

**35 U.S.C. § 112 in Light of
*Williamson v. Citrix Online, LLC***

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I. INTRODUCTION

A “means-or-step-plus-function” limitation in a patent claim is governed by 35 U.S.C. § 112(f), or Pre-AIA 35 U.S.C. § 112 ¶ 6, which states:

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.

In 2004, the Federal Circuit held, in *Lighting World, Inc. v. Birchwood Lighting, Inc.*, that “a claim term that does not use ‘means’ will trigger the rebuttable presumption that § 112 ¶ 6 does not apply,” and “the presumption flowing from the absence of the term ‘means’ is a strong one that is not readily overcome.”¹ Then, in 2015, the *en banc* Federal Circuit, in *Williamson v. Citrix Online, LLC*,² overruled *Lighting World* and the strong presumption that a claim term lacking the word “means” is not subject to § 112 ¶ 6.

II. ORIGINS OF 35 U.S.C. § 112(f)

As the U.S. Supreme Court has explained,

Congress enacted § 112, ¶ 6 [in the Patent Act of 1952], in response to *Halliburton Oil Well Cementing Co. v. Walker*,³ which rejected claims that “do not describe the invention but use ‘conveniently functional language at the exact point of novelty.’”⁴

The patent at issue in *Halliburton* (US Patent No. 2,156,519) claimed “means for measuring the location of obstruction in wells;” the District Court, affirmed by the Court of Appeals, found novelty in the addition of “a tuned acoustical means which performs the functions of a sound filter.”⁵ Reversing, the U.S. Supreme Court held that the claims “fail adequately to describe the alleged invention,”⁶ because of the use of functional language, specifically at the point of novelty, i.e., the tuned acoustical means.

There is little to no formal legislative history regarding § 112 ¶ 6 in the revisions to the bill that became the Patent Act of 1952, but P.J. Federico, one of the authors of the Act and the Chief Patent Examiner at the time, stated in a commentary following enactment:

The last paragraph of section 112 relating to so-called functional claims is new. It provides that an element of a claim for a combination (and a

¹ *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358, 72 U.S.P.Q.2d 1344 (2004) (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002)).

² *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 115 U.S.P.Q.2d 1105 (2015).

³ 329 U.S. 1, 67 S.Ct. 6, 91 L.Ed. 3 (1946).

⁴ *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 27-28, 117 S.Ct. 1040, 1048, 137 L.Ed.2d 146 (U.S. 1997) (quoting *General Electric Co. v. Wabash Appliance Corporation*, 304 U.S. 364, 371, 58 S.Ct. 899, 903, 82 L.Ed. 1402 (U.S. 1938)).

⁵ *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. at 7.

⁶ *Id.* at 14.

combination may be not only a combination of mechanical elements, but also a combination of substances in a composition claim, or steps in a process claim) may be expressed as a means or step for performing a specified function, without the recital of structure, material or acts in support thereof. It is unquestionable that some measure of greater liberality in the use of functional expressions in combination claims is authorized than had been permitted by some court decisions and that decisions such as that in *Halliburton Oil Well Cementing Co. v. Walker*, are modified or rendered obsolete, but the exact limits of the enlargement remain to be determined.⁷

Yet, over a half-century later, the precise boundaries of the “enlargement” wrought by Section 112(f) still remain to be determined. Specifically, the presence or absence of the term “means” in a claim term and whether to construe that claim term under 35 U.S.C. § 112(f) has remained largely an unclear issue.

III. FEDERAL CIRCUIT: “STRONG PRESUMPTION” THAT A LIMITATION LACKING THE WORD MEANS IS NOT SUBJECT TO § 112 ¶ 6

Leading up to *Lighting World*, Federal Circuit precedent provided that

[a] claim limitation that actually uses the word ‘means’ invokes a rebuttable presumption that § 112 ¶ 6 applies. By contrast, a claim term that does not use ‘means’ will trigger the rebuttable presumption that § 112 ¶ 6 does not apply.⁸

In *Lighting World*, the Federal Circuit held, for the first time, that “the presumption flowing from the absence of the term ‘means’ is a *strong one that is not readily overcome*.”⁹ Caselaw prior to *Lighting World* had never explicitly characterized this presumption as “strong,” but the Federal Circuit stated that this assertion was “clear” from its prior cases.¹⁰

Lighting World owned U.S. Patent No. 5,448,460, directed to commercial lighting fixtures. *Lighting World* sued *Birchwood Lighting* alleging, *inter alia*, infringement of claim 1 of the ‘460 patent, which recited “[a] lighting fixture for fluorescent lighting comprising ... a connector assembly for connecting each pair of adjacent support members, said connector assembly being pivotally connected to said pair of adjacent support members.”¹¹ The District Court for the Central District of California found that the “connector assembly” limitation was a means-plus-function limitation under 35 U.S.C. § 112 ¶ 6. The district court acknowledged the presumption that § 112 ¶ 6 does not apply to a claim term lacking the term “means,” but found

⁷ P. J. Federico, *Commentary on the New Patent Act*, reprinted in 75 J.P.T.O.S. 161 (1993). See Jeffrey R. Kuester, *Means-Plus-Function Claiming: Recent Developments and New Considerations*, Kuester Law (July 1995), <http://www.kuesterlaw.com/mpf.html>.

⁸ *Lighting World*, 382 F.3d at 1358 (quoting *CCS Fitness*, 288 F.3d at 1369).

⁹ *Id.* (emphasis added).

¹⁰ *Id.* (citing *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1318–19 (Fed. Cir. 1999); *Personalized Media Communications, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 703-05 (Fed. Cir. 1998)).

