No. 21-2040

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

VDPP, LLC,

Plaintiff-Appellant,

v.

VIZIO, INC.,

Defendant-Appellee.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE CENTRAL DISTRICT OF CALIFORNIA, CASE NO. 8:20-cv-00030-JVS-KES JUDGE JAMES V. SELNA, DISTRICT JUDGE PRESIDING

COMBINED PETITION BY DEFENDANT-APPELLEE VIZIO, INC. FOR REHEARING AND REHEARING EN BANC

CHARLES S. BARQUIST
MASCHOFF BRENNAN
300 South Grand Avenue, Suite 1400
Los Angeles, CA 90071

Telephone: (949) 202-1900

ERYNN L. EMBREE
MASCHOFF BRENNAN

100 Spectrum Center Dr., Suite 1200

Irvine, CA 92618

Telephone: (949) 202-1900

Attorneys for Defendant-Appellee

MAY 2, 2022

FORM 9. Certificate of Interest

Date: $\frac{05/02/2022}{}$

Form 9 (p. 1) July 2020

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

CERTIFICATE OF INTEREST

Case Number	21-2040
Short Case Caption	VDPP, LLC v. VIZIO, INC.
Filing Party/Entity	VIZIO, INC.
specific as to which repr result in non-compliance additional pages as n	e each section of the form. In answering items 2 and 3, be resented entities the answers apply; lack of specificity may e. Please enter only one item per box; attach eeded and check the relevant box. Counsel must ended Certificate of Interest if information changes. Fed.
I certify the following in complete to the best of	nformation and any attached sheets are accurate and my knowledge.

Signature:

Name:

/s/ Charles S. Barquist

Charles S. Barquist

FORM 9. Certificate of Interest

Form 9 (p. 2) July 2020

1. Represented Entities. Fed. Cir. R. 47.4(a)(1).	2. Real Party in Interest. Fed. Cir. R. 47.4(a)(2).	3. Parent Corporations and Stockholders. Fed. Cir. R. 47.4(a)(3).
Provide the full names of all entities represented by undersigned counsel in this case.	Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities. None/Not Applicable	Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities. None/Not Applicable
VIZIO, INC.		

 \square Additional pages attached

FORM 9. Certificate of Interest

Form 9 (p. 3) July 2020

4. Legal Representatives appeared for the entities in appear in this court for the entered an appearance in the	the originating of entities. Do not	court or age include tho	ency or (b) are expected to see who have already
□ None/Not Applicable		Additiona	l pages attached
Lee C. Cheng (formerly of Maschoff Brennan, currently of Buchalter)			
Jared J. Braithwaite (formerly of Maschoff Brennan, currently of Foley & Lardner)			
Lannie Rex Sears Maschoff Brennan			
5. Related Cases. Provided pending in this court or any directly affected by this court originating case number(s) R. 47.5(b).	y other court or a ert's decision in th	gency that he pending	will directly affect or be appeal. Do not include the
☑ None/Not Applicable		Additiona	l pages attached
6. Organizational Victim required under Fed. R. App and 26.1(c) (bankruptcy case)	o. P. 26.1(b) (orga	nizational v	victims in criminal cases)
☑ None/Not Applicable		Additiona	l pages attached

TABLE OF CONTENTS

	CIR. R. 35(B)(2))	1
	TTS OF LAW AND FACT OVERLOOKED OR MISAPPREHENDED . CIR. R. 35(E)(1)(F))	3
SUM	MARY OF ARGUMENT	3
ARG	UMENT	6
I.	The panel improperly followed <i>Dyfan</i> rather than <i>Williamson</i> by considering only whether "processor adapted to" connotes structure, without also considering whether it connotes structure that is sufficient to perform its claimed functions.	6
II.	A generic "processor adapted to" <i>in the claim</i> , without more, should be insufficient to avoid means-plus-function treatment for the same reason that a generic processor <i>in the specification</i> is inadequate to avoid indefiniteness.	.10
III.	The panel's departure from <i>Williamson</i> 's either-or standard led it to also misjudge VIZIO's evidence	.14
IV.	Zeroclick is instructively inapposite.	.17
CON	CLUSION	.19
CERT	ΓΙFICATE OF SERVICE	.21
CERT	ΓΙFICATE OF COMPLIANCE	.22

TABLE OF AUTHORITIES

Cases

Apex Inc. v. Raritan Computer, Inc., 325 F.3d 1364 (Fed. Cir. 2003)	8
<i>Apple Inc. v. Motorola, Inc.</i> , 757 F.3d 1286 (Fed. Cir. 2014)7	7, 8
Aristocrat Technologies Australia Party Limited v. International Game Technology, 521 F.3d 1328 (Fed. Cir. 2008)pass	sim
Dyfan, LLC v. Target Corp., 28 F.4th 1360 (Fed. Cir. 2022)	sim
Egenera, Inc. v. Cisco Systems, Inc., 972 F.3d 1367 (Fed. Cir. 2020)	7, 9
Eon Corp. IP Holdings LLC v. AT&T Mobility LLC, 785 F.3d 616 (Fed. Cir. 2015)	.16
Goldenberg v. Cytogen, Inc., 373 F.3d 1158 (Fed. Cir. 2004)	.13
Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580 (Fed. Cir. 1996)	6
In re Katz Interactive Call Processing Patent Litigation, 639 F.3d 1303 (Fed.Cir.2011)	.16
Net MoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359 (Fed. Cir. 2008)	.11
Noah Systems, Inc. v. Intuit Inc., 675 F.3d 1302 (Fed. Cir. 2012)	17
VDPP LLC v. VIZIO, Inc., No. 2021-2040, 2022 WL 885771 (Fed. Cir. Mar. 25, 2022)pass	sim
VDPP LLC v. VIZIO, Inc., No. SACV20-00030, 2021 WL 3621887 (C.D. Cal. Apr. 5, 2021)	15

Watts v. XL Systems, Inc., 232 F.3d 877 (Fed. Cir. 2000)	6
Williamson v. Citrix Online, LLC, 792 F.3d 1339 (Fed. Cir. 2015)	passim
Zeroclick, LLC v. Apple Inc., 891 F.3d 1003 (Fed. Cir. 2018)	17, 18, 19
Statutes	
35 U.S.C. § 112	passim
Other Authorities	
Federal Circuit Rule 32	22
Federal Rule of Appellate Procedure 32	22
Federal Rule of Appellate Procedure 35	1, 3

Case: 21-2040 Document: 54 Page: 8 Filed: 05/02/2022

STATEMENT OF COUNSEL IN SUPPORT OF EN BANC REHEARING (FED. CIR. R. 35(b)(2))

The asserted claims of plaintiff-appellant VDPP LLC's patents-in-suit include "storage" and "processor" limitations. Those limitations do not use the word "means"; but the district court ruled that they should nonetheless be construed under 35 U.S.C. § 112(f), and that so construed, the claims are indefinite under 35 U.S.C. § 112(b). *VDPP LLC v. VIZIO, Inc.*, No. SACV20-00030, 2021 WL 3621887, at *4-*5 (C.D. Cal. Apr. 5, 2021) ("*VDPP-I*").

