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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* STEVEN HECKENLIVELY

_____

Appeal 2019-001216
Application 14/463,907
Technology Center 2800

_____

Before CATHERINE Q. TIMM, CHRISTOPHER C. KENNEDY, and
LILAN REN, *Administrative Patent Judges.*

TIMM, *Administrative Patent Judge.*


DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Steven D. Heckenlively (Appellant)[1]
appeals from the Examiner's decision to reject claims 61–90 under 35
U.S.C. § 112(b) as indefinite and the Examiner's objection to the
Specification. We have jurisdiction under 35 U.S.C. § 6(b).

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37
C.F.R. § 1.42. Appellant identifies the real party in interest as himself, the
inventor Steven D. Heckenlively, who is prosecuting his application without
an attorney, i.e., *pro se*. Appeal Br. 5.

We AFFIRM, but because our reasoning differs from that of the Examiner, pursuant to our authority under 37 C.F.R. § 41.50(b), we denominate our affirmance as involving a new ground of rejection. We do not sustain the Examiner's objection to the Specification.

Through our new ground of rejection we endeavor to more clearly set forth the reasons why the claims are indefinite and to provide Appellant guidance on how to overcome the rejection.

CLAIMED SUBJECT MATTER

The claims are directed to a music yielding system (*see, e.g.*, claim 61), a method for controlling music yielding devices (*see, e.g.*, claim 71), a computing device for controlling music yielding devices (*see, e.g.*, claim 81), and a computing device for analyzing music (*see, e.g.*, claim 88).

The music yielding system, at a minimum, includes a music yielding device (0212 in Figure 2) and a controller (0202 in Figure 2). Spec.[2] ¶ 99.

The music yielding device 0212, also called an engine, yields (generates) one or more first sets of notes 0211. Spec. ¶ 99. The yielded first sets of notes 0211 have musical properties (first attributes) that affect the generation of melodies. Spec. ¶¶ 99, 139, 181. These first attributes include properties such as scalar first attributes (Spec. ¶¶ 183–187; Figure 8) (starting note, size of a set of notes, etc.)), one dimensional attributes (Spec. ¶¶ 206–217; Figure 9) (note direction, note topology, music intervals, etc.)), and two dimensional attributes (Spec. ¶ 218; Figure 10 (two dimensional Cartesian square of intervals)).

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[2] References to "Spec." are to the Second Substitute Specification filed September 13, 2016.

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The music yielding device sets system first criteria 0213 in response
to first conformance evaluating functions 0203 data received from a
controller 0202. Spec. ¶ 100.

The first conformance evaluating functions are computer programs
that determine conformance to first attributes. Appeal Br. 431 (Appendix
01). According to Appendix 01 as reproduced in the Appeal Brief, a
conformance evaluating function may, for instance, determine if a first set of
notes at note position NP conforms to a maximum distance of a set of notes
0804 value D. Appeal Br. 432.

The controller 0202 retrieves the first sets of notes, sets first criteria to
first conformance evaluating functions that calculate second attributes of the
first sets of notes, compare the second attributes to the first attributes, and
return "one or more of the second degrees of conformance." Spec. ¶¶ 100,
103, 105. The degree of conformance may be true/false or yes/no (Spec.
¶¶ 159, 374), i.e., either the second attributes match the first attributes or
they do not.

Claim 61, reproduced below with outlining ((a), (b), (c), etc.),
reference numerals from the figures, examples, and some reformatting,[3] is
illustrative of the claimed subject matter:

61. A music yielding system, comprising:

[(a)] one or more music yielding devices [Fig. 2, at 0212]
comprising:

first circuits and first software to perform actions
comprising:

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[3] Particularly, we reformat the indenting and add language so that the
meaning is consistent with our understanding of the invention as described
in the Specification.

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[(a1)] yielding one or more first sets of notes comprising:

one or more musical notes [0211];

[the musical notes 0211] conforming in one or more predetermined minimum first degrees to one or more first attributes [e.g., starting note, size of a set of notes, etc.] of one or more of the first sets of notes; and

[(a2)] setting one or more first criteria [0213], the first criteria determining one or more second degrees of conformance of one or more of the first sets of notes to one or more of the first attributes; and

[(b)] one or more controllers [0202] comprising:

second circuits and second software to perform actions comprising:

[(b1)] receiving one or more first input indications [e.g., Fig. 8, at 0802–06 (input indications of starting note (input indication C4), size of a set of notes (input indication 6), etc.)] comprising:

one or more of the first attributes [e.g., starting note, size of a set of notes, etc.]; and

[(b2)] causing one or more of the first criteria [0213] to be set to one or more first conformance evaluating functions [0203; Appendix 01],

the first conformance evaluating functions [0203; Appendix 01] calculating one or more second attributes [e.g., starting note, size of a set of notes, etc.] of one or more of the first sets of notes, comparing one or more of the second attributes to one or more of the first attributes and returning one or more of the second degrees of conformance;

wherein the music is yielded.

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Appeal Br. 275 (Claims Appendix) (formatting added).

OPINION

*Objection to the Specification*

In the Office Action Appealed from, i.e., the Non-Final Office Action of October 5, 2017 (Non-Final Act.), the Examiner objects to the disclosure because "it includes terminology which is so different from that which is generally accepted in the art to which this invention pertains that a proper search of the prior art cannot be made." Non-Final Act. 2–3. The Examiner does not reproduce this portion of the objection in the Answer. Ans. 3. Thus, we assume it has been withdrawn and we do not reach it.

Further in the Office Action appealed from, the Examiner objects to some amended terms as not setting forth what Appellant regards as the invention and for not being supported by the disclosure as originally filed. Non-Final Act. 3. The Examiner's objection arises from changes in language introduced into the Specification via two substitute specifications, the First Substitute Specification[4] and the Second Substitute Specification.[5] Ans. 2.

In the Answer, the Examiner restates the basis for the objection as follows:

> In the specification, Appellant has amended terms such as "transfer objects," "transfer origin," "transfer destination," to "musical data item," "musical data source," "musical data destination." These amendments do not more clearly set forth

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[4] Clean version of the first Substitute Specification filed February 26, 2016 (1st Sub. Spec.). Appellant also filed a marked up version on February 26, 2016 (1st Markup).

[5] Clean version of the Substitute Specification filed September 13, 2016 (Spec.). Appellant also filed a marked up version on September 13, 2016 (2nd Markup).

what Appellant considers to be his invention, and are terms that
are not supported by the disclosure as originally filed.
Correction is required.

Ans. 2.

To the extent that the objection relates to the indefiniteness of
language used in the claims, we will treat those issues when discussing the
indefiniteness rejection.

To the extent that the objection is on the ground that "musical data
item," "musical data source," "musical data destination," and other terms are
new matter, we are mindful of a potential jurisdictional question. Only
where the alleged new matter is introduced into or affects the claims and
necessitates their rejection on this ground does the issue become appealable.
Manual of Patent Examining Procedure (MPEP) § 608.04(c) (rev. 8, Jan.
2018); *In re Hengehold*, 440 F.2d 1395, 1404, (CCPA 1971) (holding that
discretionary, procedural, or nonsubstantive issues not directly connected
with the merits of rejection are not appealable but are instead decided by
petition to the Director).