¹¹ ‘460 patent, claim 1 (emphasis added).

that the presumption was overcome because the “connector assembly” limitation described only a function and not the structure that performed it.¹²

The Federal Circuit, disagreed with the lower court, holding that Birchwood failed to rebut the presumption that § 112 ¶ 6 did not apply to the “connector assembly” limitation. The court looked to intrinsic evidence, such as the ‘460 patent’s written description, and extrinsic evidence, such as expert testimony and dictionary definitions of “connector” and “connect,” and concluded that “connector” and “connector assembly” are used as the names for structure, not function.¹³

The *Lighting World* court further justified its holding by noting similarities to *Greenberg v. Ethicon Endo-Surgery, Inc.*¹⁴ and drawing distinctions from *Mas-Hamilton Group v. LaGard, Inc.*¹⁵ In *Greenberg*, the Federal Circuit held that the trial court erred when it characterized the claim phrase “detent mechanism” as a means-plus-function limitation, largely because the dictionary definitions made clear that “detent” denoted a type of device with a generally understood meaning in the mechanical arts.¹⁶ In contrast, *Mas-Hamilton* was the only published Federal Circuit opinion between 1996 and 2004 that characterized a limitation lacking the term “means” as a means-plus-function limitation. There, the court found the claim terms “lever moving element” and “movable link member” to be subject to § 112 ¶ 6, because the claim terms were functional in nature and had no well-understood meaning in the art.¹⁷

Following *Lighting World*, the Federal Circuit, in *Inventio AG v. ThyssenKrupp Elevator Americas Corp.*,¹⁸ reiterated that the presumption that § 112 ¶ 6 does not apply to a claim term lacking the term “means” is a “strong one that is not readily overcome.”¹⁹ *Inventio* owned U.S. Patent Nos. 6,892,861 and 6,935,465, which both involved “modernizing” a conventional elevator system, through the use of a claimed “modernizing device.” The Federal Circuit stated that the district court erred in concluding the claim term “modernizing device” was a means-plus-function limitation under § 112 ¶ 6, because the patent claims and written description showed that the claim term “modernizing device” was not a purely functional limitation.²⁰ Specifically, the court found that “modernizing device” was used to describe an electrical circuit, and that there was sufficient structure to avoid application of § 112 ¶ 6 because the written description adequately detailed the circuit’s operation.²¹

A year after *Inventio*, the Federal Circuit, in *Flo Healthcare Solutions, LLC v. Kappos*,²² “raised the bar even further, declaring that “[w]hen the claim drafter has not signaled his intent to invoke § 112, ¶ 6 by using the term “means,” we are unwilling to apply that provision *without a*

¹² *Lighting World*, 382 F.3d at 1358. See *CCS Fitness*, 288 F.3d at 1369; *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000).

¹³ *Id.* at 1361-62.

¹⁴ 91 F.3d 1580 (Fed. Cir. 1996).

¹⁵ 156 F.3d 1206 (Fed. Cir. 1998).

¹⁶ *Greenberg*, 91 F.3d at 1583.

¹⁷ *Mas-Hamilton*, 156 F.3d at 1213-15.

¹⁸ 649 F.3d 1350 (2011).

¹⁹ *Id.* at 1358 (citing *Lighting World*, 382 F.3d at 1358).

²⁰ *Id.* at 1358-59.

²¹ *Id.*

²² 697 F.3d 1367 (2012).

showing that the limitation essentially is devoid of anything that can be construed as structure.”²³ In *Flo Healthcare*, the Federal Circuit stated that the Patent Trial and Appeal Board (PTAB) erred in holding that the “height adjustment mechanism” limitation in Flo Healthcare’s U.S. Patent No. 6,721,178 invoked means-plus-function interpretation under § 112 ¶ 6. The court found the dictionary definition of the noun “adjustment” to have a reasonably well-understood meaning as a name for a structure.²⁴ Further, the court concluded that the written description of the ‘178 patent “confirms that the term ‘height adjustment mechanism’ indicates a structure, and is not ‘simply a nonce word or a verbal construct that is [used as] ... a substitute for the term “means for.””²⁵

In 2014, in *Apple Inc. v. Motorola, Inc.*,²⁶ the Federal Circuit again reiterated the “strong presumption” from *Lighting World*, and also noted that the court has “‘seldom’ held that a limitation without recitation of ‘means’ is a means-plus-function limitation.”²⁷ Apple was the owner of U.S. Patent No. 7,479,949, directed to the use of finger contacts to control a touchscreen computer. Several of the claims from the ‘949 patent contained the noun “heuristic,” for example, claim 1 recited “a vertical screen scrolling heuristic,” “a two-dimensional screen translation heuristic,” and “a next item heuristic.”²⁸ The district court construed these “heuristic” claim terms as means-plus-function limitations under § 112 ¶ 6. The Federal Circuit disagreed, explaining that:

The correct inquiry, when “means” is absent from a limitation, is whether the limitation, read in light of the remaining claim language, specification, prosecution history, and relevant extrinsic evidence, has sufficiently definite structure to a person of ordinary skill in the art. Here, the answer is yes.²⁹

Accordingly, the Federal Circuit reversed the district court’s construction of “heuristic” as a means-plus-function limitation and held that the “the heuristic claim limitations provide ‘sufficiently definite structure,’ to a person of ordinary skill in the art, for performing the recited function, and Motorola has not rebutted the strong presumption against means-plus-function claiming.”³⁰

In sum, by the time the *en banc* Federal Circuit addressed construction of functional claim language in *Williamson*, the court had recognized that its “opinions in *Lighting World*, *Inventio*, *Flo Healthcare* and *Apple* ha[d] thus established a heightened bar to overcoming the presumption that a limitation expressed in functional language without using the word ‘means’ is not subject to § 112, para. 6.”³¹

²³ *Williamson*, 792 F.3d at 1349 (quoting *Flo Healthcare*, 697 F.3d at 1374 (citing *Masco Corp. v. United States*, 303 F.3d 1316, 1327 (Fed. Cir. 2002)))(emphasis added).

²⁴ *Flo Healthcare*, 697 F.3d at 1374.

²⁵ *Id.* at 1374-75 (quoting *Lighting World*, 382 F.3d at 1360).

²⁶ 757 F.3d 1286 (2014).

²⁷ *Id.* at 1297 (citing *Lighting World*, 382 F.3d at 1358, 1362; *Inventio*, 649 F.3d at 1356; see also *Flo Healthcare*, 697 F.3d at 1374).

²⁸ *Id.* at 1294-95.

²⁹ *Id.* at 1298.

³⁰ *Id.* at 1304.

³¹ *Williamson*, 792 F.3d at 1349.

