Trials@uspto.gov
571-272-7822

Paper: 7
Entered: April 3, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC.,
Petitioner,

v.

DOLBY INTERNATIONAL AB,
Patent Owner.

IPR2024-01354
Patent 6,339,757 B1

Before AMBER L. HAGY, SHARON FENICK, and STEPHEN E. BELISLE, *Administrative Patent Judges*.

BELISLE, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Roku, Inc. ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting an *inter partes* review of claims 1–17 ("Challenged Claims") of U.S. Patent No. 6,339,757 B1 (Ex. 1001, "the '757 patent"). Dolby International AB ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

The '757 patent issued on January 15, 2002, and expired on January 15, 2019. *See* Ex. 1001, codes (22), (45); 35 U.S.C. § 154(c)(1) (2024). Neither party challenges our jurisdiction over this patent in this case. *See Apple Inc. v. Gesture Tech. Partners, LLC*, 127 F.4th 364, 367 (Fed. Cir. 2025) (confirming Board jurisdiction over IPRs concerning expired patents).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a) (2023). We may not institute an *inter partes* review "unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). The "reasonable likelihood" standard is "a higher standard than mere notice pleading" but "lower than the 'preponderance' standard to prevail in a final written decision." *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential). When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim. 37 C.F.R. § 42.108(a).

Applying those standards, and upon consideration of the information presented in the Petition and Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood of success in

proving that any of the Challenged Claims is unpatentable. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Accordingly, we deny institution of an *inter partes* review of the '757 patent.

II. BACKGROUND

A. Real Parties in Interest

Petitioner identifies itself as the real party in interest. Pet. 81. Patent Owner likewise identifies itself as the real party in interest. Paper 4 (Patent Owner's Mandatory Notices), 1.

B. Related Matters

According to the parties, the '757 patent has been asserted in *Dolby Laboratories Licensing Corp. v. Roku, Inc.*, No. 5:24-cv-04660 (N.D. Cal.) ("District Court Case"). Pet. 81; Paper 4, 1; Ex. 1034.

C. The '757 Patent

The '757 patent is titled "Bit Allocation Method for Digital Audio Signals," and issued January 15, 2002, from U.S. Patent Application No. 08/161,798, filed December 6, 1993. Ex. 1001, codes (10), (21), (22), (45), (54).

The '757 patent relates generally to "the efficient information coding of digital audio signals for transmission or digital storage media," and more specifically, "a quantization method using an efficient bit allocation method for information coding." Ex. 1001, 1:7–10. According to the '757 patent, the invention is "a dynamic bit allocation procedure that is adapted to the human auditory system and yet with a low level of complexity so that high audio quality can be achieved while at the same time meeting the low cost target," where the complexity is reduced by allocating an initial bit number

using approximations made in a mathematical model before the remaining bit numbers are allocated by a precise iterative process. *Id.* at 2:41–45, 2:63–67.

Figure 1 of the '757 patent is reproduced below.

Fig. 1

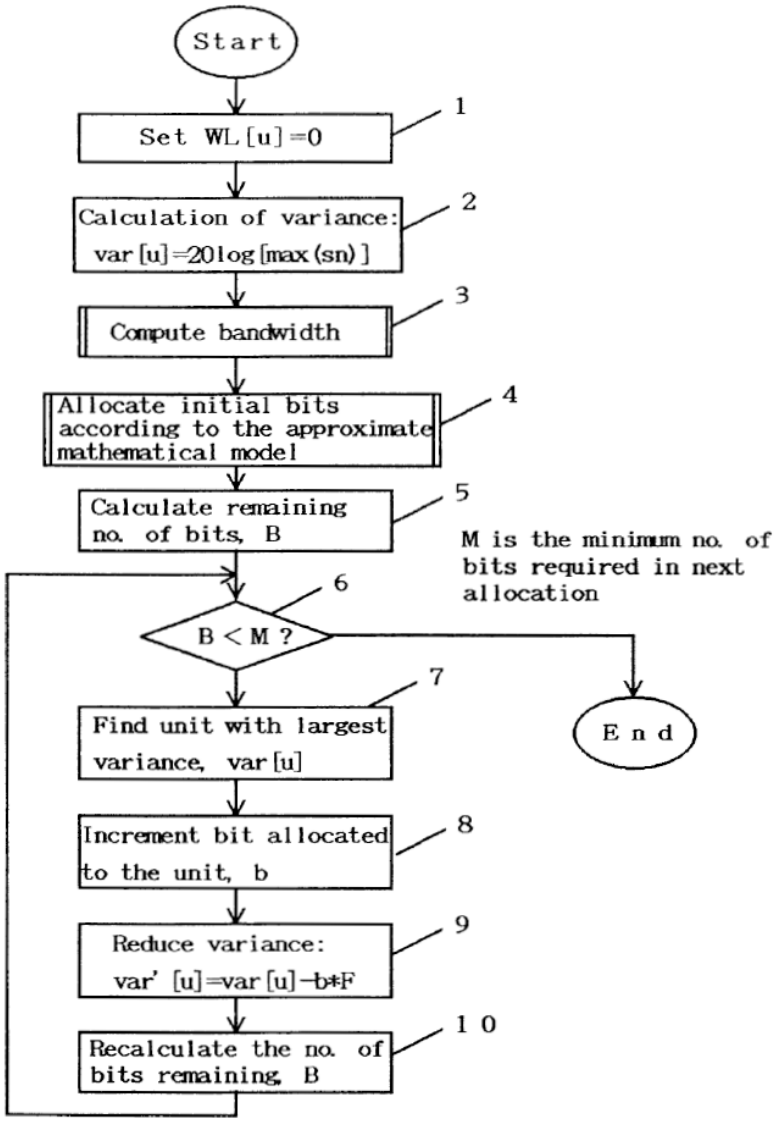


Figure 1 depicts a flowchart of an embodiment of a dynamic bit allocation procedure.

Ex. 1001, 3:29–30, Fig. 1.

As shown above in Figure 1, in step 1, quantization's or bit allocations for each frequency interval or unit (WL[u]) is set to zero. Ex. 1001, 3:47–49. In step 2, variance in each unit is calculated from the maximum spectral sample amplitude in the unit. *Id.* at 3:50–59 (noting that variance also may be calculated from an average of the spectral components within the unit). In step 3, bandwidth of transmission is computed. *Id.* at 3:59–60. In step 4, an initial number of bits are allocated according to an approximate mathematical model. *Id.* at 3:60–62. In step 5, calculation of the remaining bits is performed, where such remaining bits B are iteratively allocated to the units according to steps 6–10 until the number of bits remaining is less than the minimum number of bits M required in the next allocation. *Id.* at 3:62–4:18.

D. Illustrative Claim

The '757 patent includes twenty-one claims, of which claims 1–17 are challenged. Independent claim 1 is illustrative of the claimed subject matter and is reproduced below with labels, such as "[1A]," added to limitations in the same manner as used by the parties.