We determine that the terms "musical data item," "musical data
source," and "musical data destination" are used in the claims, *see, e.g.*,
claims 64–67, 74–77, and 82–84. Because the objection affects the claims,
we will review the objection of those terms. The issue is whether Appellant
has identified a reversible error in the Examiner's finding that various terms
that Appellant renamed lack support in the original Specification filed on
August 20, 2014.

Appellant has identified such an error.

As can be seen from the First Marked Up Substitute Specification
filed February 26, 2016 (1st Markup), Appellant first amended "portal" to

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read "transfer." *See, e.g.*, 1st Markup ¶ 102 (changing "portal origin" to "transfer origin," and "portal destination" to "transfer destination.") and ¶ 103 (changing "portal objects" to "transfer objects.").

As can be seen from the Second Marked Up Substitute Specification filed September 13, 2016 (2nd Markup), Appellant then changed "transfer origin" to "musical data source," "transfer destination" to "musical data destination," and "transfer objects" to "musical data items." 2nd Markup ¶¶ 102–103. Claims 64–67, 74–77, and 82–84 were likewise changed.

Appellant contends that there is a "clear taxonomy of nomenclature" for those elements and the definitions for the elements has not changed. Appeal Br. 177–185. For instance, whether the origin element is named a "portal origin," a "transfer origin," or a "musical data source," the element is described the same way as either, (1) "a data file within an environment external to the system" (1st and 2nd Markups ¶¶ 102, 104, 112), (2) "a first process within an environment external to the system" (¶ 109), (3) "system music yielding device 0212" (¶ 114), (4) "system controller 0202" (¶ 115) or (5) "system music analyzing device 0209" (¶ 116). 1st Markup and 2nd Markup ¶¶ 104, 109, 112, 114, 115, 116.

35 U.S.C. § 132 forbids the addition of new matter into the disclosure of the invention and is closely related to the written description requirement of 35 U.S.C. § 112(a), which essentially forbids the addition of new matter into the claims. *Schering Corp. v. Amgen Inc.*, 222 F.3d 1347, 1352 (Fed. Cir. 2000). The Examiner has the initial burden of presenting evidence of reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims. *In re Wertheim*, 541 F.2d 257, 263 (CCPA 1976). The written description requirement serves "to ensure that the inventor had possession, as of the filing date of the

application relied on, of the specific subject matter later claimed by him; how the specification accomplishes this is not material." *Id.* at 262. Rephrasing is allowed as long as the substituted word conveys the same concept. *See In re Anderson*, 471 F.2d 1237, 1244 (CCPA 1973) ("The question, as we view it, is not whether 'carrying' was a word *used* in the specification as filed but whether there is *support* in the specification for employment of the term in a claim; is the concept of carrying present in the original disclosure?"). Nor is a renaming alone enough to support a finding of new matter and lack of support. *See, e.g.*, *Schering Corp.*, 222 F.3d at 1352–53 (holding that replacing the terminology "leukocyte interferon" with the term IFN-α in a manner that indicated the two terms had the same meaning was not new matter).

The Examiner here has merely pointed out that Appellant has renamed various terms. The Examiner has not provided any evidence or explanation indicating that the concepts conveyed have been changed. Thus, the Examiner has not met the burden of showing that the renaming resulted in new matter. We do not sustain the Examiner's objection to the Specification.

*Indefiniteness*

The Examiner maintains a rejection of claims 61–90 as indefinite under 35 U.S.C. § 112(b). Ans. 2–3.

35 U.S.C. § 112(b) requires Appellant's Specification "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." "As the statutory language of 'particular[ity]' and 'distinct[ness]' indicates, claims are required to be cast in clear—as opposed to ambiguous, vague, indefinite—terms." *In re Packard*, 751 F.3d 1307, 1313 (Fed. Cir.

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2014). Exact precision is not required. The test for determining the question of indefiniteness may be formulated as whether the claims "set out and circumscribe a particular area with a reasonable degree of precision and particularity." *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971). With regard to the reasonableness standard, one must consider the language in the context of the circumstances. *Packard*, 751 F.3d at 1313. Language is an imprecise method of drawing boundaries delineating patent rights, thus unreasonable precision cannot be demanded. *Id.* On the other hand, the claims must notify the public of what they are excluded from making and using. *Id.* For this reason, an applicant is required to use language as precise as the subject matter reasonably permits. *Id.*

The Examiner begins the rejection by stating that "[t]he claim(s) are narrative in form and replete with indefinite language," "[t]he structure which goes to make up the device must be clearly and positively specified," and "[t]he structure must be organized and correlated in such a manner as to present a complete operative device." Ans. 2. In the next few paragraphs, the Examiner lists specific terms the Examiner determines are unclear and indefinite, and, lastly, the Examiner closes with a paragraph stating there are similar unclear terms in "[t]he remaining claims." Ans. 2–3.

The Examiner's beginning paragraph does not point out specific instances of indefiniteness and, thus, fails to give Appellant, who is prosecuting the application *pro se*, the guidance necessary to overcome the rejection. Further, the next paragraphs merely provide a laundry list of claim terms without adequately explaining why the terms are indefinite. We determine that the Examiner overlooked, or did not adequately explain, a number of issues of indefiniteness.

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Although Appellant has identified reversible errors in some of the Examiner's determinations of indefiniteness, we conclude that the claims are indefinite. We endeavor to more thoroughly explain the indefinite aspects of the claims below. We start by pointing out areas of indefiniteness not discussed by the Examiner and we denominate the entirety of our discussion a new ground of rejection to give Appellant an opportunity to respond.

*"Comprising" and "One or More"*

For all claims, we determine that the many instances of "comprising" and "one or more" makes the claims indefinite. We discuss the issue in terms of part (a) of claim 61, but the issue arises throughout the claims.

The portion of claim 61 we identify as part (a) reads as follows:

one or more music yielding devices comprising:

first circuits and first software to perform actions comprising:

yielding one or more first sets of notes comprising:

one or more musical notes;

conforming in one or more predetermined minimum first degrees to one or more first attributes of one or more of the first sets of notes;

and setting one or more first criteria, the first criteria determining one or more second degrees of conformance of one or more of the first sets of notes to one or more of the first attributes; and

Appeal Br. 275 (Claims Appendix).

Appellant's multiple use of "comprising" in the body of the claims renders the claims indefinite.

"'Comprising' is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim." *In re Crish*, 393 F.3d 1253, 1257 (Fed. Cir. 2004) (quoting *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997)). "Comprising" is customarily used as a transitional phrase between the preamble and the body of the claim, e.g., the use of "comprising" between "[a] music yielding system" and clause (a) of claim 61.