IV. EN BANC FEDERAL CIRCUIT OVERRULES “STRONG PRESUMPTION”

In *Williamson*, the *en banc* Federal Circuit “expressly overrule[d]” the strong presumption that a limitation lacking the word means is not subject to 35 U.S.C. § 112 ¶ 6.³² Richard A. Williamson (“Williamson”), as trustee for the At Home Corporation Bondholders’ Liquidating Trust, owned U.S. Patent No. 6,155,840, which described “methods and systems for ‘distributed learning’ that utilize industry standard computer hardware and software linked by a network to provide a classroom or auditorium-like metaphor – i.e., a ‘virtual classroom’ environment.”³³ Specifically, claim 8 of the ‘840 patent recited “a distributed learning control module for receiving communications.”³⁴ After Williamson filed suit in the U.S. District Court for the Central District of California alleging the defendants infringed all 24 claims of the ‘840 patent, the district court issued a claim construction order and concluded that the “distributed learning control module” limitation was a means-plus-function term under § 112 ¶ 6 and that it was also invalid as indefinite under § 112 ¶ 2.³⁵

On appeal, the Federal Circuit agreed with the district court and held claim 8 to be invalid. After a brief narrative of the history of the “strong presumption” holding, beginning with *Lighting World* and ending with *Apple*, the court “conclude[d] that such a heightened burden is unjustified and [] we should abandon characterizing as ‘strong’ the presumption that a limitation lacking the word ‘means’ is not subject to § 112, para. 6.”³⁶ Justifying its holding, the court reasoned that the:

characterization is unwarranted, is uncertain in meaning and application, and has the inappropriate practical effect of placing a thumb on what should otherwise be a balanced analytical scale. It has shifted the balance struck by Congress in passing § 112, para. 6 and has resulted in a proliferation of functional claiming untethered to § 112, para. 6 and free of the strictures set forth in the statute.³⁷

The court went on to state that

“[h]enceforth, we will apply the presumption as we have done prior to *Lighting World*, without requiring any heightened evidentiary showing and ... [t]he standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.”³⁸

After *Lighting World*, patent practitioners had increasingly used so-called nonce words to achieve functional claiming without those claims being subjected to the constraints of § 112(f). It is clear that the Federal Circuit was attempting to put an end to this practice with its holding in

³² *Id.*

³³ *Id.* at 1343.

³⁴ *Id.* at 1344.

³⁵ *Id.* at 1345.

³⁶ *Id.* at 1348-49.

³⁷ *Id.* at 1349.

³⁸ *Id.* (citing *Greenberg*, 91 F.3d at 1583).

Williamson. Whether the court completely accomplished its goal still remains to be seen. However, cases following *Williamson* seem to demonstrate that the “strong” presumption that a limitation lacking the word “means” is not subject to § 112(f) has indeed been impaired, if not altogether quashed.

V. AFTER WILLIAMSON: § 112(f) AT THE FEDERAL CIRCUIT

The first case concerning means-plus-function claim construction at the Federal Circuit following *Williamson* was *Media Rights Technologies, Inc. v. Capital One Financial Corporation*.³⁹ Media Rights owned U.S. Patent No. 7,316,033, which was generally directed to methods, systems, and computer readable media related to the prevention of unauthorized recording of electronic media.⁴⁰ Every claim of the '033 patent contained the term “compliance mechanism,” which “divert[ed] incoming media content protected by law or agreement from being output from a system in order to stop the illegal copying or sharing of that content.”⁴¹

Media Rights sued Capital One in the U.S. District Court for the Eastern District of Virginia, alleging infringement of claims of the '033 patent. The district court held a *Markman* claim construction hearing and concluded that the “compliance mechanism” term must be a means-plus-function term under § 112 ¶ 6, because the claim language described this term only by its function, and not its structure. The district court also concluded the “compliance mechanism” term was indefinite under § 112 ¶ 2, because the specification failed to describe “an algorithm whose terms are defined and understandable.”⁴²

On appeal, Media Rights attempted to prevent the application of § 112 ¶ 6 by analogizing the recited “compliance mechanism” to the “modernizing device” recited in *Inventio*; the Federal Circuit disagreed, stating “unlike *Inventio*, the claims do not use the term ‘compliance mechanism’ as a substitute for an electrical circuit, or anything else that might connote a definite structure.”⁴³ The court also noted that *Inventio* was decided under the “now-superseded case law, which imposed a heavy presumption against finding a claim term to be in means-plus-function format.”⁴⁴ Here, because there was no strong presumption, and the description was far less detailed than in *Inventio*, the court refused to reach the same conclusion as in *Inventio*.⁴⁵ The court went on to affirm the district court and held that the “compliance mechanism” term was a means-plus-function term under § 112 ¶ 6, and was indefinite under § 112 ¶ 2.⁴⁶

Less than a year after *Media Rights*, the Federal Circuit decided *Advanced Ground Information Systems, Inc. v. Life360, Inc.*⁴⁷ Advanced Ground Information Systems (“AGIS”) appealed the decision of the U.S. District Court for the Southern District of Florida, which found that claims 3 and 10 of U.S. Patent No. 7,031,728 and claims 5 and 9 of U.S. Patent No.

³⁹ 800 F.3d 1366 (Fed. Cir. 2015).

⁴⁰ *Id.* at 1367.

⁴¹ *Id.*

⁴² *Id.* at 1370 (quoting *Ibormeith IP, LLC v. Mercedes-Benz USA, LLC*, 732 F.3d 1376, 1381 (Fed.Cir.2013)).

⁴³ *Id.* at 1372.

⁴⁴ *Id.* at 1373.

⁴⁵ *Id.*

⁴⁶ *Id.* at 1373-75.

⁴⁷ 830 F.3d 1341 (Fed. Cir. 2016).

7,672,681 invoked § 112 ¶ 6, and were indefinite under § 112 ¶ 2.⁴⁸ The '728 patent described “a cellular communication system that allows multiple cellular phone users to monitor others’ locations and statuses via visual display of such information on a map.”⁴⁹ The '681 patent was a continuation-in-part of the '728 patent, and was directed to a manner in which a designated administrator can reprogram all user participants’ cell phone devices to modify switch names and new symbols for a different operating environment.⁵⁰

Claims 3 and 10 of the '728 patent, and claims 5 and 9 of the '681 patent, each recited a “symbol generator.” The court concluded that “[t]he term ‘symbol generator’ invokes the application of § 112, ¶ 6 because it fails to describe a sufficient structure and otherwise recites abstract elements ‘for’ causing actions, or elements ‘that can’ perform functions.”⁵¹ AGIS relied on the testimony of a Dr. Goldberg to argue that those skilled in the art would have understood what a “symbol generator” is, but the court pointed out that Dr. Goldberg testified that the term “symbol generator” was a term “coined for the purposes of the patents-in-suit.”⁵² Therefore, “[t]he term [was] not used in ‘common parlance or by persons of skill in the pertinent art to designate structure,’ such that it connote[d] sufficient structure to avoid the application of 35 U.S.C. § 112, ¶ 6.”⁵³ The court proceeded to affirm the district court and held that the “symbol generator” term was a means-plus-function term under § 112 ¶ 6, and the claims were indefinite under § 112 ¶ 2 for failure to “disclose an operative algorithm for the claim elements reciting ‘symbol generator.’”⁵⁴