> 1. [1P] A method of determining a bit allocation for a quantization of digital audio signals having spectral and temporal structure wherein the digital audio signals are obtained by buffering audio signals in frames and decomposing the digital signals into spectral components, which comprises the steps of:
>
> [1A] a step for dividing at least one frequency interval into a plurality of frequency-units;
>
> [1B] a step for obtaining a representative of each frequency-unit obtained;

[1C] a step for counting a number of available frequency-units by using the representative, based on psychoacoustic criteria;

[1D] a first bit allocation step for determining an initial bit allocation for each of said available frequency-units by using an approximate mathematical model using said counted number of available frequency-units; and

[1E] a second bit allocation step for determining further bit allocation for each of said available frequency-units based on psychoacoustic criteria.

Ex. 1001, 5:41–61.

E. Evidence of Record

Petitioner relies on the following patent evidence.

Name	Patent Document	Exhibit
Mahieux	U.S. Patent No. 5,185,800, issued February 9, 1993	1005
Fielder	U.S. Patent No. 5,109,417, issued April 28, 1992	1006
Akagiri	U.S. Patent No. 5,241,603, issued August 31, 1993	1007
Veldhuis	U.S. Patent No. 4,896,362, issued January 23, 1990	1008
Galand	U.S. Patent No. 4,677,671, issued June 30, 1987	1009
Reaves	U.S. Patent No. 5,579,431, issued November 26, 1996	1010

Pet. 1–2.

Petitioner also relies upon the Declaration of Tim A. Williams, Ph.D. (Ex. 1003).

Patent Owner relies upon the Declaration of Chris Kyriakakis, Ph.D. (Ex. 2002).

F. Asserted Challenges to Patentability

Petitioner challenges the patentability of claims 1–17 of the '757 patent on the following bases (Pet. 1).

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–3, 6, 7, 10, 11, 14, 16	103[1]	Mahieux, Fielder
1–17	103	Mahieux, Fielder, Akagiri
1–3, 6, 7, 10, 11, 14, 16	103	Veldhuis, Galand
1–17	103	Veldhuis, Galand, Reaves

III. PATENTABILITY

A. Applicable Law

Petitioner challenges the patentability of claims 1–17 of the '757 patent on grounds that the claims would have been obvious under 35 U.S.C. § 103 in light of various references, namely Mahieux, Fielder, Akagiri, Veldhuis, Galand, and Reaves. "In an [*inter partes* review], the petitioner has the burden from the onset to show *with particularity* why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim")) (emphasis added). This burden never shifts to Patent Owner. *See Dynamic*

[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103 effective on March 16, 2013. Because the '757 patent issued January 15, 2002, the pre-AIA version of § 103 applies.

Drinkware, LLC v. Nat'l Graphics, Inc., 800 F.3d 1375, 1378 (Fed. Cir. 2015).

A claim is unpatentable under 35 U.S.C. § 103 if "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when of record, objective evidence of obviousness or non-obviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Secondary considerations may include the following: "commercial success, long felt but unsolved needs, failure of others, etc."[2] *Id.* The totality of the evidence submitted may show that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). When evaluating a combination of teachings, we must also "determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

The Supreme Court has made clear that we apply "an expansive and flexible approach" to the question of obviousness. *Id.* at 415. Whether a patent claiming a combination of prior art elements would have been

[2] Patent Owner has not presented objective evidence of non-obviousness.

obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. To reach this conclusion, however, requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. *Unigene Labs., Inc. v. Apotex, Inc*., 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention. *Id.* "To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

We analyze the challenges presented in the Petition in accordance with the above-stated principles.

B. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art, at the time of the invention of the '757 patent:

> would have had a Bachelor of Science (BS) degree in Computer Science, Computer Engineering, Electrical Engineering, or an equivalent field, as well as at least 2-3 years of academic or industry experience in the fields of audio encoding, analog-to-digital signal conversion, or digital signal processing.

Pet. 2 (citing Ex. 1003 ¶¶ 19–24).

Patent Owner does not present an alternative definition. *See* Prelim. Resp. 10 ("For purposes of this preliminary response, Patent Owner does not challenge that definition.").

In determining the level of ordinary skill in the art, various factors may be considered, including the "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). The level of ordinary skill in the art also may be reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

Neither party argues that the outcome of this case would differ based on our adoption of any particular definition of the level of ordinary skill in the art. Considering the subject matter of the '757 patent, the background technical field, the prior art, and Petitioner's proposed and unopposed definition of the skilled artisan (Ex. 1003 ¶¶ 19–24), we apply the level of skill set forth above.

C. Claim Construction

We construe claims "using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent." 37 C.F.R. § 42.100(b); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

In this context, claim terms "are generally given their ordinary and customary meaning" as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *see CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (noting "a 'heavy presumption' that a claim term carries its ordinary and customary meaning"). "In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317.

Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that "we need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Petitioner submits, "[a]lthough limitations recited in claim 1 of the '757 patent include the phrase 'step for,' neither the Applicant nor the BPAI[3] treated them as step-plus-function limitations during prosecution."

[3] *See* Ex. 1002, 250–263 (Decision on Appeal before the Board of Patent Appeals and Interferences).

Pet. 9. Petitioner also identifies functions and disclosed acts associated with such steps "[t]o the extent the Board determines that the limitations are written in step-plus-function format." Pet. 9–12. Petitioner argues "whether the terms are step-plus-function is immaterial because the cited art renders the claims obvious under both the step-plus-function constructions and the terms' plain-and-ordinary meanings." Pet. 12. Petitioner argues all other claim terms should receive their ordinary and customary meaning. Pet. 12 (citing Ex. 1003 ¶¶ 96–98). Patent Owner responds that "[a]ll claim terms should be construed according to the *Phillips* standard," without more. Prelim. Resp. 10–11.

We agree with Petitioner that whether the claimed "step" terms are deemed step-plus-function is "immaterial" in deciding whether to institute *inter partes* review in this case, because the cited asserted art would apply in the same or substantially the same manner either way. Thus, we do not find that the express construction of any term is necessary for this decision.

D. Alleged Obviousness of Claims 1–3, 6, 7, 10, 11, 14, and 16 over the Combination of Mahieux and Fielder

Petitioner contends claims 1–3, 6, 7, 10, 11, 14, and 16 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of Mahieux (Ex. 1005) and Fielder (Ex. 1006). Pet. 12–41. Patent Owner opposes Petitioner's contentions. Prelim. Resp. 12–31. Based on our review of the record before us, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that independent claim 1 (and thus any Challenged Claim) would have been unpatentable as obvious over the combination of Mahieux and Fielder, as discussed below. We turn first to an overview of Mahieux and Fielder.