Appellant uses "comprising" at many points within the body of the claims. The use of "comprising" in the body of the claim can over-broaden the scope of the claim. *See, e.g.*, *Promega Corp. v. Life Techs. Corp.*, 773 F.3d 1338, 1350 (Fed. Cir. 2014), *rev'd and remanded on other grounds*, 137 S. Ct. 734 (2017) (holding that the use of "comprising" before the recitation of a set of loci, improperly expanded the claims at a key limitation); *MagSil Corp. v. Hitachi Global Storage Techs., Inc.*, 687 F.3d 1377, 1381 (Fed. Cir. 2012) (holding the claim must tie key claim limitations to what is enabled by the written description).

To illustrate the problem in Appellant's claims, we discuss the use of "comprising" in part (a1) of claim 61. Here, the phrase "first sets of notes *comprising*: one or more musical notes" (Claim 61(a) (emphasis added)) is indefinite because the Specification only describes sets of notes as musical notes. The Specification indicates that a note and a musical note are referring to the same thing. *See* Spec. ¶¶ 16–17 (discussing "musical notes," "notes an instrument may provide," and "set of notes"). The term "comprising" implies that a note can include things other than a musical note, but it is not known what else a note might encompass other than a musical note. Thus,

the use of "comprising" in this context is indefinite as the ordinary artisan cannot determine the scope of a "note" that is broader than a musical note.

The use of "one or more" in "first sets of notes comprising: *one or more* musical notes" (claim 61(a) (emphasis added) also renders the phrase indefinite because Appellant is using the word "set" as a noun with a meaning most consistent with the Specification as "a number of things of the same kind that belong or are used together." Merriam-Webster.com/ dictionary/set (last accessed Jan. 2, 2020); Spec. ¶¶ 184–187 (describing a set of notes as having a starting note, a size (e.g., number of notes such as 5, 6, 7, etc.), a maximum distance (distance between musical scale positions of Note[i] and Note[i-1]), and a range); ¶¶ 208–209 (describing sets of notes as having note directions, note topology). Thus, a set of notes must have more than one note and "one or more" contradicts this meaning and is indefinite.

Further, the claim would be clearer if some of the other instances of "one or more" were removed. That Appellant removes the "one or more" phrases when reproducing the claims in the Appeal Brief is evidence that Appellant understands that the phrase obscures the understanding of the claims. *See, e.g.*, Appeal Br. 6. "[A]n indefinite article 'a' or 'an' in patent parlance carries the meaning of 'one or more' in open-ended claims containing the transitional phrase 'comprising.'" *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000). Thus, it is adequate to use "a" rather than "one or more" in the claims in most instances.

For instance, the following revision of claim 61, part (a) would more clearly set forth the scope of the claim while still allowing for the claim to be open to the presence of other music yielding devices, controllers, and other actions.

61. A music yielding system, comprising:

[(a)] a music yielding device comprising first circuits and first
software to perform actions comprising

[(a1)] yielding a first set of musical notes having a first
attribute; and

[(a2)] setting first criteria, the first criteria determining
whether the first set of notes conform to the first
attribute; and

Because all of the claims overuse the terms "comprising" and "more
or more" in the manner described above, we reject claims 61–90 as
indefinite. We denominate the rejection as a new ground of rejection to
allow Appellant the opportunity to respond. Directions on how to proceed
with prosecution or rehearing are provided at the end of our opinion.

*The specific terms rejected by the Examiner*

After setting forth generalized reasons for rejecting the claims as
indefinite, the Examiner list terms the Examiner identifies as indefinite. Ans.
2–3. The Examiner ends with a paragraph stating that "[t]he remaining
claims have similar issues." Ans. 3.

As a first matter, it is sometimes appropriate for an examiner to use
examples from some claims in explaining an indefiniteness rejection that
applies to other claims, but only if the examples illuminate the basis of
indefiniteness for the other rejected claims so that the applicant may
understand the full basis for the rejection. *In re Hammack*, 427 F.2d 1384,
1389 (CCPA 1970); 35 U.S.C. § 132 (the Examiner must state the reasons
for rejection "together with such information and references as may be
useful in judging of the propriety of continuing the prosecution of [the]
application."); *Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (35
U.S.C. § 132 "is violated when a rejection is so uninformative that it

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prevents the applicant from recognizing and seeking to counter the grounds for rejection."). Thus, we determine that the rejection is limited to the specific language listed in the rejection and any language substantially the same as the language of the list. No language, other than that discussed below, can be said to be rejected by the Examiner. To say otherwise would be a violation of 35 U.S.C. § 132 and a violation of Appellant's due process rights.

Also, not before us is the issue of whether the terms "musical data items," "musical data source," "musical data destination," "music is yielded" and "near synchrony" are indefinite. Although the Examiner lists those terms as indefinite, later in the Answer the Examiner withdraws the rejection of certain claims on the basis of those terms. Ans. 22–24. Thus, we treat the rejection as it relates to those terms as withdrawn and not before us.

As another matter, we note that the Examiner's first list of terms is not associated with any particular claim. In order to properly review the indefiniteness issues, it is necessary to consider the terms in the context of the specific claims where the terms are used. Thus, we organize our review by claim. In the spirit of 37 C.F.R. § 41.37(c)(1)(iv), where the issues are the same for multiple claims, we select a single claim as representative for deciding the issue.

*Claim 61*

We first turn to claim 61, which we select as representative for deciding the issues as to the indefiniteness of "conformance evaluating functions," "conforming in one or more predetermined minimum first degrees"/"one or more second degrees of conformance" (collectively listed

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as "conforming in one or more predetermined minimum first (second)

degrees"), and "input indications."

We reproduce claim 61 as we previously formatted it above and with

the claim terms at issue highlighted:

61. A music yielding system, comprising:

[a] one or more music yielding devices [Fig. 2: 0212]
    comprising:

    first circuits and first software to perform actions
    comprising:

        [a1] yielding one or more first sets of notes comprising:

            one or more musical notes [0211];

            [the musical notes 0211] *conforming in one or
        more predetermined minimum first degrees* to one
        or more first attributes [e.g., Fig. 8: 0802–06] of
        one or more of the first sets of notes [see 2nd Sub.
        Spec. ¶ 99]; and

        [a2] setting one or more first criteria [0213], the first
        criteria determining *one or more second degrees of
        conformance* of one or more of the first sets of
        notes to one or more of the first attributes; and

[b] one or more controllers [0202] comprising:

    second circuits and second software to perform actions
    comprising:

        [b1] receiving one or more *first input indications* [Fig.
        2:0201, Fig. 5:0527] comprising:

            one or more of the first attributes; and

        [b2] causing one or more of the first criteria [0213] to
        be set to one or more *first conformance evaluating
        functions* [0203],

> the *first conformance evaluating functions* [0203;
> Appendix 01] calculating one or more second
> attributes of one or more of the first sets of notes,
> comparing one or more of the second attributes to
> one or more of the first attributes and returning *one
> or more of the second degrees of conformance*;

wherein the music is yielded.

Appeal Br. 275 (Claims Appendix) (formatting and emphasis added).

