

DETAILED ACTION

CLAIM INTERPRETATION

1. The following is a quotation of 35 U.S.C. 112(f): (FP **7.30.03**)

(f) ELEMENT IN CLAIM FOR A COMBINATION.—An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The following is a quotation of pre-AIA 35 U.S.C. 112, sixth paragraph:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

2. The claims in this application are given their broadest reasonable interpretation using the plain meaning of the claim language in light of the specification as it would be understood by one of ordinary skill in the art. The broadest reasonable interpretation of a claim element (also commonly referred to as a claim limitation) is limited by the description in the specification when 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, is invoked.

As explained in MPEP 2181, subsection I, claim limitations that meet the following three-prong test will be interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph:

(A) the claim limitation uses the term “means” or “step” or a term used as a substitute for “means” that is a generic placeholder (also called a nonce term or a non-structural term having no specific structural meaning) for performing the claimed function;

(B) the term “means” or “step” or the generic placeholder is modified by functional language, typically, but not always linked by the transition word “for” (e.g., “means for”) or another linking word or phrase, such as “configured to” or “so that”; and

(C) the term “means” or “step” or the generic placeholder is not modified by sufficient structure, material, or acts for performing the claimed function.

Use of the word “means” (or “step”) in a claim with functional language creates a rebuttable presumption that the claim limitation is to be treated in accordance with 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph. The presumption that the claim limitation is interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, is rebutted when the claim limitation recites sufficient structure, material, or acts to entirely perform the recited function.

Absence of the word “means” (or “step”) in a claim creates a rebuttable presumption that the claim limitation is not to be treated in accordance with 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph. The presumption that the claim limitation is not interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, is rebutted when the claim limitation recites function without reciting sufficient structure, material or acts to entirely perform the recited function.

Claim limitations in this application that use the word “means” (or “step”) are being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, except as otherwise indicated in an Office action. Conversely, claim limitations in this application that do not use the word “means” (or “step”) are not being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, except as otherwise indicated in an Office action. (FP 7.30.05)

3. This application includes one or more claim limitations that do not use the word “means,” but are nonetheless being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, because the claim limitation(s) uses a generic placeholder that is coupled with functional language without reciting sufficient structure to perform the recited function and the generic placeholder is not preceded by a structural modifier. Such claim limitation(s) is/are: **color translation module for producing** in claim 5 **and unit for removing** in claim 6.

Because this/these claim limitation(s) is/are being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, it/they is/are being interpreted to cover the corresponding structure described in the specification as performing the claimed function, and equivalents thereof.

If applicant does not intend to have this/these limitation(s) interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, applicant may: (1) amend the claim limitation(s) to avoid it/them being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph (e.g., by reciting sufficient structure to perform the claimed function); or (2) present a sufficient showing that the claim limitation(s) recite(s) sufficient structure to perform the claimed function so as to avoid it/them being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph. (FP 7.30.06)

Claim Rejections – 35 USC § 112

4. The following is a quotation of 35 U.S.C. 112(b): (FP 7.30.02)

(B) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of pre-AIA 35 U.S.C. 112, second paragraph:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 6 is rejected under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention. (FP 7.34.01)

Claim limitation “**unit for removing noise from the appearance signals produced by the scanner**” invokes 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for performing the entire claimed function and to clearly link the structure, material, or acts to the function. **The specification is devoid of adequate structure to perform the claimed function. In particular, the specification states the claimed function of removing noise from the appearance signals is performed by “filtering.” There is no disclosure of any particular structure, either explicitly or inherently, to perform the noise removal. The use of the term “filtering” is not adequate structure for performing the noise removal because it does not describe a particular structure for performing the function. As would be recognized by**

those of ordinary skill in the art, the term “filtering” refers to removing certain unwanted features of a signal and can be performed in any number of ways in hardware, software or a combination of the two. The specification does not provide sufficient details such that one of ordinary skill in the art would understand which filter structure or structures perform(s) the claimed function.

Therefore, the claim is indefinite and is rejected under 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph.

Applicant may:

(a) Amend the claim so that the claim limitation will no longer be interpreted as a limitation under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph;

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the entire claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(c) Amend the written description of the specification such that it clearly links the structure, material, or acts disclosed therein to the function recited in the claim, without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts and clearly links them to the function so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant should clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181. (FP 7.34.23)

6. The following is a quotation of 35 U.S.C. 112(a): (FP 7.30.01)

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 6 is rejected under 35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention. **As described above, the disclosure does not provide adequate structure to perform the claimed function of removing noise from the appearance signals. The specification does not demonstrate that applicant has made an invention that achieves the claimed function because the invention is not described with sufficient detail such that one of ordinary skill in the art can reasonably conclude that the inventor had possession of the claimed invention.** (FP 7.31.01)

Claim Rejections – 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: (FP 7.07.aia)

A person shall be entitled to a patent unless—

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention. (FP 7.08.aia)

9. Claims 5 and 6 are rejected under 35 U.S.C. 102(a)(1) as being anticipated by X. (FP 7.15.aia)

[NOTE: For the purposes of this training assume the X reference teaches each of the limitations as identified below.]