On appeal, in a non-precedential opinion, the panel reversed and remanded. *VDPP LLC v. VIZIO, Inc.*, No. 2021-2040, 2022 WL 885771 (Fed. Cir. Mar. 25, 2022) ("*VDPP-II*"). Together with *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360 (Fed. Cir. 2022)—which was decided the day before and on which the panel's opinion relies, *see VDPP-II*, 2022 WL 885771, at *2-*4—the panel opinion in this case merits en banc rehearing, especially as to the "processor" limitations.¹

First, in my professional judgment, the decisions of the panels here and in *Dyfan* mark an apparent departure from *Williamson v. Citrix Online*, LLC, 792 F.3d 1339 (Fed. Cir. 2015) (en banc).

1

¹ Because each asserted claim includes both "processor" and "storage" limitations, the district court's invalidity judgment should be affirmed even if only one of those terms is indefinite. In order to streamline this petition, defendant-appellee VIZIO, Inc. focuses on "processor."

Second, in my professional judgment, this appeal—in conjunction with *Dyfan*—requires an answer to precedent-setting questions of exceptional importance:

- (1) The en banc portion of *Williamson* held, in part, that "[w]hen a claim term lacks the word 'means,' the presumption" against means-plus-function treatment "can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to 'recite sufficiently definite structure' *or else* recites 'function without reciting sufficient structure for performing that function." 792 F.3d at 1349 (emphasis added) (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)). Under that standard:
 - (a) May a claim term that connotes structure to one of skill in the art nonetheless require means-plus-function treatment because the structure it connotes is not sufficient for performing the functions the structure is recited as performing?
 - (b) Must the proponent of means-plus-function treatment of a claim term that does not include the word "means" adduce extrinsic or other evidence beyond the language of the claim itself, in order to meet its burden of production in rebutting the *Williamson* presumption—or may the proponent satisfy its burden by showing that on its face, the claim does not recite sufficient structure?

(2) May the algorithmic-disclosure requirement that this Court has erected as a bulwark against purely functional claiming for computer-implemented inventions be evaded by reciting in a claim, rather than the specification, a generic "processor adapted to" perform claimed functions?

Date: May 2, 2022 /s/ Charles S. Barquist

POINTS OF LAW AND FACT OVERLOOKED OR MISAPPREHENDED (FED. CIR. R. 35(e)(1)(F))

- 1. The panel misapprehended the *Williamson* inquiry—which is not exhausted upon a determination that the claim recites *some* structure. Although "processor adapted to" might connote *some* structure, it does not disclose *sufficient* structure for performing the functions recited in the asserted claims.
- 2. The panel's misapprehension of the inquiry also clouded its assessment of VIZIO's evidence. VIZIO's evidence consists of the text of the asserted claims, which is competent and sufficient to rebut the presumption against means-plus-function treatment because it shows that the claims merely recite a generic processor, defined by reference to functions that it performs, without sufficient structure for performing the listed functions.

SUMMARY OF ARGUMENT

"[F]ailure to use the word 'means' ... creates a rebuttable presumption" that a limitation is not means-plus-function. *Williamson*, 792 F.3d at 1348. Because the

Case: 21-2040 Document: 54 Page: 11 Filed: 05/02/2022

asserted claims of VDPP's patents-in-suit do not use "means," that presumption arises. But it is rebuttable. *Id.* at 1349.

To determine whether VIZIO rebutted the presumption, the panel treated claim 1 of VDPP's '444 patent as representative. *VDDP-II*, 2022 WL 885771, at *1. That claim recites "[a]n apparatus comprising: a storage adapted to: [perform a function]; and a processor adapted to: [perform five functions]"—and *nothing more*. *VDDP-II*, 2022 WL 885771, at *1. "The remaining asserted claims are substantially similar ... but recite different functions for the processor." *Id.* Thus, as VDPP concedes: "[e]ach claim ... defin[es] the ... processor"—and defines it *solely*—"by the functions the ... processor perform[s]." (*See* Appellant's Br. 8).² One claim recites that the processor is "communicably coupled to the storage," *see* '380 patent, claim 6, which is immaterial; otherwise, the asserted claims do not recite *any* structural limitation on the "processor adapted to" perform those functions.

"In cases involving ... means-plus-function claiming" of "a computerimplemented invention," "this court has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or

² This was also confirmed in oral argument, at 3:28-4:08: VDPP's counsel stated, "The processor ... performs a number of functions which are recited in the claims"; Judge Taranto inquired, "Are these all functions?"; and VDPP's counsel replied, "They are functions, Your Honor."

microprocessor." *Aristocrat Techs. Austl. Pty Ltd. v. International Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008). This is "to prevent purely functional claiming." *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1318 (Fed. Cir. 2012). For the same reason, in order to avoid being treated as means-plus-function to begin with, a claim should have to recite more than a generic "processor adapted to" perform a function, if it is to satisfy *Williamson*'s requirement that the claim recite "sufficient structure for performing that function." *See Williamson*, 792 F.3d at 1349 (quoting *Watts*, 232 F.3d at 880).

The panel reached its anomalously contrary result by following *Dyfan* rather than *Williamson* in two respects. First, instead of considering whether "processor adapted to" connotes not only structure but structure that is "sufficient ... for performing" the claimed functions, as required by *Williamson*, *see* 792 F.3d at 1349 (citation omitted), it followed *Dyfan* in cutting off the inquiry once it determined that "processor" connotes structure. Second, again like *Dyfan*, it improperly required VIZIO to adduce more than the claim language, in order to meet its burden of production with regard to the presumption against means-plusfunction treatment.

Rehearing should be granted, here and in *Dyfan*, to (1) reaffirm and restore *Williamson*'s either-or standard and (2) rehabilitate safeguards against purely

functional claiming of computer-implemented inventions involving special programming, which are undermined by *Dyfan* and the panel opinion in this case.

ARGUMENT

I. The panel improperly followed *Dyfan* rather than *Williamson* by considering only whether "processor adapted to" connotes structure, without also considering whether it connotes structure that is sufficient to perform its claimed functions.

Under *Williamson*, the presumption against means-plus-function treatment arising from absence of the word "means" may be overcome by showing *either* "that the claim term fails to 'recite sufficiently definite structure' *or else* recites 'function without reciting sufficient structure for performing that function." 792 F.3d at 1349 (emphasis added) (citation omitted). "As an aid in determining whether" the first prong is met, "this court has inquired into whether the 'term, as the name for structure, has a reasonably well understood meaning in the art." *Watts*, 232 F.3d at 880-81 (quoting *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)). Whether a claim term "recite[s] sufficiently definite structure" will sometimes be referred to below as the "name-for-structure" condition, and whether it recites "sufficient structure for performing that function" will sometimes be referred to as the "sufficient-for-function" condition.