*Conforming in one or more predetermined minimum first (second) degrees*

As a first matter, we point out an issue not identified by the Examiner. We determine that the recitation of "conforming in one or more predetermined minimum first degrees . . ." in the portion of claim 61 we label (a1), is indefinite because it is unclear what thing is to conform. The Specification describes *musical notes* as "conforming in one or more predetermined minimum first degrees to one or more first attributes." Spec. ¶ 99. But "conforming in one or more predetermined minimum first degrees to one or more first attributes" is recited in claim 61 at the same level as "yielding" and "setting," i.e., the actions to be performed by the first circuits and first software. Because the Specification indicates that it is the musical notes that conform in predetermined minimum first degrees to first attributes of the first set of notes, we have included language in brackets in our reproduction of the claim above that resolves this issue of indefiniteness.

We also agree with the Examiner's reason for rejecting the language as indefinite. The Examiner determines that the recitations of conforming in one or more "predetermined minimum first degrees" and "second degrees" are indefinite. Ans. 3. Similar "degrees" language is recited in claims 67, 69, 70, 71, 79, 80, 81, 84, and 86, which are likewise indefinite.

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Appellant contends that the term "conforming in one or more predetermined minimum first (second) degrees" would have been understood by a person of ordinary skill in the art to mean "complying with one or more conclusively fixed and least admissible extents." Appeal Br. 29. Appellant developed this meaning using selected definitions of the individual words from Merriam-Webster dictionary. Appeal Br. 20–21. According to Appellant paragraphs 99, 374, 454, and 455 of the Specification and associated figures support Appellant's proffered definition. Appeal Br. 29–30.

A preponderance of the evidence supports the Examiner's determination of indefiniteness.

First, Appellant's proffered definition does not provide clear boundaries for the limitations. Particularly, the phrase "least admissible extents" is as vague as "minimum first (second) degrees." It adds no guidance on how to determine the degree or the least admissible extent or what the scope of the degree might be.

Second, the Specification does not add clarity. Paragraph 99 merely use the words "minimum first degrees" and "second degrees" of conformance without providing a measure of the extent of the degree or what threshold is a minimum threshold of conformance. Paragraph 159 indicates that the conformance can be quantized to a predetermined degree of either true or false. Paragraph 374 articulates a similar yes/no conformance. But paragraph 554 indicates that the predetermined degree of true or false is only an example. Thus, the extent of minimum first degrees and second degrees is broader than a determination that attributes match or don't match (true/false or yes/no).

It is reasonable to read "degree" as the extent or measure of conformance in keeping with the Merriam-Webster meaning cited by Appellant, i.e., "the extent, measure, or scope of an action, condition, or relation." Appeal Br. 21. In this reading, the word "degree" is a term of degree. To be definite terms of degree must provide enough certainty to one of skill in the art when read in the context of the invention so that person may determine the objective boundaries of the claim. *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370–71 (Fed. Cir. 2014); *see also Halliburton Energy Servs., Inc. v. M–I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008) ("Even if a claim term's definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope.").

Because the boundary for "predetermined minimum first degrees" and "second degrees of conformance" is unclear, the language is indefinite. Thus, we sustain the Examiner's rejection of all the claims that use the "degrees" language, i.e., the rejection of claims 61, 67, 69, 70, 71, 79, 80, 81, 84, and 86. But we also enter a new ground of rejection on the basis that (a1) should recite that the *musical notes* are "conforming" because "conforming" is not an action performed by the circuits and software.

*"Conformance evaluating functions"*

The phrase "conformance evaluating functions" is recited in claims 61, 69, 71, 79, 81, and 86. But it will suffice to discuss the rejection in terms of claim 61. We do not sustain this basis of rejection.

Claim 61 itself illuminates the meaning of "conformance evaluation functions" by setting forth actions that a "conformance evaluation function" performs. The actions include performing steps of calculating second

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attributes of the first sets of notes, comparing the second attributes to the first attributes, and returning second degrees of conformance. Claim 61 (b2). These actions take place in the circuits and software of controllers. Claim 61(b).

Appellant contends that "conformance evaluating function" is clear and definite because the phrase refers to "a subroutine which determines correspondence," a meaning that conforms with definitions of the individual terms from Merriam-Webster dictionary, and with the meaning conveyed by paragraph 105 of the Specification, Figure 2, and Appendix 01. Appeal Br. 18–19.

Appellant has identified a reversible error in the Examiner's rejection.

As pointed out by Appellant, and not disputed by the Examiner, the Specification uses the word "function" in the context of a function that receives a data input, such as first input indications recited in claim 61, performs calculations, and returns a result. The function would be understood, according to its ordinary meaning, as a computer subroutine that performs calculations. Appeal Br. 15.

In claim 61, the data received by the "first conformance evaluating functions" is in the form of first input indications comprising first attributes and the function compares second attributes it has calculated with the first attributes to determine how closely the two sets of attributes correspond to each other. According to the Examiner, "'[c]onformance' or 'correspondence' of an 'attribute' of a note (para. 0105 of the specification) does not have a clear meaning to one of ordinary skill in the art of electronic musical instruments." Ans. 5. Further according to the Examiner, "[m]usical notes have many different 'attributes' and it is not clear from anything in Appellant's disclosure as to which 'attribute' is being evaluated." Ans. 5.

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We disagree with the Examiner.

First, the question of whether the phrase has a clear meaning to one of ordinary skill in the art of electronic musical instruments is somewhat off the mark as it neglects the fact that an applicant can be their own lexicographer and the definiteness of the language employed in a claim must be analyzed not in a vacuum, but in light of the teachings of the particular application. *In re Moore*, 439 F.2d at 1235. The specification is the single best guide to determining the meaning of the claim terms. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc).

To be sure, to act as its own lexicographer, a patentee must "clearly set forth a definition of the disputed claim term" when the meaning is other than its plain and ordinary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must clearly express an intent to redefine the term.

Here, however, Appellant is using the terms in accordance with their ordinary and accustomed meaning and the Specification provides a guide to the ordinary meaning consistent with the Specification. The Specification makes clear that the "conformance evaluating functions" compare second and first attributes to see if they are the same or different. The controller 0202 sets first criteria to first conformance evaluating functions (e.g., functions in computer code of Appendix 01) that calculate second attributes of the first sets of notes, compares the second attributes to the first attributes and "return[s] one or more of the second degrees of conformance." Spec. ¶ 105. The degree of conformance may be true/false or yes/no (Spec. ¶¶ 159, 374), which indicates that conformance evaluating functions are

mathematical functions that determine whether the second attributes conform or correspond to the first attributes.

Here, the Specification describes the "conformance evaluating functions" in a way that illuminates the meaning and renders the phrase definite.

As to the Examiner's concern that musical notes have many attributes and it is not clear which attribute is being evaluated (Ans. 5), the fact that the claim is open to the selection of any first attribute does not make the claim indefinite, only broad. "Breadth is not indefiniteness." *In re Gardner*, 427 F.2d 786, 788 (CCPA 1970). The Examiner has not established that the phrase "conformance evaluating function" is indefinite due to the breadth of attributes that may be used in the calculation. Thus, we do not sustain the Examiner's rejection of "conformance evaluating function" as indefinite.

