only specific example of “determining, in response to detecting the hook-flash signal” described in the ’838 patent is “a continuous noise indicative of a ringer,” and not a “call progress tone,” as claimed. Pet. 79–80 (citing Ex. 1001, Fig. 6, 12:36–41). Petitioner asserts further that “call progress tone” is a genus, where “ringer” is a species. According to Petitioner, the ’838 patent only has literal written description support for performing the aforementioned determining step with respect to one species, i.e., “a continuous noise indicative of a ringer,” and that under *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336 (Fed. Cir. 2005), reciting a genus in a claim limitation, i.e., “call progress tone,” when the corresponding portion of the Specification only discloses a single species does not meet the requirements of Section 112(a). Pet. 79–82.

Patent Owner asserts that Petitioner’s reliance on *LizardTech*’s genus-species jurisprudence is misplaced and inapplicable because the ’838 patent does not list a “call progress tone” as a genus. Patent Owner asserts that, if anything, “call progress tone” is a species, as the ’838 patent lists it alongside other species such as “ring signals, busy signals, special information tones (“SIT tones”), dual tone multi-frequency tones (“DTMF”) . . . or other similar tones characteristic of the placement of a telephone call,” presumably of the genus “tones” referenced earlier in the aforementioned sentence. Prelim. Resp. 27–28 (citing Ex. 1001, 4:5–9). We agree with Patent Owner’s assertion, and because *LizardTech* is

⁹ Independent claim 15 recites a similar corresponding limitation.

inapplicable, the Petition does not set forth an adequate basis for a written description challenge of the aforementioned claim limitation.

For the foregoing reasons, we determine that the Petitioner has not demonstrated that it is more likely than not that Petitioner would prevail in showing that claims 1–20 are unpatentable on this ground.

E. Claims 8–14 as Indefinite

Petitioner contends that the following limitations of independent claim 8 are indefinite under 35 U.S.C. § 112(b): “calculating a noise pattern of a portion of the audio stream that occurred during a period of time following the detection of the hook-flash signal”; “determining whether the noise pattern is indicative of the call progress tone”; and “call progress tone.” Pet. 83–85 (citing Exs. 1001, 1003). Patent Owner disagrees. Prelim. Resp. 31–34 (citing Exs. 1001, 1003).

1. “calculating” and “determining”

For the “calculating” and “determining” limitations, Petitioner asserts that “it would not be apparent to a person of ordinary skill how the claimed calculations and determinations are to be made,” because the ’838 patent only provides, at best, vague examples that are insufficient to meet the standards for definiteness under Section 112(b). Pet. 84–85. Patent Owner disagrees, asserting that the underlying basis for Petitioner’s positions are flawed because the ’838 patent provides at least one specific example, e.g., the ringer example in column 12, and that the background section of the ’838 patent is replete with examples of “detecting tones commonly associated with call bridging and call forwarding attempts,” which is the purpose of the aforementioned “calculating” and “determining” “limitations.” Prelim. Resp. 31–34.

We agree with Patent Owner for the stated reasons. Insofar as Petitioner is asserting that the claims do not articulate sufficient details as to “how the claimed

calculations and determinations are to be made,” we determine that is a question of breadth, which is permitted, and not indefiniteness. *See In re Miller*, 441 F.2d 689, 693, (CCPA 1971) (breadth of a claim is not to be equated with indefiniteness).

2. “call progress tone”

For “call progress tone,” Petitioner asserts the following:

Furthermore, the generic term “call progress tone” is indefinite because it is undefined and used only once in the specification solely with respect to the prior art in the “background” section. The specification leaves the skilled artisan to speculate as to exactly what sounds would read on to the claims and what tones are “indicative of the attempted three-way call” as addressed above with respect to written description *supra* in § (IX)(B). *See Williams Decl.* ¶ 319 (**stating that there is no one standard as to what tones or sounds qualify as progress tones and that some progress tones do not have a “pattern”**). Thus, one having ordinary skill in the art would not be able to reasonably determine the scope of claims including the indefinite term “call progress tone.”

Pet. 85 (emphasis added). The above-identified portion of the Petition, based upon an unsupported statement by Petitioner’s expert, is the only identified evidentiary basis for Petitioner’s assertion.