According to *Williamson*, a challenger may rebut the presumption against means-plus-function treatment by showing a failure of *either* condition. 792 F.3d at 1349. Thus *Egenera, Inc. v. Cisco Systems, Inc.*, 972 F.3d 1367 (Fed. Cir. 2020),

following *Williamson*, affirmed a district court's treatment of "logic to modify" as means-plus-function. *Egenera* credited the patentee's contention that the term "connotes ... structure in the general sense of software, firmware, or circuitry"; but it ruled that post-*Williamson*, "[t]he question is not whether a claim term recites *any* structure but whether it recites *sufficient* structure," and more specifically "whether the claim term recites sufficient structure to perform the claimed functions." *Egenera*, 972 F.3d at 1374. Because it did not, *Egenera* affirmed the district court's ruling that "§ 112(f) applies." *Id.* at 1375.

However *Dyfan* replaces *Williamson*'s either-or standard with a different standard that it derives from pre-*Williamson* authority. According to *Dyfan*, where "a structural definition ... generally known in the art" is shown, "a description of ... 'how the function is achieved" is not needed³—and thus, so long as "a claim

³ *Williamson* deals with the name-for-structure and sufficient-for-function conditions as alternative ways to *rebut* the presumption, and the logical structure of its either-or standard can be expressed semi-formally as:

if (*not* name-for-structure or *not* sufficient-for-function) then means-plus-function.

But *Dyfan* instead casts the conditions as alternative ways to *vindicate* the presumption: "structure can be recited"—and § 112(f) thus avoided—"through the use of 'a claim term with a structural definition ...,' or a description of [its] operation and 'how the function is achieved." 28 F.4th at 1366 (quoting *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2014)). That is:

if (name-for-structure or sufficient-for-function) then *not* means-plus-function.

Case: 21-2040 Document: 54 Page: 15 Filed: 05/02/2022

term itself connotes *some* structure to a person of ordinary skill in the art, 'the presumption that § 112, ¶ 6 does not apply is determinative,'" at least "in the absence of 'more compelling evidence of the understanding of one of ordinary skill in the art." *See Dyfan*, 28 F.4th at 1366 (emphasis added) (quoting *Apple*, 757 F.3d at 1299, and *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003)).

Dyfan's standard is inconsistent with *Williamson*'s express, en banc overruling of "the strict requirement of 'a showing that the limitation essentially is devoid of anything that can be construed as structure." *See Williamson*, 792 F.3d at 1349 (citation omitted). But here, the panel followed *Dyfan*'s improper abridgement of *Williamson*'s either-or standard. According to the panel: "To overcome that presumption, a challenger must 'demonstrate[] that the [limitation] fails to "recite sufficiently definite structure." *VDPP-II*, 2022 WL 885771, at *2 (quoting *Dyfan*, 28 F.4th at 1365, in turn quoting *Williamson*, 792 F.3d at 1349, in

The difference matters because under *Dyfan*'s formulation, if the name-for-structure condition is satisfied then the limitation is *not* means-plus-function, regardless of whether the sufficient-for-function condition is satisfied. But under *Williamson*, even if the name-for-structure condition is satisfied, the limitation will still be means-plus-function if the challenger shows the sufficient-for-function condition is not met.

turn quoting *Watts*, 232 F.3d at 880; alterations to *Williamson* per *Dyfan*).⁴ Thus the panel dispensed with the second half of *Williamson*'s disjunctive standard, leaving VIZIO with just one option: "VIZIO was required to provide ... evidence that a person of ordinary skill would not have understood the limitations to 'recite sufficiently definite structure[s]," *VDPP-II*, 2022 WL 885771, at *3 (quoting *Dyfan*, 28 F.4th at 1370), i.e., that the name-for-structure condition was not met—with no acknowledgement that *Williamson* also gives VIZIO the option of showing that a claim "recites 'function without reciting sufficient structure for performing that function." 792 F.3d at 1349 (quoting *Watts*, 232 F.3d at 880).⁵

Rehearing should be granted to confirm that *Williamson*'s disjunctive standard means what it says, and *Egenera* applied it correctly: the presumption may be rebutted by showing functional insufficiency, without also showing an absence of structural connotation—at least when it comes to computer-implemented inventions, *see infra*.

-

⁴ The panel's disinclination to credit the second part of *Williamson*'s statement was evident in oral argument, e.g., at 23:25-32: "don't just say, here's a phrase from Williamson that referred to Watts."

⁵ This was also evident in oral argument, e.g., at 21:42-56 ("These terms ... clearly have ... structural meaning and therefore, one can stop thinking about 112(f) ...").

Case: 21-2040 Document: 54 Page: 17 Filed: 05/02/2022

II. A generic "processor adapted to" in the claim, without more, should be insufficient to avoid means-plus-function treatment for the same reason that a generic processor in the specification is inadequate to avoid indefiniteness.

"A § 112(f) analysis consists of two steps. At step one, we determine whether, as a threshold matter, § 112(f) applies to the claim limitation." *VDPP-II*, 2022 WL 885771, at *2 (citations omitted). "At step two, we determine whether the specification discloses structure that 'corresponds to the claimed function." *Id.* (quoting *Williamson*, 792 F.3d at 1351). As shown above, part of the step-one inquiry is whether the claim "recit[es] *sufficient* structure for performing the [claimed] function." *Williamson*, 792 F.3d at 1352 (emphasis added) (citation omitted). Step two similarly inquires "[w]hether the specifications disclose *adequate* corresponding structures for the claimed functions." *VDPP-II*, 2022 WL 885771, at *3 (emphasis added). If, at step two, "the patentee fails to disclose adequate corresponding structure, the claim is indefinite." *Williamson*, 792 F.3d at 1352.

"In cases involving ... means-plus-function claiming" of "a computer-implemented invention," "this court has consistently required ... the structure disclosed in the specification [to] be more than simply a general purpose computer or microprocessor," in order to be found adequate at step two. *Aristocrat*, 521 F.3d at 1333. The specification must also "disclose an algorithm for performing the

Case: 21-2040 Document: 54 Page: 18 Filed: 05/02/2022

claimed function." *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1367 (Fed. Cir. 2008).

The algorithmic-disclosure requirement is rooted in the general policy underlying the statutory provision that where "[a]n element in a claim ... [is] expressed as a means ... for performing a specified function without the recital of structure ... in support thereof, ... such claim shall be construed to cover the corresponding structure ... described in the specification and equivalents thereof." *See* 35 U.S.C. § 112(f). "The point of the requirement that the patentee disclose particular structure in the specification and that the scope of the patent claims be limited to that structure and its equivalents is to avoid pure functional claiming." *Aristocrat*, 521 F.3d at 1333. Likewise, "[t]his court imposed the algorithm requirement to prevent purely functional claiming," at least "when a patentee employs a special purpose computer-implemented means-plus-function limitation." *Noah*, 675 F.3d at 1318.

Williamson's clarification of the step-one standard was animated by this same policy of resisting "functional claiming untethered to § 112, para. 6 and free of the strictures set forth in the statute." See 792 F.3d at 1349. But allowing a patentee to evade means-plus-function interpretation altogether, and thus also the subsidiary algorithm requirement, simply by moving its recitation of a generic

Case: 21-2040 Document: 54 Page: 19 Filed: 05/02/2022

"processor" from the specification to the claim, would open the door to purely functional claiming, untethered to the statutory strictures. As *Dyfan* explains:

Section 112 \P 6 offers patent applicants two options: (1) recite, in the claim, a function without reciting structure for performing the function and limit the claims to the structure ... disclosed in the specification (or their equivalents), in which case \S 112 \P 6 applies, or (2) recite both a function and the structure for performing that function in the claim, in which case \S 112 \P 6 is inapplicable.