We note that, in the Non-Final Office Action appealed from (Non-Final of October 5, 2017), the Examiner had also objected to "conformance evaluating function" as unclear in the context of stating that the Specification includes terminology that is so different from that generally accepted in the art that a proper search of the prior art could not be made. Non-Final Act. 2–3. The Examiner does not repeat this portion of the objection when reproducing the objection in the Answer nor does the Examiner state it as withdrawn. Thus, it is unclear whether the Examiner is maintaining this portion of the objection. In any case, the portion of the objection determining that "conformance evaluating function" is unclear falls with the indefiniteness rejection.

We do not sustain the Examiner's determination that the phrase "conformance evaluating functions," as recited in claims 61, 69, 71, 79, 81,

and 86, is indefinite. Thus, we do not sustain either the rejection or objection on this basis.

*"First input indications"*

The Examiner determines that the term "input indications" is indefinite. Ans. 2. According to the Examiner, although "input" is understood in the art, it remains unclear how the term "indication" is further limiting. Ans. 7.

Appellant contends that, based on meanings of the two terms taken from the Merriam-Webster dictionary, the phrase "input indication" would be understood by a person of ordinary skill in the art to mean "information fed into a system/device, the information serving to state that which is comprised therein." Appeal Br. 36. Appellant also points to paragraph 101 as supportive of the proffered definition. *Id.* Paragraph 101 states that "[t]he system controller 0202 may receive one or more *system first input 0201 data indications* which may include the first attributes of the system first sets of notes 0211 yielded by the system music yielding device 0212." *Id.*; Spec. ¶ 101 (emphasis added).

We agree with Appellant that adding the word "indication" does not make the phrase "input indications" indefinite. Paragraph 101 conveys that input indications are input data indications and are information, such as information including data on the first attributes (e.g., data about scalar attributes such as starting note, size of a set of notes, etc., data about one dimensional attributes, such as note direction, note topology, music intervals, etc., and data about two dimensional attributes such as two dimensional Cartesian square of intervals). Spec. ¶¶ 183–187, 206–218; Figs. 8–10. For instance, an "input indication" is information that represents

an underlying property, such as the input indication "6" at 0803 in Figure 8 that represents the size of a set of notes.

Although we do not agree with the Examiner that "indications" renders "input indications" indefinite, we determine that "first input indications comprising: one or more of the first attributes" is indefinite. "Comprising" indicates that first attributes is a part of the first input indications, but the Specification explains that the input indications are information symbols and the first attributes are musical properties. The two things are different and although the information represents the properties (attributes) of the set of notes, the input indications do not *comprise* the first attributes.

In addition, when we consider the meaning of "input indications" in light of dependent claim 67, the term becomes indefinite. Claim 67 recites both first attributes and first input indications in a list of musical data items "selected from the group consisting of," i.e., in a Markush group. *See Abbott Labs. v. Baxter Pharm. Prods., Inc.*, 334 F.3d 1274, 1280 (Fed. Cir. 2003) ("A Markush group is a listing of specified alternatives of a group in a patent claim, typically expressed in the form: a member selected from the group consisting of A, B, and C."). Because a Markush group is a listing of specified alternatives, the listing of both "first attributes" and "first input indications" conveys that these two elements are distinct from each other. The problem is that "first input indications" cannot both *comprise* "first attributes" and be an alternative to "first attributes." Dependent claim 67, which must further limit the claim from which it depends, is inconsistent with claim 61. Claim 61 requires first attributes "comprise," i.e., be a part of, the "first input indications—a species of the genus of "first input indications." But claim 67 requires the first input indications be different and

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distinct from first attributes. This inconsistency between claims renders the meaning of "first input indications" indefinite because two plausible meanings are possible.

We determine the use of "first input indications" in claims 61, 67, 71, 77, 81, and 84 renders the term "first input indications" indefinite because there is an inconsistency in use between claims 61 and 67, between claims 71 and 77, and between claims 81 and 84. The inconsistency could be eliminated by deleting "first attributes" from the Markush groups of claims 67, 77, and 84. Alternatively, the reference to "first input indications" could be deleted from both claims 61 and 67 as well as the other claims and claim 61 amended to recite "receiving first attributes." Removing the "first input indications" language would make the claim clearer given that the Specification does not discuss including data other than the attributes. Given that the actions comprise the receiving action, claim 61 would still be open to receiving other data.

The phrase "input indications" is recited in claims 61, 64, 67, 69, 71, 74, 77, 79, 81, 82, 84, and 86. Although we determine these claims are indefinite, we do so on grounds different from those of the Examiner.

*Claim 62 - Output Indications*

Claim 62 further limits claim 61 to a music yielding system including a music analyzing device. The music analyzing device includes third circuits and third software that calculates correlations within the first sets of notes and transmits first output indications comprising the correlations.

The Examiner determines that the term "output indications" is indefinite for reasons similar to the determination that "input indications" is indefinite.

Based on meanings of the individual words found in Merriam-Webster dictionary, Appellant develops a meaning for "output indication" as "information produced by a system/device, the information serving to state that which is comprised therein." Appeal Br. 58. According to Appellant, paragraphs 110 and 279 and associated figures support this meaning. Appeal Br. 58–59.

Claim 62 uses the term "output indications" in the same manner as the Specification. The Specification conveys that the "output indications" are data including correlation data. Paragraph 110 states that "[t]he system music analyzing device 0209 may transmit one or more first output 0210 data indications which may include one or more of the correlations." Spec. ¶ 110. Figure 16 shows a display screen for the output of an interval music analyzing device grid. Spec. ¶ 279. The Specification explains that the "screen displays multiple time series of color-coded musical intervals. These musical intervals, and their coordinates, are included within output indications, specifically correlations." Spec. ¶ 279.

Although the use of "output indications" in claim 62 is consistent with the use of the phrase in the Specification, like "input indications," there is an inconsistency in the use of "output indications" between claims. Claims 62 and 67 are representative. Claim 62 depends from claim 61 and requires a music analyzing device with circuits and software to perform a step of calculating correlations within first sets of notes and transmitting first output indications *comprising* the correlations. Claim 67 includes both "correlations" and "first output indications" as alternatives in a Markush group. For the reasons given above for "input indications," we agree with the Examiner that "output indications" is indefinite. Claims 62, 63, 66, 67, 72, 73, 76, 77, and 83 contain the language "first output indications." The

language of the other claims containing "output indications" is similarly indefinite. Thus, we sustain the Examiner's rejection of these claims, but on new grounds.

*Claim 63*

Claim 63 depends from claim 62 and includes three main wherein clauses. The first wherein clause further limits the transmitting action recited in claim 62. It reads:

> wherein the transmitting one or more of the first output indications further comprises:
>
>> performing in near-synchrony with one or more time progressions of one or more of the first sets of notes.