1. Overview of Mahieux (Ex. 1005)

Mahieux is directed to "a bit allocation device enabling an adaptive quantization of a digital audio signal, after this signal has been transformed into the frequency domain and cut up into frequency bands." Ex. 1005, 1:17–21. Mahieux describes:

> A device for compressing a digital audio signal, includes a device for allocating bits available for the transmission or storage of the signal, controlling means for the adaptive quantization of the signal, in order to enable a major reduction in the bit rate while at the same time preserving the quality of the starting signal to the maximum extent. The device includes means for allocating a specific number of bits for the expression of the coefficients of each frequency band of a transformed digital audio signal, as a function of a piece of auxiliary information corresponding to a description of the spectrum of the signal, said device being informed by means for the prior elimination of spectral components of said transformed signal as a function of a psychoauditive criterion.

Id. at code (57).

Mahieux depicts a signal spectrum divided into bands in Figure 5, reproduced below.

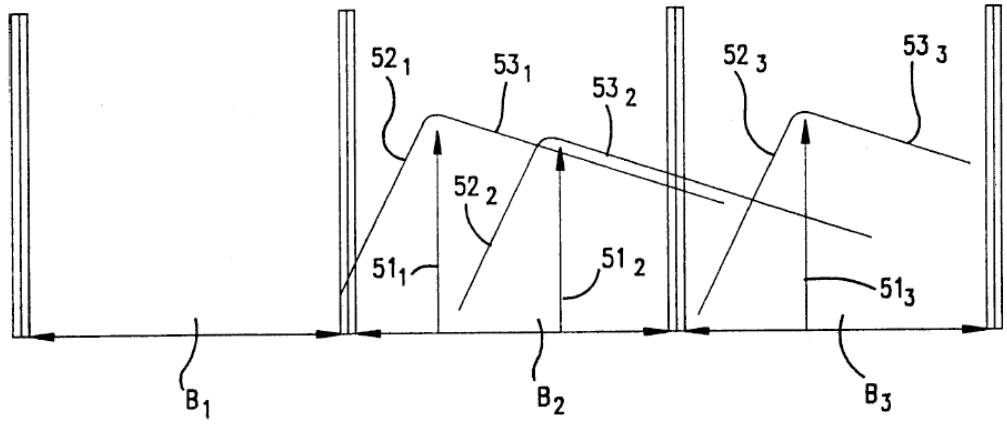


FIG.5

Figure 5 depicts the principle of elimination of masked lines (inaudible frequencies) according to Zwicker's analysis.

Ex. 1005, 5:6–7, 6:1–6, 1:63–68, Fig. 5. As shown above in Figure 5, the representative spectrum is divided into bands, such as B_1, B_2, and B_3. *Id.* at 7:13–15. Mahieux describes that, "for each line 51 transmitted, the lines that are beneath a line 52 of –25 dB per critical band upstream of the line and beneath a line 53 of –10 dB per downstream critical band, are inaudible," and "[t]hese two slopes correspond respectively to the anterior and posterior frequency maskings." *Id.* at 7:6–12; *see id.* at 5:66–6:6. Mahieux identifies such "inaudible" lines 51 for purposes of eliminating inaudible spectral components in transmitted data signals. *Id.*

We further discuss below the disclosures of Mahieux in connection with the parties' arguments.

2. Overview of Fielder (Ex. 1006)

Fielder is directed to a "high-quality low bit-rate digital signal processing of audio signals, such as music signals." Ex. 1006, 1:14–16. Fielder summarizes itself as follows: "Quantizing noise is lessened in a speech signal system by using adaptive bit allocation for subband channels, wherein subband information of digital words is represented in block-floating-point form, and normalized mantiss[as] as may allow dropping a sign bit." *Id.* at code (57).

We further discuss below the disclosures of Fielder in connection with the parties' arguments.

3. Analysis of Independent Claim 1

Claim 1 recites, in relevant part, "[1C] a step for *counting a number of available frequency-units* by using the representative, based on psychoacoustic criteria"; and "[1D] a first bit allocation step for determining an initial bit allocation for each of said available frequency-units *by using an approximate mathematical model using said counted number of available frequency-units*." Ex. 1001, 5:52–58 (emphases added). The parties dispute whether the combination of Mahieux and Fielder teaches or suggests to the skilled artisan *counting a number of available frequency-units* by using the representative, based on psychoacoustic criteria, and in turn using that *counted number* in a mathematical model to initially allocate bits for each available frequency-unit. *See* Pet. 24–30; Prelim. Resp. 12–31. We turn first to Petitioner's position on Mahieux's teachings.

a. Mahieux's Teachings

Petitioner argues "Mahieux decomposes an audio signal into spectral components by subjecting the signal 'to a time/frequency transformation,'" and "[t]he resulting output is a frequency '***spectrum***' (claimed 'frequency interval') that is 'cut up' or 'divided' 'into ***frequency bands***' (claimed 'frequency-units')." Pet. 21. Petitioner submits that these bands (frequency-units) are depicted as B_1, B_2, and B_3 in Mahieux's Figure 5, as annotated by Petitioner and reproduced below. Pet. 21–22.

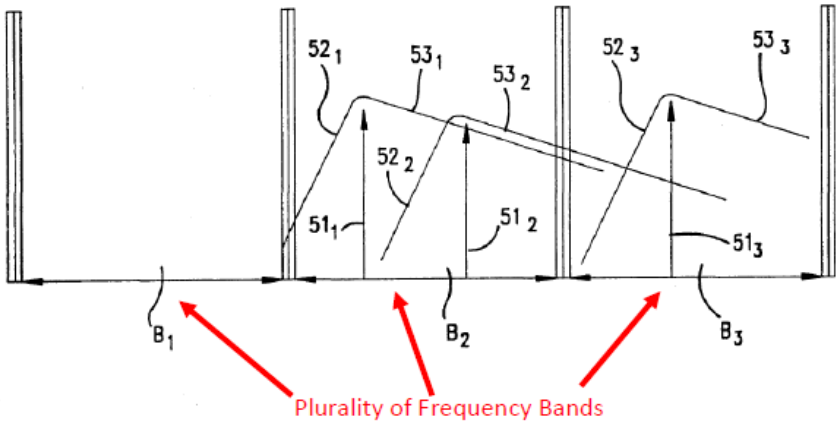
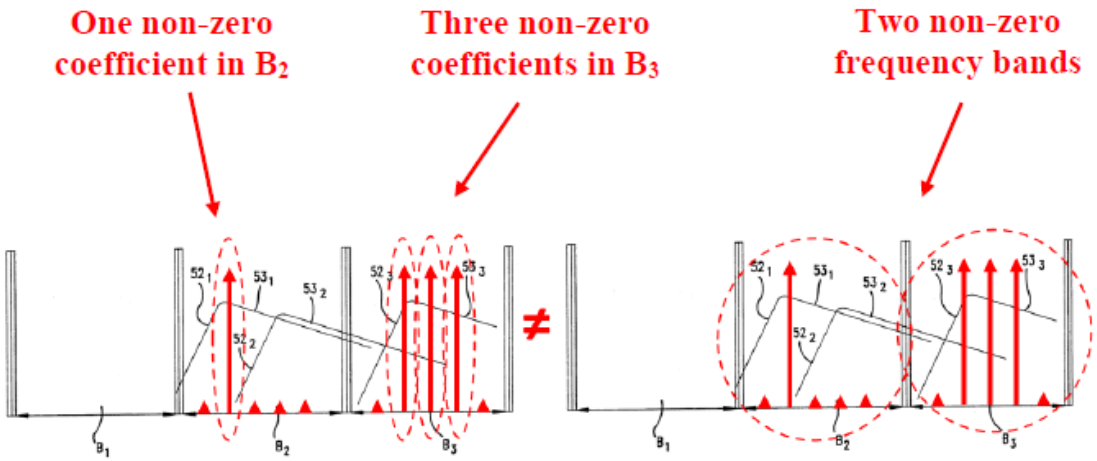