Dyfan, 28 F.4th at 1365. Accordingly, the Court should clarify, en banc if necessary, that at least for computer-implemented inventions, the step-one sufficient-for-structure condition correlates with the adequacy-of-corresponding-structure analysis at step two. More precisely, to prevent purely functional claiming of computer-implemented inventions, patentees should be required to disclose an algorithm *somewhere*—either in the claims themselves, in order to avoid means-plus-function treatment at step one, or in the specification, in order to avoid an indefiniteness ruling at step two.

The facts here illustrate why. The specifications of two patents-in-suit⁶ indicate that "apparatus ... described herein may be implemented ... using one or more computers using well-known computer processors." *See* '380 patent at 62:48-

⁶ This passage does *not* appear in the specification of the '444 patent, from which the panel selected its representative claim. *See VDPP-II*, 2022 WL 885771, at *3, n. 2.

52.7 The panel cited this as "intrinsic evidence ... that ... 'processor' ... do[es] connote structure," *VDPP-II*, 2022 WL 885771, at *3—which suffices to bar means-plus-function treatment altogether, under the *Dyfan* abridgement of *Williamson*'s standard that the panel applied. But that generic recital of well-known computer processors would not be adequate disclosure at step two. Why, then, should it be evidence at step one to keep the step-two inquiry from even being reached? If a specification's disclosure of a generic "processor," as structure corresponding to a claimed means, would result in indefiniteness, then so too should the recitation of the same generic "processor" in a claim, because the collective disclosure of the claim and specification is the same, either way.

That said, to grant rehearing in *this* case, the Court need not go the full distance to an affirmative holding that in order to avoid means-plus-function treatment at step one, a claim reciting a processor adapted to perform a function must also recite the algorithm used by the processor to perform that function—

⁷ The panel's reliance on the passage in question also is misplaced because it is not competent evidence for construing these claims, at all: it does not appear in the '444 patent specification; and although it appears in the other two patents-in-suit, VDPP contends *all* the asserted claims in all three patents are entitled to priority to a provisional application filed on January 23, 2001, from which the passage is likewise absent. (*See* Appx743, 639-84.) Accordingly, VDPP did not rely on this later-added "processor" language in the court below or in its briefing here. Such "new matter" simply is "not part of the intrinsic evidence." *See Goldenberg v. Cytogen, Inc.*, 373 F.3d 1158, 1168 (Fed. Cir. 2004).

because this is an extreme case, where the claims recite *only* a generic processor-adapted-to and its functions, and *nothing* more. The Court need not decide exactly what more—an algorithm or something else—is required; instead it need decide only that *something* more than a generic recitation of a processor-adapted-to and its functions is required, in order to avoid means-plus-function treatment at step one. Otherwise, the panel opinion here will join *Dyfan* in opening the door, which *Williamson* and *Aristocrat* were to have closed, to purely functional claiming of computer-implemented inventions, untethered to the constraints of § 112(f).

III. The panel's departure from *Williamson*'s either-or standard led it to also misjudge VIZIO's evidence.

The presumption against means-plus-function construction "can be overcome" by "demonstrat[ing] that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function." *Williamson*, 792 F.3d at 1349 (citation omitted). Here, to rebut the presumption, VIZIO focused on the claim language. Specifically, VIZIO showed that the *only* non-functional recitations in the representative claim are "a processor adapted to" (and "a storage adapted to"). The complete *absence* of additional or more definite structure, and of any description of how the "processor" carries out its claimed functions, is evidence tending to rebut the presumption against means-plus-function treatment.

According to the panel, "[t]he [district] court pointed to no [rebuttal] evidence from VIZIO." *See VDPP-II*, 2022 WL 885771, at *3. But the district court *did* point to such evidence, when it "agree[d] with VIZIO that the asserted claims do not describe how the ... 'processor' carr[ies] out the recited functions—only that [it] do[es]." *See VDPP-I*, 2021 WL 3621887, at *3.

VIZIO did present evidence. But its evidence went to the second *Williamson* condition, the insufficiency of the structure recited to perform the functions claimed, rather than the first, whether "processor" has a structural connotation. And the panel would only credit evidence that "processor" does not have a generally accepted meaning as a name for structure. It would not recognize VIZIO's evidence on *Williamson*'s second condition because it treated the first condition as dispositive, in keeping with Dyfan's pronouncement that "where ... a claim term itself connotes some structure ... 'the presumption that § 112, ¶ 6 does not apply is determinative.'" *See Dyfan*, 28 F.4th at 1366 (citation omitted).

VIZIO is not arguing that *whenever* a claim recites both structure and function performed by the structure, the claim must also say how the structure performs the function. But as this Court's algorithmic-disclosure jurisprudence recognizes, claims reciting generic processors "adapted to" implement functional inventions pose special risks of purely functional claiming. Even in that context, "functions [that] can be achieved by any general purpose computer without special

programming," such as "processing,' 'receiving,' and 'storing,'" might require nothing more than a "general purpose processor that performs those functions." *See In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed.Cir.2011). But in cases requiring "a special purpose computer specifically programmed to carry out the recited functions," "*Aristocrat* and its progeny" require more. *See Noah*, 675 F.3d at 1312 n. 8.

Here, VDPP's inventions *do* require special programming. As VDPP pointed out in its opening brief, the specifications of the patents-in-suit refer to off-the-shelf software, including Adobe Photoshop, Media 100, and Adobe After Effects.

See '380 patent at 9:58-10:4; 47:13-26, 49:11-15. The specifications associate those products with the blending function performed by the claimed "processor adapted to." "A microprocessor or general purpose computer lends sufficient structure only to basic functions of a microprocessor," not to the "special programming' ... functionality" of "off-the-shelf software." See Eon Corp. IP Holdings LLC v. AT&T Mobility LLC, 785 F.3d 616, 623 (Fed. Cir. 2015). The obtaining, expanding, generating, and displaying functions require still more special programming, which the specifications do not disclose at all. Cf. In re Katz,

639 F.3d at 1316 (identifying processing, receiving, and storing as "functions [that] can be achieved by any general purpose computer without special programming").8

Because this case "involv[es] a computer-implemented invention" that requires special programming, a recital of structure sufficient to perform the functions should "require[] ... more than simply a general purpose computer or microprocessor." Cf. Aristocrat, 521 F.3d at 1333.

Zeroclick is instructively inapposite. IV.