Patent Owner counters that “call progress tone” has an ordinary meaning within the general understanding of a person of ordinary skill. Prelim. Resp. 29, 33. We agree with Patent Owner. The ’838 patent does provide some indications that “systems are known” that include “call progress tones.” Ex. 1001, 4:1–9. Moreover, Li discloses the following:

Telephone systems provides users with feedback about what they are doing in order to simplify operation and reduce calling errors. This information can be in the form of lights, displays, or ringing, but is most often audible tones heard on the phone line. These tones are generally referred to as **call progress tones**, as they indicate what is happening to dialed phone calls. Conditions like busy line, ringing called party, bad number, and others each have distinctive tone frequencies and

cadences assigned them from which some standards have been established. A precise tone signal includes one of four tones. The frequencies used for precise tone encoding and detection, namely 350, 440, 480, and 660 Hz, are defined by the international telecommunication union and are widely accepted around the world.

Ex. 1009, 37:34–47 (emphasis added). We are persuaded that these evidentiary-based assertions that call progress tones are “known” and have standards “defined by the international telecommunication union and are widely accepted around the world” contradict and outweigh the unsupported assertion of Petitioner’s expert that “there is no one standard as to what tones or sounds qualify as progress tones and that some progress tones do not have a ‘pattern’” (Ex. 1003 ¶ 319).

3. Conclusion

For the foregoing reasons, we determine that the Petitioner has not demonstrated that it is more likely than not that Petitioner would prevail in showing that claims 8–14 are unpatentable on this ground.

F. Claims 1–20 as Directed to Non-Statutory Subject Matter Under 35 U.S.C. § 101

Petitioner contends that claims 1–20 do not recite patent eligible subject matter under 35 U.S.C. § 101, because they are directed to unpatentable abstract ideas. Pet. 86–96 (citing Exs. 1001, 1003, 1011, 1012). Patent Owner disagrees. Prelim. Resp. 8–21 (citing Exs. 1001).

1. Relevant 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. The Supreme Court, however, has long interpreted § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347, 2354 (2014).

In determining whether a claim falls within the excluded category of abstract ideas, we are guided in our analysis by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012)). In accordance with that framework, we first determine whether the claim is “directed to” a patent-ineligible abstract idea. *See Alice*, 134 S. Ct. at 2356 (“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.”); *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.”); *Diamond v. Diehr*, 450 U.S. 175, 184 (1981) (“Analyzing respondents’ claims according to the above statements from our cases, we think that a physical and chemical process for molding precision synthetic rubber products falls within the § 101 categories of possibly patentable subject matter.”); *Parker v. Flook*, 437 U.S. 584, 594–595 (1978) (“Respondent’s application simply provides a new and presumably better method for calculating alarm limit values.”); *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972) (“They claimed a method for converting binary-coded decimal (BCD) numerals into pure binary numerals.”).

The patent-ineligible end of the spectrum includes fundamental economic practices, *Alice*, 134 S. Ct. at 2357; *Bilski*, 561 U.S. at 611; mathematical formulas, *Flook*, 437 U.S. at 594–95; and basic tools of scientific and technological work, *Benson*, 409 U.S. at 69. On the patent-eligible side of the spectrum are physical and chemical processes, such as curing rubber, *Diamond*, 450 U.S. at 184 n.7, “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores,” and a process for manufacturing flour, *Gottschalk*, 409 U.S. at 69.

If the claim is “directed to” a patent-ineligible abstract idea, we then consider the elements of the claim—both individually and as an ordered

combination—to assess whether the additional elements transform the nature of the claim into a patent-eligible application of the abstract idea. *Alice*, 134 S.Ct. at 2355. This is a search for an “inventive concept”—an element or combination of elements sufficient to ensure that the claim amounts to “significantly more” than the abstract idea itself. *Id.*

2. *Whether the Claims Are Directed to an “Abstract Idea”*

Petitioner asserts that the claims are directed to “detecting a three-way call by listening to a phone conversation for a hook-flash (i.e., a ‘click’ sound) followed by a ring tone.” Pet. 87–88. Petitioner asserts that such an action constitutes an unpatentable abstract idea under several theories: (1) “[m]onitoring for three-way calls was performed by humans in this manner long before the ’838 patent”; (2) “a method that ‘can be performed in the human mind, or by a human using a pen and paper . . . is merely an abstract idea and is not patent-eligible under § 101”; and (3) the claims do “nothing more than recite this abstract idea in a method using computer terms” and “the claimed microprocessor is merely a general purpose computer that provides a computing platform for the abstract idea.” Pet. 88–94. We address each in turn.