FIG.5

Mahieux's Figure 5 as annotated by Petitioner to depict a plurality of frequency bands or units.

Pet. 21–22 (citing, *inter alia*, Ex. 1005, Fig. 5 (annotated)). Notably, Petitioner acknowledges that "Mahieux does not expressly disclose *'counting' [a number]*" of available frequency-units (bands), i.e., frequency-units whose variance exceeds a human hearing threshold. Pet. 24–25. Instead, Petitioner argues Mahieux "accounts" for frequency-bands exceeding a threshold, and "Mahieux therefore 'counts' those bands so as to eliminate all bands below the threshold." Pet. 25. We find Petitioner's arguments unpersuasive.

Patent Owner argues "Mahieux's system does not determine whether a 'frequency band' as a whole is audible (i.e., allegedly 'available'), but rather whether each of several constituent spectral components within the frequency bands are individually audible." Prelim. Resp. 15 (citing Ex. 2002 ¶ 80); *see id.* at 14–16 (discussing how Mahieux's system compares each of the spectral components' coefficients to a threshold value (represented by the lines 52_1–52_3 and 53_1–53_3 in Figure 5, *see* Ex. 1005, 7:6–10) to determine which individual spectral components are audible). To illustrate, Patent Owner submits an annotated version of Mahieux's Figure 5, reproduced below. *Id.* at 16–17.



Mahieux's Figure 5 as annotated by Patent Owner to distinguish counting available frequency-units from counting audible spectral components.

Id. at 16. Patent Owner explains, in the above annotated Figure 5, (i) the frequency band B_2 has one non-zero coefficient (represented by a line that extends above the lines 52 and 53) and four zero coefficients (represented by triangles on the x-axis), and (ii) the frequency band B_3 has three non-zero

coefficients and two zero coefficients. *Id.* at 16 (citing Ex. 2002 ¶ 81). Patent Owner argues, in this example, "Mahieux's system would simply determine that the frequency band B_2 has one non-zero coefficient, and separately determine that the frequency band B_3 has three non-zero coefficients (as shown on the left)," and "[t]his is not the equivalent of determining the total number of the sub-bands B_1-B_3 that are audible (e.g., two total sub-bands, B_2 and B_3) (as shown in the right)." *Id.* at 16 (citing Ex. 2002 ¶ 81). Thus, Patent Owner argues, and we agree, "Mahieux's system does not determine 'available frequency-units' at all (e.g., the 'available' ones of frequency bands B_1, B_2, and B_3 alleged to be the 'frequency-units')," but rather determines available spectral components of the frequency bands. *Id.* at 16–17 (citing Ex. 2002 ¶ 82); *see* Ex. 2002 ¶¶ 77–83; *see also* Pet. 21 (specifically equating Mahieux's frequency bands to the claimed "frequency-units").

b. Modifying Mahieux

Petitioner argues, "to the extent that the Board determines that affirmatively counting—for example, by incrementing a counter—is required, [the skilled artisan] would have found it obvious to do so in Mahieux's system." Pet. 26 (citing Ex. 1003 ¶ 142). Petitioner argues "there are only a finite number of ways *to keep track of perceptibly significant frequency bands*, and a prominent one known in the art was to use a counter," and "so, using a counter in Mahieux's system would have at least been obvious to try given how easy it is to implement." Pet. 26 (citing Ex. 1003 ¶ 142) (emphasis added). We find Petitioner's arguments conclusory and unpersuasive.

Patent Owner responds, "Mahieux's system merely determines ***spectral components*** of the frequency-units that are individually 'available' (e.g., the 'available' ones of spectral lines 51_1, 51_2, and 51_3 within each of the frequency bands B_1, B_2, and B_3)," and argues that "this individual spectral component-based approach is critical to Mahieux's system, as Mahieux's system specifically relies upon the number of audible ***spectral components*** in each frequency band in order to select from among several sets of quantizers for quantizing coefficients in that particular frequency band." Prelim. Resp. 16–17 (citing Ex. 2003, 11:39–62; Ex. 2002 ¶ 82); *see id.* at 20–22 (submitting that "Mahieux's system includes five sets of quantizers 61_1-61_5, each corresponding to a different number of 'non-zero coefficients' ('Nsi(j)') within a band ('j')") (citing, *inter alia*, Ex. 2003, Fig. 6; Ex. 2002 ¶ 88). Patent Owner argues, "even if Mahieux's system were to positively determine which frequency bands were audible (i.e., allegedly having one or more spectral components that exceed a threshold value), Mahieux's system still would not ***count*** the number of such audible frequency bands." *Id.* at 17 (citing Ex. 2002 ¶ 83). Simply put, Patent Owner argues "this count would not have served any purpose in Mahieux's system." *Id.* at 20 (citing Ex. 2002 ¶ 88).

We agree with Patent Owner and find that Petitioner does not sufficiently explain *why* the skilled artisan, given Mahieux, would have had a rational reason to modify Mahieux to keep track of, let alone make use of, perceptibly significant frequency *bands*. Indeed, Patent Owner's declarant, Dr. Kyriakakis, persuasively testifies why modifying Mahieux to do so would have made no sense to the skilled artisan:

> It would not have made sense to modify Mahieux's system to instead count the number of audible frequency bands (e.g., the number of audible frequency bands B_1-B_3), as such a count would play no role in Mahieux's bit allocation. Indeed, as Mahieux's bit allocation focuses on the number of non-zero coefficients in each individual frequency band in isolation and without regard to the aggregate number of total audible frequency bands of the overall spectrum, generating an aggregate number of total audible frequency bands (e.g., by counting) serves no purpose in Mahieux's allocation scheme. Further given Mahieux's focus on allocating bits to frequency coefficients in individual frequency bands in isolation from other bands, [the skilled artisan] would fail to find any use for such an aggregate number or count.