Zeroclick, LLC v. Apple Inc., 891 F.3d 1003 (Fed. Cir. 2018), is not to the contrary. In Zeroclick, the district court found two limitations to be means-plusfunction, and ultimately indefinite for lack of adequate corresponding structure. This Court reversed the means-plus-function ruling underlying the indefiniteness conclusion, based primarily on surrounding claim language and related specification disclosures. See 891 F.3d at 1008-09. More specifically, the limitations found by the district court to be means-plus-function were: "program ... that can operate the movement of the pointer (0)," as part of a lengthy preamble more broadly reciting "[a] graphical user interface (GUI), which may comprise an update of an existing program, ... wherein, said existing program is any existing

⁸ This could not constitute a disclosure of adequate corresponding structure at step two because the specifications associate those products with only one of the five functions claimed. See Noah, 675 F.3d at 1318 ("where ... a claim recites multiple identifiable functions and the specification discloses an algorithm for ... less than all ... we must analyze the disclosures as we do when no algorithm is disclosed").

"user interface code ... configured to detect one or more locations touched by a movement of the user's finger on the screen without requiring the exertion of pressure and determine therefrom a selected operation." *Id.* at 1006-07.

This Court reversed as to the "program" limitation because the claims reciting it have additional limitations further describing the program as a "graphical user interface" ("GUI") comprising "an update of an *existing* program." *Zeroclick*, 891 F.3d at 1008. This Court reversed as to the "user interface code" limitation because the relevant claims tied it to code "stored in a memory connected to the processor" that is "configured to receive from the screen information regarding locations touched by the user's finger." *Id*.

Thus in context, both "program" and "code" were "specific references to conventional graphical user interface programs or code, existing in prior art at the time of the inventions." *Zeroclick*, 891 F.3d at 1008. This interpretation was "bolster[ed]" by "the distinction ... between the graphical user interfaces in the prior art and the improvement to such interfaces in the claimed invention," as "laid bare in the written descriptions supporting the asserted claims." *Zeroclick*, 891 F.3d at 1008. Zeroclick's invention, basically, was modifying existing GUIs to be used in a new way: "using pre-defined pointer or touch movements instead of mouse clicks." *Id.* The upshot is that where the claim, in light of the specification,

Case: 21-2040 Document: 54 Page: 26 Filed: 05/02/2022

discloses that "the recited functions can be performed by conventional off-the-shelf software, a person of ordinary skill in the art would ... underst[an]d the ... limitations ... to connote structure." *See Dyfan*, 28 F.4th at 1369 (citing *Zeroclick*, 891 F.3d at 1008).

Zeroclick dealt with claim contexts rich enough to clarify that the disputed terms refer to existing, off-the-shelf GUIs. VDPP's asserted claims include nothing comparable. To the contrary, as shown at the outset, they include only a generic "processor adapted to" and a series of functions it performs—with nothing in the claims tying the processor to any off-the-shelf software—and even in the specification, a tie to off-the-shelf software for only one of the five claimed functions. Zeroclick's determination that claim language referring to existing, off-the-shelf GUIs discloses sufficient structure cannot sustain the panel's determination that the generic "processor adapted to" recited by VDPP's claims in this case does, as well.

CONCLUSION

Instead of applying the full body of this Court's jurisprudence, the panel's opinion in this case tracks *Dyfan*'s departures from *Williamson* and other applicable precedent. *See, e.g., VDPP-II*, 2022 WL 885771, at *4 ("VIZIO's arguments are particularly unpersuasive in view of our holding in *Dyfan*."). The

Case: 21-2040 Document: 54 Page: 27 Filed: 05/02/2022

Court should rehear both appeals and restore uniform adherence to Williamson.

More specifically, the Court should confirm, en banc if necessary, that:

(1) The presumption against means-plus-function treatment may be rebutted

by showing that although structure is recited, it is not sufficient to perform

the claimed functions.

(2) Given that—and also in view of this Court's algorithmic-disclosure

jurisprudence—the fact that VDPP's claims define the "processor" solely by

reference to its adaptation to perform the functions claimed, with no

algorithmic or other disclosure of how the processor performs them, is

competent rebuttal evidence.

And thus, the panel opinion should be vacated, and the judgment of the district

court affirmed.

Respectfully submitted this 2d day of May, 2022.

by: /s/ Charles S. Barquist

CHARLES S. BARQUIST

ERYNN L. EMBREE

MASCHOFF BRENNAN

Attorneys for Defendant-Appellee VIZIO, Inc.

20

CERTIFICATE OF SERVICE

I hereby certify that on May 2, 2022, an electronic copy of the foregoing COMBINED PETITION BY DEFENDANT-APPELLEE VIZIO, INC. FOR REHEARING AND REHEARING EN BANC was filed electronically with the U.S. Court of Appeals for the Federal Circuit by means of the Court's CM/ECF system and thereby causing a "Notice of Electronic Filing" to be served on all counsel of record.

Date: May 2, 2022 /s/ Charles S. Barquist

Case: 21-2040 Document: 54 Page: 29 Filed: 05/02/2022

CERTIFICATE OF COMPLIANCE

This document complies with the type-volume limit of Fed. R. App. P. 32(a)(7) because, excluding the parts of the document exempted by Fed. R. App. P. 32(f) and Fed. Cir. R. 32(b), this document contains 3,899 words.

This document complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because this document has been prepared in proportionally spaced typeface using Microsoft Word in 14-point Times New Roman.

Date: May 2, 2022 /s/ Charles S. Barquist

Case: 21-2040 Document: 54 Page: 30 Filed: 05/02/2022

ADDENDUM

Opinion of Panel and Statute at Issue



NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

VDPP LLC, Plaintiff-Appellant

 \mathbf{v} .

VIZIO, INC.,
Defendant-Appellee

2021-2040

Appeal from the United States District Court for the Central District of California in No. 8:20-cv-00030-JVS-KES, Judge James V. Selna.

Decided: March 25, 2022

MATTHEW MICHAEL WAWRZYN, Wawrzyn LLC, Chicago, IL, argued for plaintiff-appellant.

CHARLES SHELDON BARQUIST, Maschoff Brennan, Los Angeles, CA, argued for defendant-appellee. Also represented by ERYNN EMBREE, Irvine, CA.

Before NEWMAN, LOURIE, and TARANTO, Circuit Judges.

Lourie, Circuit Judge.

VDPP LLC appeals from the judgment of the United States District Court for the Central District of California holding that claims 1 and 27 of U.S. Patent 9,699,444 ("the '444 patent"); claim 2 of U.S. Patent 9,948,922 ("the '922 patent"); and claim 6 of U.S. Patent 10,021,380 ("the '380 patent") are invalid as indefinite. VDPP LLC v. Vizio, Inc., No. SACV 20-00030 (JVS), 2021 WL 3621887 (C.D. Cal. Apr. 5, 2021) ("Decision"). The district court's judgment was based on its determination that certain claim limitations are drafted in means-plus-function format under § 112(f), and they have no disclosed corresponding structures. Because we conclude that the district court erred in holding that the limitations are drafted in means-plus-function format, we reverse its judgment of invalidity and remand for further proceedings.