In *Skky, Inc. v. MindGeek, s.a.r.l.*,⁵⁵ the Federal Circuit discussed the inverse presumption following from the above cases, *i.e.*, a presumption that a limitation *containing* the word “means” is subject to § 112 ¶ 6. *Skky* appealed from a final written decision of the PTAB in an *inter partes* review (“IPR”) proceeding concluding that claims 1-3, 5, and 15-23 of U.S. Patent No. 7,548,875 were not to be construed under § 112 ¶ 6, and that the claims were unpatentable as obvious under 35 U.S.C. § 103. The '875 patent was directed to a method for delivering audio and/or visual files to a wireless device, and the claims contained the term “wireless device means.”⁵⁶ The PTAB “determined that ‘wireless device means’ does not invoke § 112 ¶ 6 because “‘wireless device’ is not purely functional language, but rather language that denotes structure.”⁵⁷

In determining whether to apply § 112 ¶ 6, the Federal Circuit quoted *Williamson*, stating that “‘the essential inquiry is not merely the presence or absence of the word ‘means’ but whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.’”⁵⁸ Ultimately, the court agreed with

⁴⁸ *Id.* at 1343.

⁴⁹ *Id.* at 1344 (citing '728 patent, Abstract).

⁵⁰ *Id.* at 1345 (citing '681 patent, col. 2 ll. 3-7).

⁵¹ *Advanced Ground Information Systems*, 830 F.3d at 1347-48 (quoting '728 patent, col. 14 ll. 45-47 and '681 patent, col. 12 l. 62).

⁵² *Id.* at 1348.

⁵³ *Id.* (quoting *Lighting World*, 382 F.3d at 1359).

⁵⁴ *Id.* at 1349.

⁵⁵ 859 F.3d 1014 (Fed. Cir. 2017).

⁵⁶ *Id.* at 1016-17.

⁵⁷ *Id.* at 1018 (quoting J.A. 4638-39).

⁵⁸ *Id.* at 1019 (quoting *Williamson*, 792 F.3d at 1348).

MindGeek and held that “wireless device means” did not invoke § 112 ¶ 6 because its clause recited sufficient structure.⁵⁹ The court reasoned:

Although the term uses the word “means” and so triggers a presumption, the full term recites structure, not functionality; the claims do not recite a function or functions for the wireless device means to perform, and “wireless device” is “used in common parlance ... to designate structure.”⁶⁰

The court went on to affirm the PTAB and found the claims unpatentable as obvious in light of the claims being construed as their plain and ordinary meaning, and not as limitations under § 112 ¶ 6.

VI. AFTER WILLIAMSON: § 112(f) IN THE DISTRICT COURTS

In *Telinit Technologies, LLC v. Alteva, Inc.*,⁶¹ the U.S. District Court for the Eastern District of Texas held a *Markman* claim construction hearing and concluded that the claim term “means configured to connect an instrument identified by the user telephone number to the call” was a means-plus-function term under § 112 ¶ 6.⁶² Telinit Technologies, LLC (“Telinit”) owned U.S. Patent No. 6,192,123, generally directed to technology for placing and receiving network-based telephone calls; claims of the ’123 patent recited the “means configured to connect.”⁶³ The parties disputed whether this claim term should be construed as a means-plus-function term. The court acknowledged that the “presence of the word ‘means’ in the disputed term gives rise to a presumption that this is a means-plus-function term,”⁶⁴ and, not surprisingly, concluded that Telinit failed to overcome the presumption that § 112 ¶ 6 applied.

Telinit may seem like an easy case. Consider, however, *Krausz Industries Ltd. v. Smith-Blair, Inc.*⁶⁵ There, the U.S. District Court for the Eastern District of North Carolina held that the claim term “connecting means” was *not* a means-plus-function term, and hence the requirements of § 112 ¶ 6 did not apply.⁶⁶ This claim term was found in U.S. Patent No. 6,293,556, owned by Krausz Industries Ltd. and directed to “Coupling and Connecting Means for pipes of the same or different diameters and a seal to be used with such connecting means.”⁶⁷ The court acknowledged that the presence of the word “means” in the claim term created a rebuttable presumption that § 112 ¶ 6 applied, but the court also stated that “[m]erely because a named element of a patent claim is followed by the word ‘means,’ however, does not automatically make that element a ‘means-plus-function’ element under 35 U.S.C. § 112, ¶ 6.”⁶⁸ “Rather, ‘the essential inquiry is ... whether the words of the claim are understood by persons of ordinary skill

⁵⁹ *Id.* at 1020.

⁶⁰ *Id.* (quoting *TecSec, Inc. v. International Business Machines Corp.*, 731 F.3d 1336, 1347 (Fed. Cir. 2013)).

⁶¹ 2015 WL 5578604 (E.D. Tex. 2015).

⁶² *Id.* at 14.

⁶³ *Id.* at 1.

⁶⁴ *Id.* at 13 (citing *Williamson*, 792 F.3d at 1348).

⁶⁵ 122 F.Supp.3d 381 (E.D.N.C. 2015).

⁶⁶ *Id.* at 400-01.

⁶⁷ *Id.* at 384 (quoting ’556 Patent, Abstract).

⁶⁸ *Id.* at 400 (quoting *Williamson*, 792 F.3d at 1348).

in the art to have a sufficiently definite meaning as the name for structure.”⁶⁹ Specifically, the court found that “the term ‘connecting means’ [was] followed by a precise structural recitation, as opposed to a description of function performed. In particular, claim 3 describe[d] ‘connecting means *provided with a U shape ring and placed within said U shaped ring.*”⁷⁰ Further, the “claim [did] not use the words ‘means for,’ and the words ‘means’ [was] not followed by ‘a recitation of the function performed.”⁷¹ Accordingly, the court held that the term “connecting means” required no construction and was not indefinite.