As per claim 5, X teaches computer-assisted color-editing system, comprising:

a scanner that produces appearance signals representative of a color image (Fig. 1, element 1);

a color translation module for producing modified appearance signals representative of a reproduction image based on user input introducing aesthetically desired alterations into the appearance signals; This element is interpreted under 35 U.S.C. 112(f) as the aesthetic correction circuitry, or the software and microprocessor, with the algorithm described in the specification (the algorithm to produce the modified appearance signals as $V_{MA} = V_A + V_{ADA}$) that causes the circuitry or microprocessor to perform the claimed function. (X teaches a circuit configuration including memory, a clock, a counter, switches and a multiplexor which is controlled by the user through knobs to add adjustment values to the RGB information of the image signal, Fig. 1, element 2, Fig. 2 and page 5, lines 10-25);

a display on which the modified appearance signals are displayed as the reproduction image; (Fig. 1, element 3); and

a disk memory in which the modified appearance signals are stored (Fig. 1, element 4).

As per claim 6, X teaches a unit for removing noise from the appearance signals produced by the scanner. Because adequate structure has not been identified in the specification for performing the claimed function, the unit is interpreted for the purpose of applying prior art as any known filtering structure implemented in hardware, software, or combination of the two that removes noise from the appearance signal. (X teaches a low pass filter circuit for removing high frequency noise from the image, page 4, lines 10-15).

INSTRUCTOR NOTES

112 Rejections

Claim 5

The first step in analyzing the claim is to perform claim construction to ascertain boundaries of protection sought by the applicant. See MPEP 2103(I)(C). Claims are given their “broadest reasonable interpretation consistent with the specification as it would be interpreted by one of ordinary skill in the art.” See MPEP 2111. If the applicant invokes 35 U.S.C. § 112(f), the claim is construed to cover the structure, material, or acts described in the specification as performing the entire claimed function and equivalents to the disclosed structure, material or acts. See MPEP 2181.

Using the three-prong analysis in MPEP 2181, the claim limitation “a color translation module for producing modified appearance signals representative of a reproduction image based on user input introducing aesthetically desired alterations into the appearance signals” invokes § 112(f):

- Prong A is met because: the claim element recites a “color translation module”, which is a generic placeholder for “means”. The specification recites that the module can be hardware (such as a circuit) or software (such as programming instructions) running on a microprocessor. No specific definition for the term “module” is provided. The term “module” is not a sufficiently definite name of structure in this art.
- Prong B is met because: the generic placeholder (the “color translation module”) is modified by functional language (“for producing modified appearance signals...”).
- Prong C is met because: this claim element is not further modified by sufficient structure or material for performing the claimed function.

Since § 112(f) has been invoked, the examiner should include a “Claim Interpretation” section in the Office action to address this on the record. The examiner should use form paragraphs 7.30.03.h (Claim Interpretation Header), 7.30.03 (Statement of Statutory Basis, 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph), new form paragraph 7.30.05 (Broadest Reasonable Interpretation under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, Sixth Paragraph: Use of “Means” (or “Step”) in Claim Drafting and Rebuttable Presumptions Raised) and new form paragraph 7.30.06 (35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, Sixth Paragraph, Invoked Despite Absence of “Means”). When using form paragraph 7.30.06 the examiner should identify the claim limitation that invokes § 112(f) in the first bracket (“color translation module for producing”) and indicate in bracket 2 that this appears in claim 5.

Form paragraph 7.30.06 identifies proper applicant responses to a finding that the claim invokes § 112(f) (i.e. amendment or identifying how the claim does not invoke § 112(f) under the three prong analysis). It would not be sufficient for the applicant to respond by simply stating that they did not intend to invoke § 112(f). It is the claim language that determines whether § 112(f) has been invoked, not applicant’s intentions.

Note that claim 5 does not raise concerns under 35 U.S.C. § 112(b). Once it has been determined that the claim invokes § 112(f), the examiner must consult the specification to determine the corresponding structure that performs the claimed function. If the specification does not provide adequate structure for performing the entire claimed function and/or fails to clearly link the structure to the function, the claim must be rejected under § 112(b) as being indefinite. See MPEP 2181(II). In this case, the recited § 112(f) limitation is supported by adequate structure in the specification linked to the function. The specification discloses the aesthetic correction circuitry or the software and microprocessor, each programmed to perform the algorithm for performing the function of producing the modified appearance signals. In particular, the aesthetic correction circuitry as an electrical circuit and the software and microprocessor are each described as having an input of the appearance signals produced by the scanner, a design that permits interactive introduction of aesthetically desired alterations into the appearance signals, and an output of modified appearance signals. The aesthetic correction circuitry or software and microprocessor is programmed to perform the algorithm described as adding 8-bit adjustment values (V_{ADA}) for each adjustment component (*e.g.*, hue, saturation, luminance) as vectors to the input appearance signals (V_A) to produce the modified appearance signals as $V_{MA} = V_A + V_{ADA}$. For these same reasons, the claim does not raise any concerns under 35 U.S.C. § 112(a).