Ex. 2002 ¶ 92 (cited at Prelim. Resp. 23). Thus, we find Petitioner does not sufficiently explain why modifying Mahieux to keep track of perceptibly significant frequency bands would have presented itself *to the skilled artisan* as an option at all, let alone an option that would have been obvious to try. *See Rolls-Royce, PLC v. United Tech. Corp.*, 603 F.3d 1325, 1339 (Fed. Cir. 2010) ("[The skilled artisan] must have 'good reason to pursue the known options within his or her technical grasp.'").

c. Combination of Mahieux and Fielder

Petitioner argues "Fielder expressly discloses iterating through all frequency sub-bands to determine transform coefficients," and "[u]sing a similar iterative process in Mahieux would have been the most straightforward way to implement Mahieux, as the software would need a way to account for and loop through all frequency bands that exceed Mahieux's masking threshold." Pet. 27–28. Petitioner argues "[s]uch counting would not have changed any aspect of the system," and so "utilizing a counter to actively count available frequency bands represents a

mere design choice that would have yielded predictable results." Pet. 28 (citing Ex. 1003 ¶¶ 145–146). We find Petitioner's arguments conclusory and unpersuasive.

Patent Owner responds, and we agree, "even if Fielder's 'iterating' process could be incorporated into Mahieux's system, at best, the Mahieux-Fielder system would simply 'iterat[e] through ***all*** frequency sub-bands to determine transform coefficients," but "the Mahieux-Fielder system still would not specifically count the number of Mahieux's 'frequency bands' that are ***audible*** (i.e., the purported "available frequency-units"). Prelim. Resp. 23 (citing Ex. 2002 ¶ 93). Patent Owner's declarant, Dr. Kyriakakis, persuasively testifies why the combined teachings of Mahieux and Fielder still would not have provided for *counting a number of available frequency-units*:

> [T]he count of the number of audible frequency bands does not play any role in Fielder's bit allocation. Instead, Fielder's bit allocation focuses on assigning bits to (i) transform coefficients that have previously been assigned bits, and (ii) transform coefficients that are adjacent to those that have been previously assigned bits. . . . None of [Fielder's bit allocation process] phases involves generating an aggregate number of total audible frequency bands (e.g., by counting). Thus, Fielder would not have provided [the skilled artisan] with any motivation to utilize such information in Mahieux's system.

Ex. 2002 ¶¶ 94–95 (cited at Prelim. Resp. 24). We agree with Patent Owner that "generating an aggregate number of total audible frequency bands (e.g., by counting) serves no purpose in Fielder's bit allocation scheme, and correspondingly would not have provided any motivation to utilize such information in Mahieux's system." Prelim. Resp. 24 (citing Ex. 2002

¶¶ 94–95). Petitioner, for its part, does not sufficiently explain how or why Fielder allegedly cures the deficiencies in Mahieux noted above.

d. "Using" the "Counted Number"

Petitioner does not present clearly how or why Mahieux allegedly teaches *using a counted number of available frequency-units* in a mathematical model to initially allocate bits for each available frequency-unit (see limitation [1D]).[4] *See* Pet. 28–30. Petitioner points to an alleged "mathematical model" in Mahieux, namely "$\alpha(k)\cdot\beta(k)\cdot\sigma^2(k)/S(k)$," and argues that it "*accounts* for the frequency bands that have been counted," but does not sufficiently explain, if at all, what part, if any, of that model *uses the claimed "counted number"* of available frequency-units. Pet. 29–30 (emphasis added). Petitioner argues, or at least implies, that this mathematical model supports its argument that the combination of Mahieux and Fielder teaches counting a number of available frequency-units (discussed above). We find Petitioner's arguments conclusory and unpersuasive.

Patent Owner responds, and we agree, that the function "α(k)" of Mahieux's mathematical model relied on by Petitioner "merely represents the number of constituent 'non-zero ***coefficients***' in a particular frequency band (e.g., representing respective ***individual spectral components*** of the frequency band), and not the number of 'non-zero' ***frequency bands*** as a whole (e.g., among all of the frequency bands in the spectrum)." Prelim.

[4] *See* 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim").

Resp. 17–18 (citing Ex. 2003, 12:22–29; Ex. 2002 ¶ 83), 26–27; *see* Pet. 29 ("The function α(k) accounts for '***the number of non-zero coefficients***.'"). We also agree with Patent Owner that the function "β(k)" "merely depends on a variable γ representing a 'spectral spread' of a frequency band, and does not pertain at all to generating or otherwise using a count of a number of Mahieux's audible frequency bands." Prelim. Resp. 19 (citing Ex. 2003, 12:29–56; Ex. 2002 ¶ 85), 27–28. Similarly, we agree with Patent Owner that the function "S(k)" is a masking threshold and the function "σ^2(k)" is the square of a spectrum descriptor, and that neither of these functions constitute or teach the claimed counted number of available frequency-units. *See* Prelim. Resp. 25–26, 29 ("Notably, the Petition does not assert that either of the functions σ^2(k) or S(k) represents the counted number of available frequency bands in Mahieux."). In sum, and as argued by Patent Owner, "[n]one of these functions and/or variables is or otherwise uses a count of a number of Mahieux's audible frequency bands (i.e., the alleged 'available frequency-units')." *See id.* at 28 (citing Ex. 2002 ¶¶ 100–101), 29–31.

e. Summary

We have considered Petitioner's arguments and cited evidence concerning whether the combination of Mahieux and Fielder would have taught or suggested to the skilled artisan the features of limitations [1C] and [1D], *taken together*, and do not find them sufficiently persuasive on the record before us. Rather, we find Patent Owner's arguments and cited evidence sufficiently persuasive to defeat institution in this case, for the same reasons and evidence proffered by Patent Owner as outlined above. Accordingly, for the reasons expressed above and based on the record before

us, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that independent claim 1 is unpatentable as obvious over the combination of Mahieux and Fielder.

4. Dependent Claims 2, 3, 6, 7, 10, 11, 14, and 16

Claims 2, 3, 6, 7, 10, 11, 14, and 16 depend, directly or indirectly, from independent claim 1. Ex. 1001, 5:62–6:40. Based on the record before us, we determine that Petitioner's analysis for claims 2, 3, 6, 7, 10, 11, 14, and 16 does not remedy the deficiencies identified above with respect to independent claim 1. *See* Pet. 33–41. Thus, for the same reasons discussed in connection with the challenge to claim 1, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that any of claims 2, 3, 6, 7, 10, 11, 14, and 16 is unpatentable as obvious over the combination of Mahieux and Fielder.

E. Alleged Obviousness of Claims 1–17 over the Combination of Mahieux, Fielder, and Akagiri

Petitioner contends claims 1–17 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of Mahieux (Ex. 1005), Fielder (Ex. 1006), and Akagiri (Ex. 1007). Pet. 41–46. Patent Owner opposes Petitioner's contentions based on its same arguments for independent claim 1. *See* Prelim. Resp. 31–32. Based on the record before us, we determine that Petitioner's analysis for claims 4, 5, 8, 9, 12, 13, 15, and 17, for which Akagiri is invoked, does not remedy the deficiencies identified above with respect to independent claim 1. *See* Pet. 41–46. Thus, for the same reasons discussed in connection with the challenge to claim 1, we determine that Petitioner has not established a reasonable likelihood that

it would prevail in showing that any of claims 1–17 is unpatentable as obvious over the combination of Mahieux, Fielder, and Akagiri.