In *GoDaddy.com, LLC v. RPost Communications Limited*,⁷² the U.S. District Court for the District of Arizona found that the claim term “processor for associating” was a means-plus-function term under § 112(6).⁷³ RPost Communications Limited (“RPost”) was the owner of U.S. Patent No. 6,182,219 (‘219 patent), which disclosed “a method and apparatus for authenticating the dispatch and the contents of dispatched information in general,”⁷⁴ and which contained the “processor for associating” claim term. The court stated “[f]or the first inquiry of the *Williamson* analysis, the Federal Circuit only requires...that the claim recite some structure to avoid § 112(6) and has repeatedly rejected as ‘unduly restrictive’ the argument that ‘specific structure’ is necessary.”⁷⁵ The court then looked to a technical dictionary definition of “processor,” and concluded that although “processor” may cover a broad class of structures, one of ordinary skill in the art would understand it to encompass a microprocessor or microcontroller, which are considered structural terms.⁷⁶

Despite the court concluding that “processor” connoted at least some structure, the court proceeded to the next step in the *Williamson* analysis, which “allows a challenger to overcome the presumption against application of § 112(6) if the claim recites ‘function without reciting sufficient structure for performing that function.’”⁷⁷ The court determined one skilled in the art would understand “processor” as used in the claims as a general purpose computer, the recited functions performed by the processor are not functions typically found in a commercially available off-the-shelf processor, and “processor” is different from terms specified by the Federal Circuit as denoting sufficient structure, such as “circuit.”⁷⁸ Basing its decision on the foregoing determinations, the district court concluded that the term “processor” “is a term that would not be understood by an ordinarily skilled artisan as having sufficient structure for performing the recited functions...and therefore invokes the application of § 112(6).”⁷⁹

In contrast to the holding in *GoDaddy.com*, the U.S. District Court for the Eastern District of Texas held, in *Syncpoint Imaging, LLC v. Nintendo of America Inc.*,⁸⁰ that the claim term “a processor...for processing...” was found to not be a means-plus-function term and § 112

⁶⁹ *Id.* (quoting *Williamson*, 792 F.3d at 1348).

⁷⁰ *Id.* (quoting ‘556 Patent, Col. 2, lines 53–54 (emphasis added)).

⁷¹ *Id.* at 400-01 (quoting *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed.Cir.1996)).

⁷² 2016 WL 212676 (D. Ariz. 2016).

⁷³ *Id.* at 57.

⁷⁴ *Id.* at 3 (quoting ‘219 Patent col. 1 ll. 6–8).

⁷⁵ *Id.* at 55 (citing *Lighting World*, 382 F.3d at 1359-60).

⁷⁶ *Id.*

⁷⁷ *Id.* at 56 (quoting *Williamson*, 792 F.3d at 1349 (quoting *Watts*, 232 F.3d at 880)).

⁷⁸ *Id.*

⁷⁹ *Id.* at 57.

⁸⁰ 2016 WL 55118 (E.D. Tex. 2016).

¶ 6 did not apply.⁸¹ The court noted that the decision of whether “processor,” without the term “means,” invokes § 112 ¶ 6 has been previously considered by the court. For example, in *Personal Audio, LLC v. Apple, Inc.*,⁸² the court relied in part on *Aristocrat Techs. Australia Pty Ltd. V. Int’l Game Tech.*,⁸³ to determine that “processor” did invoke § 112 ¶ 6. However, the Federal Circuit, in *Apple v. Motorola*⁸⁴ clarified the holding in *Aristocrat*, and determined that the *Aristocrat* rule applies only after § 112 ¶ 6 has been invoked, as opposed to applying the *Aristocrat* rule to determine whether § 112 ¶ 6 should be invoked.⁸⁵ Further, the district court stated that the holding in *Williamson* did not alter the clarification of the *Aristocrat* rule.

Next, the *Syncpoint Imaging* court identified *Personalized Media*⁸⁶ and *Linear Technology*⁸⁷ as instructive.⁸⁸ In *Personalized Media*, the “Federal Circuit held that “‘detector’ had a well-known meaning to those of skill in the electrical arts connotative of structure.”⁸⁹ Similarly, in *Linear Technology*, the Federal Circuit held that the term “circuit” did not invoke § 112 ¶ 6, because “the claims themselves included the ‘objectives or operations’ of the circuit and because ‘persons of ordinary skill in the art would understand the structural arrangements of circuit components from the term “circuit” coupled with the qualifying language of [the] claim[s].’”⁹⁰ Ultimately, the court reasoned that § 112 ¶ 6 did not apply for three reasons: first, “processor” connoted sufficient structure; second, the disputed claim “itself recites the objectives and operations of the processor”; and third, “one of ordinary skill in the art would understand the structural arrangements of the processor from the recited objectives and operations of the processor.”⁹¹

VII. AFTER WILLIAMSON: § 112(f) AT THE PTAB

In *Ex parte Ishikawa*,⁹² the PTAB entered a new ground of rejection, holding that the claim term “circuitry for...” was a means-plus-function term under § 112, sixth paragraph, which rendered the claim indefinite under § 112, second paragraph. The PTAB concluded that “the claimed circuitry limitations recite[d] specific functions without reciting sufficient structure for performing those functions.”⁹³ Specifically, the specification recited “that the circuitry ‘can be virtually any combination of hardware, software, and/or firmware configured to effect’ the claimed functions.”⁹⁴ While the specification described that the electrical circuitry formed “a general purpose computing device configured by a computer program,”⁹⁵ the specification failed “to provide instructions on how the claimed circuitry, which could be part of a general purpose

⁸¹ *Id.* at 21.

⁸² 2011 WL 11757163 (E.D. Tex. 2011).

⁸³ 521 F.3d 1328 (Fed. Cir. 2008).

⁸⁴ 757 F.3d at 1298.

⁸⁵ *Syncpoint*, 2016 WL 55118 at 18.

⁸⁶ 161 F.3d at 700-01, 703-07.

⁸⁷ *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311 (Fed. Cir. 2004).

⁸⁸ *Syncpoint*, 2016 WL 55118 at 19.

⁸⁹ *Id.* (quoting *Personalized Media*, 161 F.3d at 704-05 (citing dictionary definitions of detector)).

⁹⁰ *Id.* (quoting *Linear Technology*, 379 F.3d at 1320-21).

⁹¹ *Id.* at 20.

⁹² Appeal 2012-001612 (PTAB 2016).

⁹³ *Id.* at 19.