BACKGROUND

VDPP owns the '444, '922, and '380 patents ("the patents-in-suit"). The patents-in-suit are directed to an apparatus that purports to create an "illusion of continuous movement." '380 patent, col. 46 ll. 38–42. To create that illusion, the apparatus repetitively presents to the viewer "at least two substantially similar" images and a third dissimilar "bridging picture." *Id.*, col. 46 ll. 6–10. As a result, the images appear to have "seamless and sustained directional movement." *Id.*, col. 46 ll. 11–12. For example, the alternating images can "create the optical illusion of a door forever cracking open." *Id.*, col. 54 l. 22. In one embodiment, the apparatus includes a "processor" and "storage." *Id.*, col. 14 ll. 34–38.

The '922 and '380 patents are continuations-in-part of the '444 patent. Because the specifications of these three patents are similar, we cite the '380 patent specification unless otherwise noted.

This appeal primarily centers on one aspect of the claimed invention: whether the limitations "processor" and "storage," as recited in the claims, are drafted in meansplus-function format under § 112(f).

Claim 1 of the '444 patent is representative and reads as follows:

1. An apparatus comprising:

a **storage** adapted to:

store one or more image frames; and

a *processor* adapted to:

obtain a first image frame from a first video stream;

expand the first image frame to generate a modified image frame, wherein the modified image frame is different from the first image frame;

generate a bridge frame, wherein the bridge frame is a non-solid color, wherein the bridge frame is different from the first image frame and different from the modified image frame;

blend the modified image frame with the bridge frame to generate a blended modified image frame; and display the blended modified image frame.

'444 patent, col. 47 ll. 40–54 (emphases added).

The remaining asserted claims are substantially similar to claim 1 of the '444 patent but recite different

functions for the processor. For example, claim 27 of the '444 patent recites that the processor is adapted to "shrink[]" or "remov[e] a portion of the first image frame" and that the "bridge frame is black." *Id.*, col. 50 ll. 37–57. Claim 2 of the '922 patent recites that the processor is adapted to display a "first modified image frame," a black "bridge frame," and a "second modified image frame." '922 patent, col. 113 ll. 27–48. Claim 6 of the '380 patent recites that the processor is "communicably coupled to the storage" and adapted to combine a "modified first image frame" and "modified second image frame" to "generate a modified combined image frame." '380 patent, col. 113 ll. 28–51.

On January 7, 2020, VDPP sued Vizio, Inc., a company that manufactures and sells television sets. In its complaint, VDPP alleged that Vizio's "P-series" television sets infringe claims 1 and 27 of the '444 patent, claim 2 of the '922 patent, and claim 6 of the '380 patent. Complaint, VDPP LLC v. Vizio, Inc., No. SACV 20-00030 (JVS) (C.D. Cal. Jan. 7, 2020), ECF No. 1.

In response, Vizio asserted an affirmative defense of invalidity. According to Vizio, the limitations "storage" and "processor" are drafted in means-plus-function format under § 112(f), and the specifications do not disclose structures that correspond to the recited functions of those limitations.

On April 5, 2021, the district court issued a decision concluding that the asserted claims are invalid as indefinite. First, the court determined that the limitations "processor" and "storage" are subject to § 112(f) because the "asserted claims do not describe how [they] carry out the recited functions—only that they do." *Decision*, 2021 WL 3621887, at *4. Thus, according to the court, the disputed limitations are merely "black box[es] for performance of a function." *Id.* Next, the court found that the disputed limitations have no corresponding structures in the specification. *Id.* at *5. Because of that lack of disclosure, the court

concluded that the asserted claims are indefinite. *Id.* The parties then stipulated to a final judgment that the asserted claims are invalid as indefinite. J.A. 18.

VDPP appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

Indefiniteness is a question of law that we review de novo. See MasterMine Software, Inc. v. Microsoft Corp., 874 F.3d 1307, 1313 (Fed. Cir. 2017). Whether claim language is subject to 35 U.S.C. § 112(f) is also a question of law that we review de novo. See Rain Computing, Inc. v. Samsung Elec. Am., Inc., 989 F.3d 1002, 1005 (Fed. Cir. 2021) (citing Williamson v. Citrix Online, LLC, 792 F.3d 1339, 1346 (Fed. Cir. 2015)).

Section 112(f) provides that a patent applicant may express "[a]n element in a claim" as "a means or step for performing a specified function without the recital of structure." But, recites the statute, the claim will be construed to cover only "the corresponding structure . . . described in the specification and equivalents thereof."

A § 112(f) analysis consists of two steps. See Dyfan, LLC v. Target Corp., No. 2021-1725, — F.4th —, slip op. at 7 (Fed. Cir. 2022). At step one, we determine whether, as a threshold matter, § 112(f) applies to the claim limitation. See id. In making that determination, we have "long recognized the importance of the presence or absence of the word 'means." Williamson, 792 F.3d at 1348. In the absence of the word means, we presume that a claim limitation is not subject to § 112(f). Id. To overcome that presumption, a challenger must "demonstrate[] that the [limitation] fails to 'recite sufficiently definite structure." Dyfan, slip. op. at 8 (quoting Williamson, 792 F.3d at 1349).

We have also recognized, however, that "the essential inquiry is not merely the presence or absence of the word 'means" but rather, whether the skilled artisan would understand the limitation to "have a sufficiently definite meaning as the name for structure." *Id.*, slip. op. at 8 (quoting *Williamson*, 792 F.3d at 1348). If we determine that the limitation fails to recite sufficiently definite structure, we then conclude that § 112(f) applies and move to step two of the analysis. At step two, we determine whether the specification discloses structure that "corresponds to the claimed function." *Williamson*, 792 F.3d at 1351.

VDPP argues that the district court erred in holding that the limitations "processor" and "storage" are subject to § 112(f). VDPP emphasizes that, because the disputed limitations lack the word "means," there is a rebuttable presumption that they are not subject to § 112(f). According to VDPP, the court failed to give that presumption any effect. VDPP adds that the limitations should be construed according to their plain and ordinary meaning. Vizio responds that the "processor" and "storage" limitations are subject to § 112(f) because they are "nothing more than nonce words." Appellee's Br. 5.

We agree with VDPP that the district court erred in holding that the limitations "processor" and "storage" are subject to § 112(f).

First, as VDPP points out, the district court failed to give effect to the presumption against the application of § 112(f). Specifically, although the court *acknowledged* that the presumption against § 112(f) applied, it then immediately concluded, without evidence, that Vizio overcame the presumption. *See Decision*, 2021 WL 3621887, at *4 (Concluding that the terms "only stand to set up a black box for performance of a function without any description of how such a function is performed."). That was erroneous. To overcome this presumption, Vizio was required to provide at least some evidence that a person of ordinary skill would not have understood the limitations to "recite sufficiently definite structure[s]." *Dyfan*, slip. op. at 12 (citing *Apex Inc. v. Raritan Comput.*, *Inc.*, 325 F.3d 1364, 1372–73

(Fed. Cir. 2003)). The court pointed to no such evidence from Vizio, instead summarily concluding that the limitations are subject to § 112(f). See, e.g., Decision, 2021 WL 3621887, at *4 (The "terms are surrogates for means terms for the performance of their recited functions."); ("[T]he asserted claims do not describe how the 'storage' or 'processor' carry out the recited functions—only that they do.").