Appeal Br. 276 (Claims Appendix). We read the performing clause as requiring "performing [the transmitting] in near-synchrony with one or more time progressions of one or more of the first sets of notes."[6] The Specification defines "near-synchrony" as meaning "in synchrony except for processing delays which are very small relative to temporal events in the audio." Spec. ¶ 180. The Examiner has withdrawn the rejection of "near-synchrony" as indefinite. Ans. 23. Thus, the issue is not before us.

The second wherein clause of claim 63 recites a Markush group of first attributes. The Markush group, with the terms at issue highlighted, reads as follows.

> [(a)] one or more sizes of one or more of the first sets of notes,
> one or more ranges of one or more of the first sets of notes,
> one or more maximum *note distances* comprising:

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[6] We suggest "the transmitting" be added to claim 63 to make the claim clearer.

one or more counts of semitones or tones between two
or more first pitches of two or more of the notes of
one or more of the first sets of notes;

[(b)] one or more starting notes of one or more of the first sets
of notes, one or more first *note directions* comprising:

one or more of up or down or same from one second
pitch (I-1) to one second pitch(I) of the respective I-
1th and Ith notes of one or more of the first sets of
notes;

[(c)] one or more first note topologies comprising:

one or more first symbols each associated with one
first respective *pitch class* of one first note of one or
more of the first sets of notes; and one or more first
transitions from one of the first symbols to one of the
first symbols;

[(d)] one or more sets of *present musical intervals* of the first
sets of notes and

[(e)] one or more sets of *absent musical intervals* of the first
sets of notes; and

Appeal Br. 276–277 (Claim Appendix).

The Examiner determines that various terms used in the Markush
group are indefinite. Ans. 2. Specifically, "note distances" (found clause
[(a)] above), "note directions" (clause [(b)]), "note topologies" (clause [(c)]),
"present musical intervals" (clause [(d)]), and "absent musical intervals"
(clause [(e)]). *Id.*

*"Note distances"*

As a first matter, clause [(a)] is confusing because it lists three
different attributes (size, range, and maximum note distances) together and
then includes a sub-clause that appears to further limit only the maximum

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note distance. We read the clause as reciting three different attributes as
follows:

> (a1) one or more sizes of one or more of the first sets of
> notes,
> (a2) one or more ranges of one or more of the first sets of
> notes,
> (a3) one or more maximum note distances comprising:
> one or more counts of semitones or tones between two or more
> first pitches of two or more of the notes of one or more of the
> first sets of notes.

This reading of clause (a) is consistent with the Specification, which
describes size, range, and maximum note distance as three different
attributes, the size being the numeric input of the number of notes, the range
being embodied by the lowest and high notes in the set, and the maximum
distance as the numeric input of the maximum note distance within the
generated melodies. Spec. ¶¶ 185–186.

We agree with Appellant that the phrase "note distance," when read in
a way divorced from the claim, might be definite. As established by
Appellant and not disputed by the Examiner, one aspect of a musical note is
its pitch. Appeal Br. 78 (citing Harvard Dictionary of Music (defining "note"
as "more generally (especially in British usage) the pitch itself."). Given that
a set of notes will have multiple notes and these notes may vary in pitch,
there will be a distance between the pitches of different notes because
different pitches have different frequencies. Appeal Br. 78 (citing Harvard
dictionary of Music ("Any point on the continuum of musical pitch. This
continuum is analogous to the domain of musically useful frequencies, and
each point on it corresponds to some definite frequency within that
domain."). The Specification describes a maximum distance that is a
numeric input such as 5 notes, 6 notes, 7 notes, etc. Spec. ¶ 186. The

Specification offers the example of the chromatic scale of a piano, which has 7 notes between C4 and G4 and, thus a note distance of 7. Thus, the Specification informs the ordinary artisan that the maximum note distance is the number of notes between the highest pitch note and lowest pitch note of the set on a musical scale.

However, the problem is that claim 63 recites that one or more maximum note distances comprise "one or more counts of semitones or tones between two or more first pitches of two or more of the notes of one or more of the first sets of notes."

The "one or more" language renders the limitation vague and unclear as does the "counts of semitones or tones" language. The "one or more" language results in a myriad of permutations with no clear boundaries. This is true for the use of "one or more" before the listing of the other attributes of the Markush group as well. For instance, a first set of notes has only one starting note (e.g., C4 in the Figure 8 example), only one size (e.g., 6 notes in Figure 8), only one maximum note distance (12 in Figure 8), etc. Thus, "more" in the context of the claim is confusing and indefinite.

The "semitones or tones" language renders the limitation vague and indefinite because there is no evidence on this record that semitones or tones are the same as pitches and no discussion of semitones and tones in the Specification that guides the ordinary artisan to the meaning of note distance.

Thus, we agree with the Examiner that, as used in claim 63, "note distance" is indefinite.

*"Note directions"*

Clause (b) of claim 63 reads:

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[(b)] one or more starting notes of one or more of the first sets of notes, one or more first *note directions* comprising:

> one or more of up or down or same from one second pitch (I-1) to one second pitch(I) of the respective I-1th and Ith notes of one or more of the first sets of notes;

Clause (b), like clause (a), recites more than one attribute. It recites both starting notes and first note directions. *See* Spec. ¶ 184 (describing starting note) and ¶ 208 (describing note direction) as different attributes. It appears that the indented clause further limits only note directions. *See* Spec. ¶ 208 (describing note directions as the direction of frequency change relative to the prior note (e.g., as embodied by the pulldown list Up, Down, Same in Fig. 9)). Thus, we read the clause as follows:

> (b1) one or more starting notes of one or more of the first sets of notes,
> (b2) one or more first *note directions* comprising: one or more of up or down or same from one second pitch (I-1) to one second pitch(I) of the respective I-1th and Ith notes of one or more of the first sets of notes.

We agree with Appellant that the Examiner reversibly erred in determining "note directions" indefinite. The limitation must be read consistent with the Specification, which clearly describes the note direction as the audio frequency direction of a note in the set of notes relative to the frequency of the prior note in the set. Spec. ¶ 208. It is clear from the Specification that the note direction of a note of higher frequency (pitch) than the prior art note is "Up," the note direction of a note of lower frequency is "Down," and if the note has the same frequency as the prior note, its direction is "Same."

The Examiner bases the rejection on a reading of "first sets of notes" as encompassing a single note. Ans. 13–14. In so far as claim 61 encompasses a set of notes as a single note, we agree with the Examiner that the language "note direction" is indefinite. Claim 61 recites that "one or more first sets of notes compris[e] one or more musical notes" and, thus, encompasses a single note as a set. Claim 63 requires a set of notes have "note directions." But a single note cannot have "note directions." To this extent claim 63 is indefinite, but the indefiniteness may be resolved by amending claim 61 to read as we suggested above, i.e., by deleting "one or more" before "musical notes."

*"Note topologies" and "pitch class"*

The Examiner also determines that "note topologies" and "pitch class" are indefinite. This language is found in claim 63, clause (c), which reads as follows:

> [c] one or more first *note topologies* comprising:
>
>> one or more first symbols each associated with one first respective *pitch class* of one first note of one or more of the first sets of notes; and one or more first transitions from one of the first symbols to one of the first symbols.