⁹⁴ *Id.* (quoting U.S. Application No. 11/900,493 (‘493 Application), Specification).

⁹⁵ *Id.* (quoting ‘493 Application, Specification).

computer, is actually capable of performing the claimed functions.”⁹⁶ Specifically, the PTAB was looking for an algorithm, a sequence of steps, or the like to perform the functions, but the specification was silent regarding these instructions.

Conversely, in *Ex parte Confalonieri*,⁹⁷ the PTAB reversed the Examiner’s rejections under 35 U.S.C. §§ 102 and 103, and held that the claim term “a circuit for” does not invoke § 112 ¶ 6. The PTAB noted that the Federal Circuit “has explained that § 112 ¶ 6 applies where the words of a claim are not ‘understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.’”⁹⁸ Further, the PTAB cited various Federal Circuit cases that have determined that the term “circuit” connotes sufficient structure to avoid the application of § 112 ¶ 6.⁹⁹ The Examiner did not explicitly construe the term “a circuit for,” and in a brief passage, the PTAB concluded that the Federal Circuit’s previous holdings were sufficient to hold that the term “a circuit for” did not invoke § 112 ¶ 6 in this case.

In *Ex parte Schindler*,¹⁰⁰ the PTAB affirmed the Examiner’s rejections under §§ 112(2) and 103(a), and held that the claim term “a verifier configured to...” was a means-plus-function term under § 112 sixth paragraph. The PTAB concluded that the “the claim term ‘verifier’ [was] a non-structural term, coupled with functional language ‘configured to create verification information ...’ that does not recite sufficient structure to achieve the function.”¹⁰¹ The Appellants did not expressly argue against the characterization of this term as a means-plus-function limitation, and the Appellants discussed case law setting standards for sufficient disclosure of structure for means-plus-functions limitations in their reply. The PTAB interpreted these actions as a concession that the Appellants agreed with the Examiner and his findings and construction of the “verifier” term as a means-plus-function limitation.¹⁰² Further, the Appellants, in their reply brief, stated that the claim “verifier” is disclosed in the specification as, at most, “a processing device capable of executing software instructions.”¹⁰³ “[T]he fact that one of skill in the art could program a computer to perform the recited functions cannot create structure where none otherwise is disclosed.”¹⁰⁴ Therefore, the PTAB concluded that the claim term “verifier” was a means-plus-function term under § 112 sixth paragraph.

However, in *Square, Inc. v. REM Holdings 3, LLC*,¹⁰⁵ an *inter partes* reexamination, the PTAB held that the claim term “a rectifier configured to...” did not invoke § 112, sixth paragraph. As justification, the PTAB stated that the “Patent Owner provide[d] definitions for the term ‘rectifier’ demonstrating what one skilled in the art would have understood the term ‘rectifier’ in claim 15 to mean. The definition include[d] a structure that is a converter, device, or component that converts a signal from alternative current (AC) to direct current (DC).”¹⁰⁶ The

⁹⁶ *Id.*

⁹⁷ Appeal 2016-004139 (PTAB 2017).

⁹⁸ *Id.* at 3 (quoting *Williamson*, 792 F.3d at 1348).

⁹⁹ *Id.* (citing *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1363—1365 (2013); *Linear Technology*, 379 F.3d at 1320-21 (2004)).

¹⁰⁰ Appeal 2014-007006 (PTAB 2016).

¹⁰¹ *Id.* at 6 (quoting Final Act. 6).

¹⁰² *Id.* at 6-7 (citing App. Br. 8; Reply Br. 2, 4-5).

¹⁰³ *Id.* at 7 (quoting App. Br. 8).

¹⁰⁴ *Id.* (quoting *Function Media, LLC v. Google, Inc.*, 708 F.3d 1310, 1319 (Fed. Cir. 2013)).

¹⁰⁵ Appeal 2017-001184 (PTAB 2017).

¹⁰⁶ *Id.* at 55-56 (citing PO Reply 5; *The Authoritative Dictionary of IEEE Standards Terms* 939 (2000)).

PTAB also partially relied on the testimony of a Dr. Thompson, a person who was at least an ordinarily skilled artisan. Dr. Thompson stated that he “would have recognized as rectifiers that rectify an audio output signal, including ‘diodes, integrated circuits, mechanical vibrators, half wave rectifying circuits, and full wave rectifying circuits.’”¹⁰⁷ Further, the recited functions did not go beyond what a rectifier would normally perform.¹⁰⁸ Therefore, the PTAB concluded that “the evidence of record support[ed] that one skilled in the art would have recognized a sufficiently definite meaning for the structure involved in rectifying an audio output signal as recited.”¹⁰⁹

¹⁰⁷ *Id.* at 56 (quoting 3PR Response 11 (citing 3d Thompson Decl. para. 15)).

¹⁰⁸ *Id.* at 56.