Moreover, the district court overlooked intrinsic evidence showing that the terms "processor" and "storage" do connote structure to a skilled artisan. For example, the specifications explain that "processors" and "storage" are "well-known." '380 patent, col. 62 ll. 48–52; '922 patent, col. 63 ll. 19–22². In other words, contrary to the court's determination, a skilled artisan would not understand "processors" and "storage" to merely be "black box[es] for performance of a function." *Decision*, 2021 WL 3621887, at *4. Rather, they "exist[ed] in [the] prior art at the time of the invention[]." *Zeroclick*, *LLC v. Apple Inc.*, 891 F.3d 1003, 1008 (Fed. Cir. 2018).

Still, Vizio insists that the district court's analysis was correct and supported by the evidence. Vizio, however, points to no such evidence on appeal. Instead, it simply repeats the court's conclusory statements that the limitations are "nothing more than generic words." Appellee's Br. 8. That is insufficient to overcome the presumption against application of § 112(f). Accordingly, the court erred in concluding that the limitations are subject to § 112(f).

Vizio makes several additional arguments, all unpersuasive.

First, Vizio emphasizes that the specifications fail to disclose structures capable of performing the claimed functions. According to Vizio, because of that lack of disclosure, the claims are invalid as indefinite. For example, Vizio

That disclosure is not recited in the '444 patent.

contends that the specifications only disclose "generic computer diagrams" and no "algorithm for performance of the functions." Appellee's Br. 11–13.

Vizio's argument misses the mark. Whether the specifications disclose adequate corresponding structures for the claimed functions is a question we review at step two of the § 112(f) analysis. As explained above, this appeal centers on step one. And, because we conclude at step one that § 112(f) does not apply to the disputed limitations, we need not address whether, at step two, the specifications adequately disclose structures for those functions.

Second, Vizio emphasizes that, because the limitations "processor" and "storage" inherently connote function, they are necessarily subject to § 112(f). We disagree.

"[T]he mere fact that the disputed limitations incorporate functional language does not automatically convert [them] into means for performing such functions." Zeroclick, 891 F.3d at 1008. "Many devices take their names from the functions they perform. Examples are innumerable, such as 'filter,' 'brake,' 'clamp,' 'screwdriver,' or 'lock." Id. (quoting Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996)). Accordingly, that the disputed limitations incorporate functional language—"processing" and "storing"—does not necessarily render them subject to § 112(f).

Additionally, Vizio's arguments are particularly unpersuasive in view of our holding in *Dyfan*. In *Dyfan*, the district court determined that the limitations "code" and "application" were subject to 112(f). *Dyfan*, slip. op. at 6. We reversed the district court's construction of those terms (among others), explaining that the court did not give effect to the presumption against § 112(f). *Id.*, slip. op. at 19.

³ Our decision in *Dyfan* issued after the district court's decision.

More specifically, we held that the defendant failed to show "that persons of ordinary skill in the art would not have understood the 'code'/'application' limitations to connote structure in light of the claim as a whole." *Id.*, slip. op. at 11–12 (citing *Apex*, 325 F.3d at 1372–73.) That same rationale applies here. As explained above, the court ignored that it was Vizio's burden to rebut the presumption against § 112(f), and Vizio failed to meet that burden.

In summary, we determine that the district court erred in holding that the disputed limitations are subject to § 112(f). And because the district court's conclusion of invalidity was premised on its erroneous application of § 112(f), we reverse its decision. Additionally, although in some portions of its decision, the court referred only to the "asserted claims," in other portions, it referred to all claims. To the extent that the court held all the patent claims invalid as indefinite (not just the asserted claims), we also reverse that determination.

CONCLUSION

We have considered Vizio's remaining arguments but find them unpersuasive. For the foregoing reasons, we reverse the district court's decision that the asserted claims are invalid as indefinite and remand for further proceedings consistent with this opinion.

REVERSED AND REMANDED

Costs

Costs to VDPP.

§ 112 TITLE 35—PATENTS Page 46

EFFECTIVE DATE OF 1999 AMENDMENT

Amendment by section 1000(a)(9) [title IV, §4732(a)(10)(A)] of Pub. L. 106–113 effective 4 months after Nov. 29, 1999, see section 1000(a)(9) [title IV, §4731] of Pub. L. 106–113, set out as a note under section 1 of this title.

Amendment by section 1000(a)(9) [title IV, §4801(a)] of Pub. L. 106–113 effective Nov. 29, 1999, and applicable to any provisional application filed on or after June 8, 1995, see section 1000(a)(9) [title IV, §4801(d)] of Pub. L. 106–113, set out as a note under section 119 of this title.

EFFECTIVE DATE OF 1994 AMENDMENT

Amendment by Pub. L. 103–465 effective 6 months after Dec. 8, 1994, and applicable to all patent applications filed in the United States on or after that effective date, with provisions relating to earliest filed patent application, see section 534(b)(1), (3) of Pub. L. 103–465, set out as a note under section 154 of this title.

EFFECTIVE DATE OF 1982 AMENDMENT

Amendment by Pub. L. 97–247 effective six months after Aug. 27, 1982, see section 17(c) of Pub. L. 97–247, set out as an Effective Date note under section 294 of this title

EMERGENCY RELIEF FROM POSTAL SITUATION AFFECTING PATENT, TRADEMARK, AND OTHER FEDERAL CASES

Pub. L. 92-34, June 30, 1971, 85 Stat. 87, provided that a patent or trademark application would be considered filed in the United States Patent Office on the date that it would have been received by the Patent Office except for the delay caused by emergency situation affecting postal service from Mar. 18, 1970 to Mar. 30, 1970, if a claim was made.

§ 112. Specification

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.

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.

A claim may be written in independent or, if the nature of the case admits, in dependent or multiple dependent form.

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

A claim in multiple dependent form shall contain a reference, in the alternative only, to more than one claim previously set forth and then specify a further limitation of the subject matter claimed. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of the particular claim in relation to which it is being considered.

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.

(July 19, 1952, ch. 950, 66 Stat. 798; Pub. L. 89–83, §9, July 24, 1965, 79 Stat. 261; Pub. L. 94–131, §7, Nov. 14, 1975, 89 Stat. 691; Pub. L. 112–29, §4(c), Sept. 16, 2011, 125 Stat. 296.)

AMENDMENT OF SECTION

Pub. L. 112–29, §4(c), (e), Sept. 16, 2011, 125 Stat. 296, 297, provided that, effective upon the expiration of the 1-year period beginning on Sept. 16, 2011, and applicable to any patent application that is filed on or after that effective date, this section is amended:

- (1) in the first undesignated paragraph—
- (A) by striking "The specification" and inserting "(a) IN GENERAL.—The specification"; and
- (B) by striking "of carrying out his invention" and inserting "or joint inventor of carrying out the invention";
 - (2) in the second undesignated paragraph—
- (A) by striking "The specification" and inserting "(b) CONCLUSION.—The specification"; and
- (B) by striking "applicant regards as his invention" and inserting "inventor or a joint inventor regards as the invention":
- (3) in the third undesignated paragraph, by striking "A claim" and inserting "(c) FORM.—A claim":
- (4) in the fourth undesignated paragraph, by striking "Subject to the following paragraph," and inserting "(d) REFERENCE IN DEPENDENT FORMS.—Subject to subsection (e),";
- (5) in the fifth undesignated paragraph, by striking "A claim" and inserting "(e) Reference in Multiple Dependent Form.—A claim"; and
- (6) in the last undesignated paragraph, by striking "An element" and inserting "(f) ELE-MENT IN CLAIM FOR A COMBINATION.—An element".