F. Alleged Obviousness of Claims 1–3, 6, 7, 10, 11, 14, and 16 over the Combination of Veldhuis and Galand

Petitioner contends claims 1–3, 6, 7, 10, 11, 14, and 16 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of Veldhuis (Ex. 1008) and Galand (Ex. 1009). Pet. 46–72. Patent Owner opposes Petitioner's contentions. Prelim. Resp. 32–47. Based on our review of the record before us, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that independent claim 1 (and thus any Challenged Claim) would have been unpatentable as obvious over the combination of Veldhuis and Galand, as discussed below. We turn first to an overview of Veldhuis and Galand.

1. Overview of Veldhuis (Ex. 1008)

Veldhuis is directed to "a digital system including a coder and a decoder for subband coding of a digital audio signal having a given sampling rate 1/T," as shown, for example, in Figure 1, reproduced below.

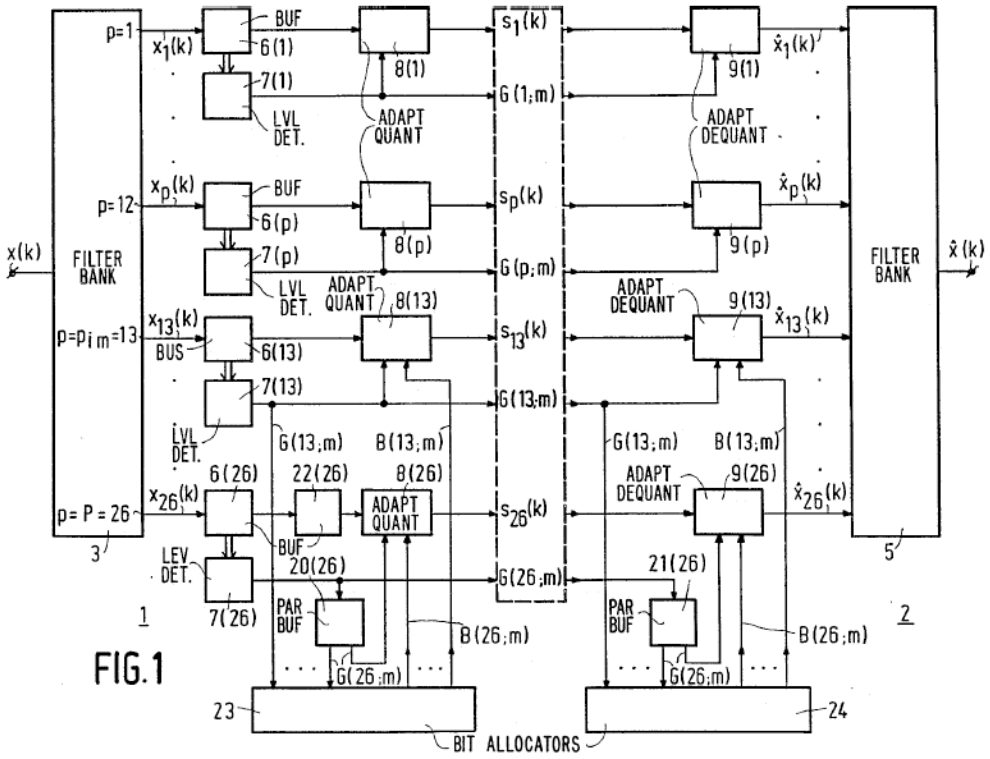


Figure 1 depicts a block diagram of a digital system for subband coding of a digital audio signal.

Ex. 1008, 1:6–9, 4:58–60, Fig. 1.

As shown above in Figure 1, an exemplary system for subband coding of a digital audio signal x(k) includes, in coder 1 (left side), filter bank 3 for splitting the audio signal band, with sampling rate reduction, into subbands (p = l, . . . P) of approximately critical bandwidth; and, in decoder 2 (right side), filter bank 5 for merging these subbands, with sampling rate increase. *Id.* at code (57). Veldhuis summarizes the features of the system in Figure 1 as follows:

> For each subband (p) the coder (1) comprises a detector (7(*p*)) for determining a parameter G(p;m) representative of the signal level in a block (p;m) of M samples of the subband signal $x_p(k)$ as well as a quantizer (8(*p*)) for adaptively block quantizing this

> subband signal in response to parameter G(p;m), and the decoder (2) comprises a dequantizer (9(*p*)) for adaptively block dequantizing the quantized subband signal $s_p(k)$ in response to parameter G(p;m). *The quantizing characteristics are related to the noise-masking curve of the human auditory system*, owing to which a high-quality of the replica x(k) of audio signal x(k) is attained with an average number of approximately 2.5 bits per sample for representing the output signals of the coder (1). The occasional audibility of quantizing noise in this replica $\hat{x}(k)$ is reduced effectively in that the coder (1) and decoder (2) contain identical bit allocation means (23, 24) responsive to a set of parameters G(p;m) for the higher group of subbands ($p_{im} \leqq p \leqq P$) within an allocation window (FIG. 5) for allocating a number of B(p;m) bits per sample from a fixed predetermined number of B bits for this allocation window to the quantizer (8(*p*)) and the dequantizer (9(*p*)) for the block (p;m) of subband signal $x_p(k)$ and $s_p(k)$, respectively.

Id. (emphasis added).

Veldhuis describes how its system for subband coding of a digital audio signal takes into consideration limitations of the human auditory system:

> These measures exploit the psychoacoustic effect of temporal masking, which means the property of the human auditory system that its threshold for perceiving signals shortly before and shortly after the occurrence of another signal which has a relatively high signal energy appears to be temporarily higher than in the absence of the latter signal. More specifically, in this preferred embodiment no quantizing bits are allocated to blocks with a relatively low signal energy which occur shortly before and shortly after occurrence of blocks with a relatively high signal energy, and the quantizing bits "saved" thus are used for the more refined quantizing of these blocks having a relatively high signal energy and the consequent reduction of the quantizing noise during these blocks, whereas the fact that the quantizing bits are not allocated to adjacent blocks with a relatively low signal energy does in fact not result in audible

> distortion owing to the temporal masking by the human auditory system.

Ex. 1008, 4:34–52.

We further discuss below the disclosures of Veldhuis in connection with the parties' arguments.

2. Overview of Galand (Ex. 1009)

Galand is directed to "a method for coding a voice signal and more particularly, to a method for digitally encoding speech at relatively low bit rates." Ex. 1009, 1:8–10, Fig. 1.