Appeal Br. 277 (Claims Appendix) (emphasis added).

A preponderance of the evidence supports Appellant's contention that "pitch class" and "note topolog[es]" are definite terms.

First, Appellant has provided evidence that "pitch class" has an ordinary meaning in the art. *See* Appeal Br. 92 (citing Harvard Dictionary of Music, 4th edition, page 663 as providing "a single definition for the term 'pitch class' as: 'A pitch without reference to the octave or register in which

it occurs.'"). The Examiner does not dispute that "pitch class" has this meaning but instead states that the "class" of a note and the definition Appellant proffers do "not have a clear meaning to one of ordinary skill in the art of electronic musical instruments." Ans. 19. The Examiner provides no adequate evidence to support this position and Appellant's evidence indicates that pitch class has an ordinary and accustomed meaning in the art. And the Specification provides examples of notes in, for instance, pitch class C, pitch class G, etc. *See, e.g.*, Spec. ¶ 209 (describing an example of a note topology for a set of notes "C4 G4 D4# C4 G3 C3").

Moreover, the Specification describes a note topology as "a list of numeric topology inputs, each e.g. Any, 1, 2, 3, etc. Each topology input is a label for Note[i]." Spec. ¶ 209. For example the set of notes "C4 G4 D4# C4 G3 C3" may be labelled as "1 2 3 1 5 6." *Id.* The Specification provides further examples. For instance, a group of linear note labels 2201 in Figure 22 shows the labeling for the linear topology of "1 2 3 4 5 6" and linear note topology 2202 shows one sequence of qualifying notes, a sequence linear input notes 2203: "C4 D4 A4 G4 E4 B3." Spec. ¶ 212. Figure 23 shows an example where a group of cyclical topology labels 2301 show labeling for a cyclical topology of "1 2 1 4 1 6 2 8" for a sequence of cyclical input notes 2303: "C4 G4 C4 F4 C4 A3 G4 C5." *Id.*

The Specification provides guidance on the meaning of "note topology" sufficient for the ordinary artisan to understand the meaning of the term.

Only from the standpoint that claim 61 allows a set of notes to be a single note is the claim indefinite as to note topology. This is because note topology, like note direction, requires multiple notes. However, the

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amendment we suggest above to claim 61, i.e., deleting "one or more" before "musical notes," would resolve the issue.

*Present and absent musical intervals*

Claims 63, 67, 73, 77, and 84

The Examiner agrees with Appellant that the term "musical intervals" is clear to one of ordinary skill in the art of electronic musical instruments. Ans. 10. However, the Examiner determines that to say that a musical interval can be "absent" is not clear to one of ordinary skill in the art. *Id.* The Examiner further states that with regard to "present musical intervals," [i]t is unclear as to how one of ordinary skill in the art would arrive at that interpretation of 'present musical intervals' with dictionary definitions." Ans. 11.

Appellant contends that absent musical intervals are "pitch-pair relationships not existing" and "present musical intervals" are "pitch-pair relationships existing" and the Specification supports this interpretation. Appeal Br. 63, 100.

We agree.

Appellant cites the Harvard Dictionary of Music, 4th edition, page 413 as defining "interval" as "[t]he relationship between 2 pitches" and explains that this dictionary states that "[t]he interval between two pitches can be represented as the ratio of the string lengths required to produce those two pitches." Appeal Br. 61. The Examiner does not dispute this. Ans. 10.

Appellant's Figure 9 depicts an example screen display for a second type of first attributes, which are 1-dimensional. Spec. ¶ 206. Among the first attributes displayed are a list of initial musical intervals 0904 (pulldown menus for acceptable initial intervals), a list of final musical intervals 0905

(pulldown menus for acceptable final intervals), a list of present musical intervals 0906 (pulldown menus for intervals that must be present), and a list of absent musical intervals 0907 (pulldown menus for intervals that "must be absent."). Spec. ¶ 213.

Thus, when the meaning of "present musical intervals" and "absent musical intervals" is read in the context of Appellant's Specification, the meaning becomes clear. Present musical intervals are simply musical intervals that must be present amongst the inputted first attributes. Absent musical intervals means musical intervals that are barred, i.e., cannot be present as first attribute data inputs.

Appellant has identified a reversible error in the Examiner's determination that "present musical intervals" and "absent musical intervals" are indefinite.

*Note depths in time*

The Examiner determines that "note depths" is indefinite. Ans. 2. This term is found in the third wherein clause of claim 63. Claim 63 depends from claim 62, which requires a music analyzing device that calculates correlations within the first set of notes and transmits these correlations. The third wherein clause recites a Markush group of correlations.

The relevant part of the third wherein clause reads:

wherein one or more of the correlations further comprises:

one or more selected from the group consisting of:

one or more musical parts of one or more of the first sets of notes, one or more musical voices of one or more of the first sets of notes, one or more *note depths in time* comprising:

one or more time intervals between two or more of the
notes of one or more of the first sets of notes;

Appeal Br. 277 (Claims Appendix) (emphasis added).

Looking to the Specification, we determine that the above Markush

group clause, in fact, recites three separate correlation objects as follows:

(a) one or more musical parts of one or more of the first
sets of notes,
(b) one or more musical voices of one or more of the first
sets of notes, and
(c) one or more *note depths in time* comprising: one or
more time intervals between two or more of the notes of one or
more of the first sets of notes.

Although the Examiner merely lists "note depths" as indefinite, in the

context of claim 63, the question is whether "note depths in time" is

indefinite. Appellant uses the phrase "note depths in time" to convey a single

object of the claimed invention. This is evident from a reading of the

Specification. *See* Spec. ¶¶ 283–284 (describing note depth in time as a

Cartesian coordinate (interval column coordinate 1602) for a time dimension

labeled M in Figure 16); ¶ 174 (describing the size of a note depth count as

determined by a value entered by note depth in time 1302 as shown in

Figure 13). The Specification discloses note depth in time 1302 as a

"pulldown menu input, e.g. 1 note, 2 notes, 3 notes, etc, for the depth of note

depth in time. I.e. note depth in time 1302 is the span of past-time over

which analysis is to be performed." Spec. ¶ 249; Fig. 13. The Specification

also uses "note depth in time" to refer to a note depth in time for absent

intervals. Spec. ¶ 214. According the Specification a note depth in time for

absent intervals "is a numeric input for the depth of note depth in time

applicable for absent intervals." *Id.* This interval might be 1 note, 2 notes,

etc. *Id.* Figure 9 depicts a numerical input of 1 at 0909, which the

Specification explains corresponds to intervals as being between adjacent notes. *Id.*

The Examiner's determination of indefiniteness does not consider the disclosures in the Specification, which provide guidance on the meaning of "note depth in time." Ans. 12–13. Thus, we determine that the Examiner reversibly erred in determining that the use of "note depth" in the phrase "note depth in time" is indefinite.