See 2011 Amendment note below.

HISTORICAL AND REVISION NOTES

Based on Title 35, U.S.C., 1946 ed., §33 (R.S. 4888, amended (1) Mar. 3, 1915, ch. 94, §1, 38 Stat. 958; (2) May 23, 1930, ch. 312, §2, 46 Stat. 376).

The sentence relating to signature of the specification is omitted in view of the general requirement for a signature in section 111.

The last sentence is omitted for inclusion in the chapter relating to plant patents.

The clause relating to machines is omitted as unnecessary and the requirement for disclosing the best mode of carrying out the invention is stated as generally applicable to all types of invention (derived from Title 35, U.S.C., 1946 ed., §69, first defense).

The clause relating to the claim is made a separate paragraph to emphasize the distinction between the description and the claim or definition, and the language is modified.

A new paragraph relating to functional claims is added.

AMENDMENTS

2011—Pub. L. 112–29 designated first to sixth pars. as subsecs. (a) to (f), respectively, inserted headings, in subsec. (a), substituted "or joint inventor of carrying

Page 47 TITLE 35—PATENTS §115

out the invention" for "of carrying out his invention", in subsec. (b), substituted "inventor or a joint inventor regards as the invention" for "applicant regards as his invention", and in subsec. (d), substituted "Subject to subsection (e)," for "Subject to the following paragraph.".

1975—Pub. L. 94–131 substituted provision authorizing the writing of claims, if the nature of the case admits, in dependent or multiple dependent form for prior provision for writing claims in dependent form, required claims in dependent form to contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed, substituted text respecting construction of a claim in dependent form so as to incorporate by reference all the limitations of the claim to which it refers for prior text for construction of a dependent claim to include all the limitations of the claim incorporated by reference into the dependent claim, and inserted paragraph respecting certain requirements for claims in multiple dependent form.

1965—Pub. L. 89-83 permitted a claim to be written in independent or dependent form, and if in dependent form, required it to be construed to include all the limitations of the claim incorporated by reference into the dependent claim.

EFFECTIVE DATE OF 2011 AMENDMENT

Amendment by Pub. L. 112–29 effective upon the expiration of the 1-year period beginning on Sept. 16, 2011, and applicable to any patent application that is filed on or after that effective date, see section 4(e) of Pub. L. 112–29, set out as a note under section 111 of this title.

EFFECTIVE DATE OF 1975 AMENDMENT

Amendment by Pub. L. 94–131 effective Jan. 24, 1978, and applicable on and after that date to patent applications filed in the United States and to international applications, where applicable, see section 11 of Pub. L. 94–131, set out as an Effective Date note under section 351 of this title.

EFFECTIVE DATE OF 1965 AMENDMENT

Amendment by Pub. L. 89–83 effective three months after July 24, 1965, see section 7(a) of Pub. L. 89–83, set out as a note under section 41 of this title.

§113. Drawings

The applicant shall furnish a drawing where necessary for the understanding of the subject matter sought to be patented. When the nature of such subject matter admits of illustration by a drawing and the applicant has not furnished such a drawing, the Director may require its submission within a time period of not less than two months from the sending of a notice thereof. Drawings submitted after the filing date of the application may not be used (i) to overcome any insufficiency of the specification due to lack of an enabling disclosure or otherwise inadequate disclosure therein, or (ii) to supplement the original disclosure thereof for the purpose of interpretation of the scope of any claim.

(July 19, 1952, ch. 950, 66 Stat. 799; Pub. L. 94–131, $\S 8$, Nov. 14, 1975, 89 Stat. 691; Pub. L. 106–113, div. B, $\S 1000(a)(9)$ [title IV, $\S 4732(a)(10)(A)$], Nov. 29, 1999, 113 Stat. 1536, 1501A–582; Pub. L. 107–273, div. C, title III, $\S 13206(b)(1)(B)$, Nov. 2, 2002, 116 Stat. 1906.)

HISTORICAL AND REVISION NOTES

Based on Title 35, U.S.C., 1946 ed., §34, part (R.S. 4889, amended Mar. 3, 1915, ch. 94, §2, 38 Stat. 958).

The requirement for signature in the corresponding section of existing statute is omitted; regulations of

the Patent Office can take care of any substitute. A redundant clause is omitted.

AMENDMENTS

2002—Pub. L. 107–273 made technical correction to directory language of Pub. L. 106–113. See 1999 Amendment note below.

1999—Pub. L. 106–113, as amended by Pub. L. 107–273, substituted "Director" for "Commissioner".

1975—Pub. L. 94–131 substituted provisions respecting drawings requiring necessary-for-understanding drawings and submission of drawings within prescribed time period and limiting use of drawings submitted after filing date of application for prior provision requiring the applicant to furnish a drawing when the nature of the case admitted it.

EFFECTIVE DATE OF 1999 AMENDMENT

Amendment by Pub. L. 106–113 effective 4 months after Nov. 29, 1999, see section 1000(a)(9) [title IV, §4731] of Pub. L. 106–113, set out as a note under section 1 of this title.

EFFECTIVE DATE OF 1975 AMENDMENT

Amendment by Pub. L. 94–131 effective Jan. 24, 1978, and applicable on and after that date to patent applications filed in the United States and to international applications, where applicable, see section 11 of Pub. L. 94–131, set out as an Effective Date note under section 351 of this title.

§ 114. Models, specimens

The Director may require the applicant to furnish a model of convenient size to exhibit advantageously the several parts of his invention.

When the invention relates to a composition of matter, the Director may require the applicant to furnish specimens or ingredients for the purpose of inspection or experiment.

HISTORICAL AND REVISION NOTES

Based on Title 35, U.S.C., 1946 ed., $\S34$, part (R.S. 4890 and 4891).

The change in language in the second paragraph broadens the requirement for specimens. $\,$

AMENDMENTS

 $2002\mathrm{-Pub}.$ L. 107–273 made technical correction to directory language of Pub. L. 106–113. See 1999 Amendment note below.

1999—Pub. L. 106–113, as amended by Pub. L. 107–273, substituted "Director" for "Commissioner" in two places.

EFFECTIVE DATE OF 1999 AMENDMENT

Amendment by Pub. L. 106-113 effective 4 months after Nov. 29, 1999, see section 1000(a)(9) [title IV, §4731] of Pub. L. 106-113, set out as a note under section 1 of this title.

§ 115. Oath of applicant

The applicant shall make oath that he believes himself to be the original and first inventor of the process, machine, manufacture, or composition of matter, or improvement thereof, for which he solicits a patent; and shall state of what country he is a citizen. Such oath may be made before any person within the United States authorized by law to administer oaths,