For theory (1), “[m]onitoring for three-way calls was performed by humans in this manner long before the ’838 patent,” Petitioner cites, as evidence, Chapter 4 §§ 1, 3(A) of a U.S. Dept. of Justice/Office Inspector General Special Report, *Criminal Calls: A Review of the Bureau of Prisons’ Management of Inmate Telephone Privileges* (Aug. 1999), <https://oig.justice.gov/special/9908>) (hereinafter “DOJ Report”), as well as an alleged admission by Patent Owner in another proceeding that “[p]olice engaged in wiretapping have done such monitoring for decades.” Pet. 88–89 (citing Exs. 1011, 1012).

Beginning with the alleged admission, we are unpersuaded that the fact that “[p]olice engaged in wiretapping have done such monitoring for decades” informs us as to whether or not “detecting a three-way call by listening to a phone conversation for a hook-flash (i.e., a ‘click’ sound) followed by a ring tone” is an unpatentable abstract idea. Most notably, the excerpt from Exhibit 1012 does not mention anything concerning “three-way call,” “hook-flash,” or “ring tone.” Of course, on closer inspection of Exhibit 1012, that is not surprising, as the Petitioner in that proceeding, who appears to be the same entity as Patent Owner in this proceeding, asserted that “independent claim 21 is a method claim that recites identifying events related to monitored communications between two individuals.” Given the disparity in what the claims are directed to in this proceeding and the other proceeding, we are unpersuaded that the alleged admission as to what was “well-known” in the other proceeding is relevant here.

Moving on to the DOJ Report, the portion cited by Petitioner reads “the [Bureau of Prison’s] current telephone system can only detect the first number the inmate dials, not any subsequent numbers to which the call is connected. Only by listening to the call, and detecting that **additional numbers are being dialed or third parties are speaking on the line**, can BOP staff detect call forwarded or three way calls.” Ex. 1011, 7 (emphasis added). While closer than the alleged admission, the DOJ Report is still missing “hook-flash” and “ring tone”; indeed, as indicated by the above bolded portions, the DOJ Report indicates that three-way calling was detected in a manner unrelated to “hook-flash” and “ring tone.” Accordingly, absent those portions of what the claims of the ’838 patent are “directed to,” we are unpersuaded that the DOJ Report is probative evidence that “detecting a three-way call by listening to a phone conversation for a hook-flash (i.e., a ‘click’ sound) followed by a ring tone” is an unpatentable abstract idea.

For theory (2), that a method that “can be performed in the human mind, or by a human using a pen and paper . . . is merely an abstract idea and is not patent-eligible under § 101,” at first glance, Petitioner’s theory appears to have some merit, in that “detecting a three-way call by listening to a phone conversation for a hook-flash (i.e., a ‘click’ sound) followed by a ring tone” does appear to be something that can perhaps be performed solely in the human mind. On closer consideration, however, the major flaw is evident, in that the asserted action cannot be performed solely in the human mind *because it requires human interaction with numerous discrete features of a telephone system*, such as “three-way call,” “hook-flash,” and “ring tone.” The case law cited by Petitioner is instructive in that regard.

We begin with *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366 (Fed. Cir. 2011). In that case, the steps of independent claim 1 read as follows:

- a) obtaining information about other transactions that have utilized an Internet address that is identified with the [] credit card transaction;
- b) constructing a map of credit card numbers based upon the other transactions and;
- c) utilizing the map of credit card numbers to determine if the credit card transaction is valid.