Galand summarizes itself as follows:

> A voice signal coding method is provided for processing the residual base-band signal provided by a Voice Excited Predictive (VEPC) Coder. The residual signal is split over several sub-bands and the contents of each sub-band is dually coded by using a process including a simultaneous direct BCPCM [(Block Companded Pulse Code Modulation)] and differential APC [(Adaptive Predictive Coding)] coding with dynamic assignment of the quantizing bits according to the relative sub-band contents, which simultaneous coding is followed by a dynamic choice of the sub-band coded output providing the lowest coding error.

Ex. 1009, code (57).

We further discuss below the disclosures of Galand in connection with the parties' arguments.

3. Analysis of Independent Claim 1

Claim 1 recites, in relevant part, "[1C] a step for *counting a number of available frequency-units* by using the representative, based on psychoacoustic criteria"; and "[1D] a first bit allocation step for determining an initial bit allocation for each of said available frequency-units *by using an*

approximate mathematical model *using said counted number of available frequency-units*." Ex. 1001, 5:52–58 (emphases added). The parties dispute whether the combination of Veldhuis and Galand teaches or suggests to the skilled artisan *counting a number of available frequency-units* by using the representative, based on psychoacoustic criteria, and in turn using that *counted number* in a mathematical model to initially allocate bits for each available frequency-unit. *See* Pet. 46–68; Prelim. Resp. 32–47. We turn first to Petitioner's position on Veldhuis' teachings.

a. Veldhuis' Teachings

As with Mahieux (*see supra* § III.D.3.a), Petitioner argues that by *accounting* for frequency-bands exceeding a threshold, Veldhuis "counts" such bands: "By determining which signal blocks can be heard and thus are available for bit allocation (those having C(p;m) values equal to 1), Veldhuis 'counts' such blocks." Pet. 57–58. Petitioner argues "nothing in the claims requires actively counting [such frequency-bands] by, for example, incrementing a counter" (despite claim 1 explicitly reciting "*counting a number* of available frequency-units" and "*using said counted number* of available frequency-units" in a mathematical model). Pet. 58–59; *see* Ex. 1001, 5:52–58. Petitioner argues "Veldhuis's express disclosure of counting *bits* for *unavailable* frequency bands would have motivated [the skilled artisan] to employ a similar technique with respect to the available frequency bands." Pet. 59 (emphases added). We find Petitioner's arguments unpersuasive.

Patent Owner highlights that our predecessor board, the Board of Patent Appeals and Interferences, already addressed the issue at hand during prosecution in view of U.S. Patent No. 5,105,463 ("Veldhuis '463"

(Ex. 2009)), which is a divisional of Veldhuis, and determined that "Veldhuis ['463] does not disclose 'counting' the available blocks (p;[m])," and therefore, does not disclose limitations [1C] and [1D]. Prelim. Resp. 34; Ex. 1002, 254–257 (BPAI Decision) ("[Veldhuis '463's] initial bit allocation is not disclosed or suggested to be made 'using an approximate mathematical model using said counted number of available frequency-units.'"). We are not persuaded that the BPAI erred in its assessment of Veldhuis' disclosure.

Patent Owner argues, and we agree, that "[a]lthough the claims do not expressly require actively counting *by incrementing a bandwidth counter* (e.g., as described in the specification of the '757 patent), claim 1 nevertheless positively recites a 'step for counting a number of available frequency-units," and that "this 'counted number' is used to perform additional operations." Prelim. Resp. 34–35 (emphasis added) (citing Ex. 2002 ¶ 133); *see id.* at 35 ("The Petition's apparent position that 'counting' is not required is nothing more than an attempt to remove a positive limitation that is integral to claimed subject matter."); Ex. 2002 ¶ 133 ("'[C]ounting" is a positive limitation that is integral to claimed subject matter.").

Patent Owner argues, and we agree, that Petitioner has not sufficiently shown that Veldhuis' determination and application of a "sum of saved bits S" (*see* Pet. 57–58) would have taught or suggested the claimed counting of a number of available frequency-units and use thereof in a mathematical model. *See* Prelim. Resp. 35–38. Indeed, Patent Owner's declarant, Dr. Kyriakakis, persuasively testifies why to the skilled artisan this *is* a distinction with a difference:

> Veldhuis selectively increments a "***sum of saved bits S,***" which is not the number of blocks that can be heard by a human (i.e., the alleged "available frequency-units"). Instead, as shown in column B(p) of the table in FIG. 3, the number of bits that are allocated to each block (and potentially reallocated to other blocks) are different respective decimal values that obfuscate the number of blocks that can or cannot be heard. Further, the number of bits in the table are pre-determined, and do not depend on the number of blocks that are audible.
>
> Further, Veldhuis increments the "sum of saved bits S" only when blocks ***cannot be heard*** by a human, in order to determine how many bits that were to be allocated to that block can be reallocated to other blocks instead (i.e., blocks that can be heard). Thus, even if "the sum of saved bits S" were somehow alleged to inform a "count" of "frequency-units" (which Patent Owner does not concede), at best Veldhuis would describe the ***very opposite*** of that required by claim [1] (i.e., counting a number of ***unavailable*** frequency-units, rather than available frequency-units) because the sum of "S" depends from unavailable/inaudible blocks, rather than available/audible blocks.

Ex. 2002 ¶¶ 140–141 (cited at Prelim. Resp. 37–38).

b. Modifying Veldhuis

Petitioner argues that "affirmatively counting available frequency bands in Veldhuis would have been obvious to try." Pet. 60. Petitioner argues "[the skilled artisan] would have been motivated to try determining [the sum of saved bits] S by counting the number of blocks that can be heard." Pet. 60 (citing Ex. 1003 ¶ 246). We find Petitioner's arguments conclusory and unpersuasive.

Patent Owner responds that counting the number of blocks that can be heard by a human "would not serve any purpose in Veldhuis's system." Prelim. Resp. 38 (citing Ex. 2002 ¶ 142). We agree with Patent Owner and

find that Petitioner does not sufficiently explain *why* the skilled artisan, given Veldhuis, would have had a rational reason to modify Veldhuis to keep track of, let alone make use of, perceptibly significant frequency bands. Patent Owner's declarant, Dr. Kyriakakis, persuasively testifies why modifying Veldhuis to do so would have made no sense to the skilled artisan:

> Veldhuis's system does not reallocate bits from any blocks that can be heard. Exhibit 2006, 11:67-12:7. Instead, Veldhuis's [system] maintains the number of allocated bits for those blocks, and in some cases selectively allocates one or more additional bits to those blocks from blocks that cannot be heard. *Id.* As Veldhuis does not reallocate any bits from audible blocks and merely allocates one or more additional bits to the audible blocks depending on the number of ***inaudible*** blocks, the specific number of ***audible*** blocks that exist is irrelevant to Veldhuis's system. As such, in Veldhuis's system, tracking the number of blocks that are audible to a human would be entirely superfluous.