¹⁰⁹ *Id.*

Case	Court	Date Decided	Disputed Claim Term(s)	Determination
<i>Skky, Inc. v. MindGeek, s.a.r.l.</i>	Fed. Cir. - 859 F.3d 1014	7-Jun-2017	"wireless device means"	Does not invoke 112(f)
<i>Intelligent Water Solutions, LLC v. Kohler Co.</i>	E.D.Tex. - 2017 WL 2444723	5-Jun-2017	1. "external data storage and input means"; 2. "memory means"	1. Invokes 112(f) 2. Does not invoke 112(f)
<i>Huawei Technologies Co. Ltd. v. T-Mobile US, Inc.</i>	E.D.Tex. - 2017 WL 2267304	24-May-2017	"identifying unit"	Invokes 112(f)
<i>Godo Kaisha IP Bridge 1 v. TCL Communication Technology Holdings Limited</i>	D.Del. - 2017 WL 1426045	19-Apr-2017	1. "pulse vector generator"; 2. "a second selector"	Both invoke 112(f)
<i>Johnson Safety, Inc. v. Voxx International Corporation</i>	C.D.Cal. - 2017 WL 1407634	17-Apr-2017	"bus"	Invokes 112(f)
<i>Global Equity Management (SA) Pty. Ltd. v. Expedia, Inc.</i>	E.D.Tex. - 2016 WL 7416132	22-Dec-2016	"program code for [configuring/manipulating/modifying]"	Invokes 112(f)
<i>Johnson Safety, Inc. v. Voxx International Corporatoin</i>	C.D.Cal. - 2016 WL 6781115	16-Nov-2016	"pivot-limiting portion"	Invokes 112(f)
<i>Saint Lawrence Communications LLC v. ZTE Corporation</i>	E.D.Tex. - 2016 WL 6275390	25-Oct-2016	1. "spectral shaping unit"; 2. "gain adjustment module"; 3. "convolution unit"; 4. "pitch search unit"; 5. "signal fragmenting device"; etc.	All invoke 112(f)
<i>Velocity Patent LLC v. Mercedes-Benz USA, LLC</i>	N.D.Ill. - 2016 WL 5234110	21-Sep-2016	"a processor subsystem"	Invokes 112(f)
<i>Via Vadis, LLC v. Buffalo Americas, Inc.</i>	W.D.Tex. - 2016 WL 5239626	20-Sep-2016	"data storage [unit/device]"	Invokes 112(f)
<i>Zeroclick, LLC v. Apple Inc.</i>	N.D.Cal. - 2016 WL 5477115	16-Aug-2016	1. "program that can operate the movement of the pointer (0)"; 2. "user interface code"	Both invoke 112(f)
<i>Advanced Ground Information Systems, Inc. v. Life360, Inc.</i>	Fed.Cir. - 830 F.3d 1341	28-Jul-2016	"symbol generator"	Invokes 112(f)
<i>Tracbeam, L.L.C. v. T-Mobile US, Inc.</i>	E.D.Tex. - 2016 WL 3751624	14-Jul-2016	"mobile station location [estimator/evaluator/determiner/estimating source]"	Invokes 112(f)
<i>Viatech Technologies, Inc. v. Microsoft Corporation</i>	D.Del. - 2016 WL 3398025	14-Jun-2016	1. "license monitor and control mechanism"; 2. "adaptive fingerprint security mechanism"	Both invoke 112(f)
<i>Core Wireless Licensing S.A.R.L. v. Apple Inc</i>	N.D.Cal. - 2016 WL 3124614	3-Jun-2016	"an inserter configured to"	Invokes 112(f)
<i>Klaustech, Inc. v. Google, Inc.</i>	N.D.Cal. - 2016 WL 2957044	23-May-2016	"central controller"	Invokes 112(f)
<i>Mobilemedia Ideas, LLC v. Apple Inc.</i>	D.Del. - 178 F.Supp.3d 209	11-Apr-2016	"an alert sound generator"	Invokes 112(f)

Case	Court	Date Decided	Disputed Claim Term(s)	Determination
<i>Cellular Communications Equipment LLC, v. Samsung Electronics Co., Ltd.</i>	E.D.Tex. - 2016 WL 1237429	29-Mar-2016	1. "controlling entity"; 2. "connection unit"	Both invoke 112(f)
<i>Vir2us, Inc. v. Invincea, Inc.</i>	E.D.Va. - 2016 WL 8711512	19-Feb-2016	"switching system"	Invokes 112(f)
<i>SyncPoint Imaging, LLC v. Nintendo of Am. Inc.</i>	E.D. Tex - 2016 U.S. Dist. LEXIS 677	5-Jan-2016	1) "processor ... for [performing a function]", 2) "a processor ... for processing ...", 3) "instructions for"	All do not invoke 112(f)
<i>Verint Sys. v. Red Box Recorders, Ltd.</i>	S.D.N.Y. - 2016 U.S. Dist. LEXIS 612	4-Jan-2016	1) "a first computer application operative", 2) "monitoring system operative", 3) "monitoring device operable", 4) "an analysis module configured to"	All invoke 112(f)
<i>Finjan, Inc. v. Proofpoint, Inc.</i>	N.D. Cal. - 2015 U.S. Dist. LEXIS 162504	3-Dec-2015	"content processor for processing/invoking ..."	Does not invoke 112(f)
<i>Collaborative Agreements, LLC v. Adobe Sys.</i>	N.D. Cal. - 2015 U.S. Dist. LEXIS 161809	2-Dec-2015	1) "code segment for", 2) "computer readable medium encoded with a computer program coupled to processors to"	Does not invoke 112(f)
<i>Masimo Corp. v. Philips Elecs. N. Am. Corp.</i>	D. Del - 2015 U.S. Dist. LEXIS 160645	1-Dec-2015	1) "a selection module repsonsive to", 2) "a processor configured to perform a method comprising"	1) Invokes 112(f); 2) Does not invoke 112(f)
<i>Samuels v. TriVascular Corp.</i>	N.D. Cal. - 2015 U.S. Dist. LEXIS 153437	12-Nov-2015	1. "means for injecting..."; 2. "means for inflating..."	Both invoke 112(f)
<i>Hitachi Maxell, Ltd. v. Top Victory Elecs. (Taiwan) Co.</i>	E.D. Tex - 2015 U.S. Dist. LEXIS 152118	10-Nov-2015	multiple "means for"	Invokes 112(f)
<i>Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.</i>	E.D. Tex - 2015 U.S. Dist. LEXIS 151310	7-Nov-2015	1) "circuitry operable to send a request for ..." , 2) "circuitry operable to receive from the location message server ..."	Does not invoke 112(f)
<i>Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.</i>	E.D. Tex. - 2015 U.S. Dist. LEXIS 149693	4-Nov-2015	"formatting device for .."	Invokes 112(f)
<i>Fortinet, Inc. v. Sophos, Inc.</i>	N.D. Cal. - 2015 U.S. Dist. LEXIS 146317	28-Oct-2015	"means in a first data processor of the network for providing ..."	Invokes 112(f)
<i>Icon Health & Fitness, Inc. v. Polar Electro Oy</i>	C.D. Cal. - 2015 U.S. Dist. LEXIS 172761	16-Oct-2015	"means for sensing the acceleration ..."	Invokes 112(f)
<i>Farstone Tech., Inc. v. Apple Inc.</i>	C.D. Cal. - 2015 U.S. Dist. LEXIS 137819	8-Oct-2015	"backup/recovery module creating at least one ..."	Invokes 112(f)
<i>Not Dead Yet Mfg. v. Pride Solutions, LLC</i>	ND. Ill. - 2015 U.S. Dist. LEXIS 135629	5-Oct-2015	1. "retention means", 2. "retention member"	Invokes 112(f)