654 F.3d at 1370. While, at first glance, the claim steps, and especially step a), would appear to require the use of the Internet address and credit card transactions, on closer inspection, no actual use of the Internet or of credit card is actually necessary. More specifically, step a) only requires “obtaining *information about* other transactions that have utilized an Internet address that is identified with the . . . credit card transaction.” *Id.* (emphasis added). The format and method of obtaining that information, however, is not defined, and indeed, could be as simple as being listed on a sheet of paper or even provided verbally by another person. In

such a case, where every step can be performed in the human mind, or by a human using a pen and paper, the Federal Circuit has held that what the claims are directed to is an unpatentable abstract idea.

By contrast, the claims of the '838 patent are directed to “detecting a three-way call by listening to a phone conversation for a hook-flash (i.e., a ‘click’ sound) followed by a ring tone.” Petitioner does not adequately identify the human-action centric or pen-and-paper-based analogues for several aspects of the above, namely, “listening . . . for a hook-flash (i.e., a ‘click’ sound) followed by a ring tone.”¹⁰ Indeed, as identified by Patent Owner, the '838 patent itself is replete with indications that it is related to solving a problem inextricably rooted in telecommunications technology (Prelim. Resp. 10-11 (citing Ex. 1001, 1:14–16, 4:3–9, 4:18–21, 5:3–5, 12:36–65)), which would make the instant fact pattern closer to *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), where “the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *Id.* at 1257. *See also Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337–1339 (Fed. Cir. 2016) (holding that claims directed to a “self-referential table for a database” are “a specific implementation of a solution to a problem in the software arts”).

The analysis is the same for the two Supreme Court cases cited by Petitioner. As noted above, in *Parker v. Flook*, 437 U.S. at 594–595, “[r]espondent’s application simply provides a new and presumably better method for calculating alarm limit values,” and in *Gottschalk v. Benson*, 409 U.S. at 64,

¹⁰ Our analysis is similar for Petitioner’s citation to *Mortgage Grader, Inc. v. First Choice Loan Serv. Inc.*, 811 F.3d 1314 (Fed. Cir. (2016)), where “the asserted claims are directed to the abstract idea of ‘anonymous loan shopping,’” again, something that can be performed in the human mind, or by a human using a pen and paper.

“[t]hey claimed a method for converting binary-coded decimal (BCD) numerals into pure binary numerals.” “Calculating alarm limit values” and “converting binary-coded decimal (BCD) numerals into pure binary numerals” are indisputably actions that can be performed using only the human mind, or by a human using a pen and paper. Such is not the case for the claims of the ’838 patent.

For theory (3), that the claims do “nothing more than recite **this abstract idea** in a method using computer terms” and “the claimed microprocessor is merely a general purpose computer that provides a computing platform **for the abstract idea**,” reliance on the theory is ultimately misplaced, because it has, as an underlying premise, that what the claims are “directed to” is an abstract idea. We agree that both the Supreme Court and Federal Circuit precedents are exceedingly clear that performing an abstract idea on a generic computer is not subject matter eligible. Here, however, Petitioner has not shown persuasively that “detecting a three-way call by listening to a phone conversation for a hook-flash (i.e., a ‘click’ sound) followed by a ring tone” is an abstract idea, for the reasons set forth above. Accordingly, without an abstract idea, whether or not the computer and microprocessor components recited in the claims are generic and conventional is immaterial.

As Petitioner has not shown sufficiently that claims 1–20 of the ’838 patent are directed to an unpatentable abstract idea, it is unnecessary to assess whether the additional elements transform the nature of the claim into a patent-eligible application.

3. Conclusion

For the foregoing reasons, we determine that the Petitioner has not demonstrated that it is more likely than not that Petitioner would prevail in showing that claims 1–20 are unpatentable on this ground.

G. Conclusion

On this record, we determine that the Petition demonstrates that it is more likely than not that Petitioner would prevail in showing that claims 1–20 are unpatentable.

III. ORDER

After due consideration of the record before us, and for the foregoing reasons, it is:

ORDERED that pursuant to 35 U.S.C. § 324, a post grant review is hereby instituted as to claims 1–20 of the '838 Patent on the following grounds:

- claims 1–20 are unpatentable under 35 U.S.C. § 103 over Kitchen and Li or Gupta;

FURTHER ORDERED that no other grounds are instituted;

FURTHER ORDERED that pursuant to 35 U.S.C. § 324(a), a post grant review of the '838 Patent is hereby instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 324(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial..

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