*Claim 64*

The Examiner determined that "input indications" is indefinite. Ans. 2. Claim 64 limits the music yielding system of claim 61 to a system further comprising a musical data transferring device that performs the action of receiving one or more *third input indications* comprising one or more musical data sources and one or more musical data destinations. Appeal Br. 278 (Claims Appendix).

Appellant contends that "input indications," as used in the claims, conforms to the meaning "information fed into a system/device, the information serving to state that which is comprised therein" from Merriam-Webster. Appeal Br. 114. On first blush we would agree. However, when one reads "third input indications" in light of the Specification, the meaning becomes less clear. This is because third input indications comprise musical data sources and musical data destinations.

In order for third input indications to be information or data, musical sources and destinations must also be information/data. However, the Specification uses the terms "musical data source" and "musical data destination" is a broader manner to refer to things other than data files. The Specification uses the terms "musical data source" and musical data

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destination" to refer to processes and also uses the term to refer to devices such as the system yielding device, system controller, and system analyzing device. *See, e.g.*, Spec. ¶ 102 ("The musical data source may be e.g. a data file within an environment external to the system" and "[t]he musical data destination may be the system controller 0202"); ¶ 109 ("a musical data source . . . may be e.g. a first process within an environment external to the system, and a musical data destination . . . may be the system music analyzing device 0209"); ¶ 114 ("a musical data source . . . may be the system music yielding device 0212, and a musical data destination . . . may be e.g. a second process within an environment external to the system"); ¶ 115 ("a musical data source . . . may be the system controller 0202, and a musical data destination . . . may be e.g. a data file within an environment external to the system"); ¶ 116 ("a musical data source . . . may be the system music analyzing device 0209, and a musical data destination . . . may be e.g., a data file within an environment external to the system").

It appears Appellant may be intending to claim third input indications comprising *information about the identity of the* musical data sources and musical data destinations. This concept is conveyed in paragraph 289, which states that "[i]n loading a file for analyzing, multiple third input indications are made. First, the musical data source is *indicated to be* the selected file. Second, the musical data destination is *indicated to be* the music analyzing device." Spec. ¶ 289; *see also* Fig. 27. However, this not what is currently claimed. Thus, we agree with the Examiner that the language as used in claim 64 is indefinite.

As to the terms "musical data items," "musical data source," and "musical data destination," because the Examiner withdrew the rejection of

those terms, Appellant's arguments (Appeal Br. 114–128) are moot as there is no longer a rejection.

*Claim 65*

Claim 65 depends from claim 64 and, thus, is indefinite for the reasons provided above for claim 64. Further, this claim recites a limitation of "transmitting one or more *second output indications* comprising: one or more of the third attributes" (Appeal Br. 279) and the Examiner has determined "output indications" is indefinite (Ans. 2).

Appellant contends that, as argued for claim 62 above, "output indication" may be easily understood by a person of ordinary skill in the art to mean "information produced by a system/device, the information serving to state that which is comprised therein" and paragraphs 113 and 347 conform to this meaning. Appeal Br. 202.

Paragraphs 113 and 347 support Appellant's contention. Paragraphs 113 and 347 describe calculating third attributes, which is data, and transmitting this data as second output data indications. Spec. ¶¶ 113, 347. Appellant has identified a reversible error in the Examiner's rejection.

*Claims 67, 77, and 84*

Claim 67 includes a number of the terms we've already addressed above. The only new issue presented is with the language "environments external to the system." Appeal Br. 281. According to the Examiner, the phrase is indefinite because "'[e]nvironments' does not have a clear meaning to one of ordinary skill in the art of electronic musical instruments." Ans. 20. In response to Appellant's argument that a person of ordinary skill in the art would understand "environments external to the system" to mean "objects situated outside the system" (Appeal Br. 213), the Examiner contends that

"[t]he phrase 'objects situated outside the system' does not have a clear meaning to one of ordinary skill in the art of electronic musical instruments." Ans. 20.

We agree with Appellant that the Examiner reversibly erred in determining the phrase "environments external to the system" is indefinite.

The claim limitation at issue is found in a Markush group listing of musical data sources that includes "one or more first processes comprised within one or more *environments external to the system* and one or more first data files comprised within one or more of the environments *external to the system*." Appeal Br. 281 (emphasis added). The limitation simply requires that the processes and data files exist at a location outside the music yielding system of the claim.

We agree with Appellant that the Examiner has not established that the scope of "environments external to the system" would not have been understood by the ordinary artisan.

*Claim 90*

Claim 90 is directed to the computing device for analyzing music of claim 88 further comprising "one or more processors; one or more memories; and one or more storage devices." Appeal Br. 302.

The Examiner determines that claim 90 is indefinite because "the structural and functional relationships between the recited 'processors,' 'memories,' and 'storage devices' is not fully set forth." Non-Final Act. 5; Ans. 3.

Claim 90 is merely limiting the device to one including a processor, memory, and storage device. The Examiner has not explained why a person of ordinary skill in the art would not understand the scope of the claim

limitation. The language sets out and circumscribes computing devices that include a processor, memory, and storage device such that it can perform its function of computing.

We do not sustain the Examiner's rejection of claim 90.

CONCLUSION

We reverse the Examiner's objection to the Specification. The Examiner's decision to reject claims 61–90 under 35 U.S.C. § 112(b) as indefinite is affirmed, but denominated a new ground of rejection because our reasoning differs from that of the Examiner.

DECISION SUMMARY

| Claim(s) Rejected | 35 U.S.C. § | Reference(s)/Basis | Affirmed | Reversed | New Ground |
|---|---|---|---|---|---|
| 61–90 | 112(b) | Indefiniteness | 61–90[7] | | 61–90 |

TIME PERIOD FOR RESPONSE

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that the Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of

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[7] As explained above, many of the Examiner's specific determinations of indefiniteness were not sustained, but the Examiner's decision to reject the claims was upheld on new grounds.

the following two options with respect to the new ground of rejection to

avoid termination of the appeal as to the rejected claims:

   (1) *Reopen prosecution*. Submit an appropriate
amendment of the claims so rejected or new evidence relating
to the claims so rejected, or both, and have the matter
reconsidered by the examiner, in which event the proceeding
will be remanded to the examiner. . . .

   (2) *Request rehearing*. Request that the proceeding be
reheard under § 41.52 by the Board upon the same record. . . .


   No time period for taking any subsequent action in connection with

this appeal may be extended under 37 C.F.R. § 1.136(a).




<div align="center">PRO SE ASSISTANCE</div>

   The USPTO has resources available for inventors prosecuting their

patent applications themselves.

   https://www.uspto.gov/patents-getting-started/using-legal-
services/pro-se-assistance-program

   Email: innovationdevelopment@uspto.gov

   Toll free phone number: 1-866-767-3848

   Post Mail:
Pro Se Assistance, Mail Stop 24
P.O. Box 1450
Alexandria, VA, 22313-1450




<div align="center">AFFIRMED; 37 C.F.R. § 41.50(b)</div>