Claim 6

Again, the first step in analyzing the claim is to perform claim construction to ascertain boundaries of protection sought by the applicant. Using the three-prong analysis in MPEP 2181, the claim limitation “unit for removing noise from the appearance signals produced by the scanner” invokes § 112(f):

- Prong A is met because: the claim element recites “unit”, which is a generic placeholder for means. The specification does not provide a special definition for this term and one of ordinary skill in the art would not understand this term to be a sufficiently definite name for structure.
- Prong B is met because: the “unit” is modified by functional language (“removing noise...”)
- Prong C is met because: the claim element is not further modified by sufficient structure or material for performing the claimed function.

Note that form paragraphs 7.30.03.h, 7.30.03, 7.30.05, and 7.30.06 only need to be in the Office action once. Since they have already been included to address the invocation of § 112(f) in claim 5, they do not need to be added again. However, the examiner should note in form paragraph 7.30.06 the claim element that invokes § 112(f) (“unit for removing”). Form paragraph 7.30.07 (35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, Sixth Paragraph, Not Invoked Despite Presence of “Means” or “Step”) is not needed to address claim 6 because this presumption has not been overcome.

Claim 6 raises concerns under 35 U.S.C. § 112(b). Since the claim invokes § 112(f), the examiner must look to the specification to determine the structure or material that performs the claimed function. However, in this example, there is no disclosure of adequate structure to perform the claimed function of removing noise. Accordingly, the claim must be rejected as indefinite under 35 U.S.C. § 112(b). The examiner should use form paragraphs 7.30.02 (Statement of 112(b) Statutory Basis), 7.34.01 (Statement

of Rejection for Indefiniteness) and new form paragraph 7.34.23 (Rejection Under 112(b) With 112(f) Interpretation). Note that form paragraph 7.34.23 lists potential options for applicants in responding to the rejection. This listing is provided as a best practice to advance prosecution.

Given that claim 6 is indefinite under 112(b), the examiner should consider any potential deficiency under 112(a). Because there is no disclosure of adequate structure to perform the claimed function, the specification does not convey with reasonable clarity to those skilled in the art that the applicant had possession of the claimed invention. A rejection under § 112(a) must be made for lacking an adequate written description. See MPEP 2163.02. The examiner should use form paragraphs 7.30.01 and 7.31.01.

Note, questions regarding enablement may come up during the workshop. You should be familiar with the principles of enablement and the differences between written description and enablement in order to address any questions. However, for the purposes of this training assume in this example that the disclosure provides enough information for one of ordinary skill in the art to make and use a “filter” for removing noise from the appearance signals without undue experimentation. Therefore, a rejection under 35 U.S.C. § 112(a) for lacking an enabling disclosure should not be made in this instance.

102 Rejections

Claim 5

Previously, examiners would indicate in their claim interpretation under § 112(f), using form paragraph 7.34.21, the corresponding structure in the specification that performs the claimed function. However, form paragraph 7.34.21 has been deleted and should no longer be used. While the identification of corresponding structure is no longer required when establishing claim interpretation under § 112(f) using new form paragraph 7.30.05, it would be appropriate to do so when making a rejection.

The rejection under § 102(a)(1) provides a mapping of the elements of the claim and where that element is taught in the prior art reference “X.” The discussion in the specification regarding the “color translation module” includes an identification of the structure that corresponds to the claimed function. Thus the corresponding structure is interpreted as the aesthetic correction circuitry, or the software and microprocessor, with the algorithm described in the specification (the algorithm to produce the modified appearance signals as $V_{MA} = V_A + V_{ADA}$), and equivalents thereof. The rejection then goes on to explain how reference X anticipates based on this interpretation of the claim element.

Claim 6

Even though claim 6 is found to be indefinite, the examiner should practice compact prosecution and identify all applicable grounds of rejection in the Office action. Where the degree of uncertainty of the claim meaning is not great and at least one interpretation of the claim would render the claim unpatentable over the prior art, the examiner should enter a rejection over the prior art based upon this interpretation. See MPEP 2173.06. The examiner should state on the record how the claim term or phrase is being interpreted with respect to the prior art that is applied in the rejection. Here the

examiner provides an interpretation for the indefinite limitation “unit for removing noise from the appearance signals produced by the scanner” and describes how the prior art anticipates the claim based on this interpretation.