Ex. 2002 ¶ 142 (cited at Prelim. Resp. 38–39). Thus, we find Petitioner does not sufficiently explain why modifying Veldhuis to keep track of perceptibly significant frequency bands would have presented itself *to the skilled artisan* as an option at all, let alone an option that would have been obvious to try. *See Rolls-Royce*, 603 F.3d at 1339.

c. Combination of Veldhuis and Galand

Petitioner argues "Galand . . . teaches using the 'number of useful sub-bands' as a parameter in the mathematical model for determining the bit allocation for a sub-band." Pet. 60 (citing Ex. 1009, 4:61–5:9, 6:33–42). Petitioner argues the skilled artisan "would have understood that, to determine the number of sub-bands that are 'useful,' Galand counts them," and that "counting the units that exceed a threshold (i.e., those that can be

heard, or those that are 'useful') was a desirable way to allocate bits." Pet. 60 (citing Ex. 1003 ¶ 247); *see* Pet. 61–63 (Petitioner relying on the "number of useful sub-bands" parameter in the context of limitation [1D]). We find Petitioner's arguments conclusory and unpersuasive.

Patent Owner responds, and we agree, "Galand does not describe counting Galand's 'useful' sub-bands 'by using the representative,' as required by [1C]." Prelim. Resp. 40 (citing Ex. 2002 ¶ 145). First, as argued by Patent Owner, Galand does not describe what a "*useful* sub-band" even entails (the term "useful" appears once in Galand, when used in "*useful* sub-bands"), but Galand does refer to dividing a frequency range into "eight adjacent sub-bands 1–8," and considering only a fixed number of sub-bands 2 to 7. Ex. 2007, 4:33–38; *see* Ex. 2002 ¶ 144; Prelim. Resp. 39–40. Second, as argued by Patent Owner, Galand does not describe that "useful" sub-bands are sub-bands that can be heard, and that any remaining sub-bands cannot be heard (as the Petition appears to imply). *See* Ex. 2002 ¶ 144; Prelim. Resp. 40. Third, as argued by Patent Owner, Galand's "useful sub-bands" "refer to a ***pre-determined*** set of sub-bands (i.e., sub-bands 2-7) that will be processed by the system." Prelim. Resp. 40 (citing Ex. 2007, 4:33–38; Ex. 2002 ¶ 145). Finally, both Petitioner and its declarant, Dr. Williams, identically conclude that the skilled artisan "would have understood that, to determine the number of sub-bands that are 'useful,' Galand counts them" (Pet. 60; Ex. 1003 ¶ 247), but neither explains, let alone sufficiently and with particularity, why so. Indeed, Galand itself describes "giving" a specific, pre-determined "value[]" to the "[n]umber of useful sub-bands," not "counting" anything to obtain that value. *See* Ex. 1009, 6:33–37 ("[C]oding can be performed by *giving* the

parameters the following values: . . . Number of useful sub-bands: p=6." (emphasis added)); Prelim. Resp. 42–47.

Further, Patent Owner's declarant, Dr. Kyriakakis, persuasively testifies why Galand does not teach the claimed "counting" to the skilled artisan:

> As [Galand's] sub-bands are predetermined in some undisclosed way, Galand fails to disclose that these sub-bands are determined, identified, or counted by using a "representative" of each of the sub-bands, much less using the "characteristic parameter G(p;m)" or equivalent thereof that was identified by the Petition in its mapping. As such, even if Galand were to describe counting "available frequency-units," Galand still would not teach doing so based specifically on a representative of those frequency-units, as recited in claim 1.

Ex. 2002 ¶ 145 (cited at Prelim. Resp. 40); *see* Prelim. Resp. 42–47 (Patent Owner also applying this testimony in the context of limitation [1D]).

Based on the foregoing, we find Petitioner does not sufficiently show how or why Galand allegedly cures the deficiencies in Veldhuis noted above—neither is sufficiently shown to teach "counting" as recited in limitation [1C].

d. Summary

We have considered Petitioner's arguments and cited evidence concerning whether the combination of Veldhuis and Galand would have taught or suggested to the skilled artisan the features of limitations [1C] and [1D], *taken together*, and do not find them sufficiently persuasive on the record before us. Rather, we find Patent Owner's arguments and cited evidence sufficiently persuasive to defeat institution in this case, for the same reasons and evidence proffered by Patent Owner as outlined above.

Accordingly, for the reasons expressed above and based on the record before us, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that independent claim 1 is unpatentable as obvious over the combination of Veldhuis and Galand.

4. Dependent Claims 2, 3, 6, 7, 10, 11, 14, and 16

Claims 2, 3, 6, 7, 10, 11, 14, and 16 depend, directly or indirectly, from independent claim 1. Ex. 1001, 5:62–6:40. Based on the record before us, we determine that Petitioner's analysis for claims 2, 3, 6, 7, 10, 11, 14, and 16 does not remedy the deficiencies identified above with respect to independent claim 1. *See* Pet. 68–72. Thus, for the same reasons discussed in connection with the challenge to claim 1, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that any of claims 2, 3, 6, 7, 10, 11, 14, and 16 is unpatentable as obvious over the combination of Veldhuis and Galand.

G. Alleged Obviousness of Claims 1–17 over the Combination of Veldhuis, Galand, and Reaves

Petitioner contends claims 1–17 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of Veldhuis (Ex. 1008), Galand (Ex. 1009), and Reaves (Ex. 1010). Pet. 72–78. Patent Owner opposes Petitioner's contentions based on its same arguments for independent claim 1. *See* Prelim. Resp. 47. Based on the record before us, we determine that Petitioner's analysis for claims 4, 5, 8, 9, 12, 13, 15, and 17, for which Reaves is invoked, does not remedy the deficiencies identified above with respect to independent claim 1. *See* Pet. 72–78. Thus, for the same reasons discussed in connection with the challenge to claim 1, we determine that Petitioner has not established a reasonable likelihood that

it would prevail in showing that any of claims 1–17 is unpatentable as obvious over the combination of Veldhuis, Galand, and Reaves.

IV. CONCLUSION

Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any of claims 1–17 of the '757 patent under any of its proffered challenges.

V. ORDER

For the reasons given, it is hereby

ORDERED that the Petition is *denied*, and an *inter partes* review of U.S. Patent No. 6,339,757 B1 is not instituted.

For PETITIONER:

Lestin L. Kenton
Richard A. Crudo
Jennifer Meyer Chagnon
Masayuki Iino
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
lkenton-PTAB@sternekessler.com
rcrudo-PTAB@sternekessler.com
jchagnon-PTAB@sternekessler.com
miino-PTAB@sternekessler.com
PTAB@sternekessler.com.

For PATENT OWNER:

W. Karl Renner
Indranil Sarkar
Roberto Devoto
Richard Wong
FISH & RICHARDSON P.C.
axf-ptab@fr.com
sarkar@fr.com
devoto@fr.com
rwong@fr.com
IPR07314-0043IP1@fr.com