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Case	Court	Date Decided	Disputed Claim Term(s)	Determination
<i>M2M Solutions LLC v. Sierra Wireless Am., Inc.</i>	D. Del - 2015 U.S. Dist. LEXIS 134558	2-Oct-2015	1) "programmable interface", 2) "processing module"	Both do not invoke 112(f)
<i>StrikeForce Techs., Inc. v. PhoneFactor Inc.</i>	D. Del - 2015 U.S. Dist. LEXIS 130938	29-Sep-2015	1) "an interception device for", 2) "biometric analyzer ... for", 3) "component for receiving"	All invoke 112(f)
<i>Gradient Enters. v. Skype Techs. S.A.</i>	W.D.N.Y. - 2015 U.S. Dist. LEXIS 126790	22-Sep-2015	"a computer-based system for"	Invokes 112(f)
<i>Telinit Techs., LLC v. Alteva, Inc.</i>	E.D. Tex. - 2015 U.S. Dist. LEXIS 125991	21-Sep-2015	"means configured to connect"	Invokes 112(f)
<i>Media Rights Techs., Inc. v. Capital One Fin. Corp.</i>	Fed. Cir. - 800 F.3d 1366	4-Sep-2015	"compliance mechanism"	Invokes 112(f)
<i>Contour Hardening, Inc. v. Vanair Mfg.</i>	S.D. Ind. - 2015 U.S. Dist. LEXIS 117219	2-Sep-2015	"mechanical power input connection means"	Invokes 112(f)
<i>Scarborough v. Integricert, LLC</i>	W.D. La. - 2015 U.S. Dist. LEXIS 116066	31-Aug-2015	1) "attachment means/fluid attachment means", 2) "attachment structure for ..."	All invoke 112(f)
<i>NorthPeak Wireless, LLC v. 3COM Corp.</i>	N.D. Cal. - 2015 U.S. Dist. LEXIS 115719	28-Aug-2015	1) "chip mode generation means", 2) "preamble means", 3) "address means", 4) "modulation means",	All invoke 112(f)
<i>Sarif Biomedical LLC v. Brainlab, Inc.</i>	D. Del. - 2015 U.S. Dist. LEXIS 112949	26-Aug-2015	"computer adapted to"	Invokes 112(f)
<i>Joao Control & Monitoring Sys., LLC v. Protect Am., Inc.</i>	W.D. Tex. - 2015 U.S. Dist. LEXIS 109187	18-Aug-2015	1) "system for detecting a failure", 2) "devices"	Both invoke 112(f)
<i>Custom Media Techs. LLC v. Comcast Cable Communs., LLC</i>	D. Del. 2015 U.S. Dist. LEXIS 105025	11-Aug-2015	"user computer means"	Invokes 112(f)
<i>GENBAND USA LLC v. Metaswitch Networks Ltd.</i>	E.D. Tex. - 2015 U.S. Dist. LEXIS 103512	6-Aug-2015	1) "telecommunications module operable to", 2) "packetization modules operable to", 3) "echo cancellation module operable to", 4) "interworking agent for", 5) "a [first/second] protocol agent for"	1) Does not invoke 112(f); 2) Invokes 112(f); 3) Invokes 112(f); 4) Does not invoke 112(f); 5) Does not invoke 112(f)
<i>Voice Domain Techs., LLC v. Apple Inc.</i>	D Mass - 2015 U.S. Dist. LEXIS 101865	4-Aug-2015	1) "coupling mechanism for", 2) "microphone interpretation mechanism which"	Both invoke 112(f)
<i>Krausz Indus. v. Smith-Blair, Inc.</i>	E.D.N.C - 2015 U.S. Dist. LEXIS 100783	3-Aug-2015	"connecting means provided with a ..."	Does not invoke 112(f)
<i>Advanced Aero. Techs., Inc. v. United States</i>	Fed. Cl. - 122 Fed. Cl. 445	29-Jul-2015	"sensor"	Does not invoke 112(f)
<i>LifePort Scis. LLC v. Endologix Inc.</i>	D. Del. - 2015 U.S. Dist. LEXIS 91246	9-Jul-2015	1) "first introducer for"; 2) "second introducer for"	Both invoke 112(f)

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Case	Court	Date Decided	Disputed Claim Term(s)	Determination
<i>Intellectual Ventures II, LLC v. AT&T Corp.</i>	W.D. Tex. - 2015 U.S. Dist. LEXIS 89293	8-Jul-2015	1) "a mechanism by which"; 2) "dynamic host configuration protocol server means..."	1) Invokes 112(f); 2) Does not invoke 112(f)
<i>Smartflash LLC v. Apple Inc.</i>	E.D. Tex. - 2015 U.S. Dist. LEXIS 91669	6-Jul-2015	1. "processor"; 2. "code"	Both do not invoke 112(f)
<i>E2E Processing, Inc. v. Cabela's Inc.</i>	E.D. Tex. - 2015 U.S. Dist. LEXIS 86060	2-Jul-2015	1. "selector component"; 2. "adapter component"; 3. "integration component"	All do not invoke 112(f)
<i>GoDaddy.com, LLC v. RPost Communications Limited</i>	D. Ariz. - 2016 WL 212676	19-Jan-2016	"processor"	Invokes 112(f)
<i>Williamson v. Citrix Online, LLC</i>	Fed. Cir. - 792 F.3d 1339	16-Jun-2015	"distributed learning control module"	Invokes 112(f)

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PTAB Cites to 792 F.3d 1339				
<i>Ex Parte</i> :	Appeal No.	Date	Disputed Claim Term(s)	Determination
Yang	2015-005788	14-Apr-2017	"a voltage determining unit"	Invokes 112(f)
Milman	2015-006545	26-Jul-2017	"module"	Invokes 112(f)
Tearney	2015-001060	21-Jun-2017	"structural optical arrangement"	Invokes 112(f)
Acharya	2015-001781	23-May-2017	1. "module" 2. "server"	1. Invokes 112(f); 2. Does not invoke 112(f)
Confalonieri	2016-004139	4-May-2017	"circuit"	Does not invoke 112(f)
Haltmayer	2016-002022	26-Apr-2017	"cleaning device"	Invokes 112(f)
Patel	2015-005130	25-Apr-2017	"drive mechanism"	Invokes 112(f)
Zhang	2016-000387	3-Apr-2017	"service subscription unit"	Invokes 112(f)
Thiele	2014-006684	31-Mar-2017	1. "beamformer" 2. "combiner"	Both do not invoke 112(f)
He	2017-000587	29-Mar-2017	"programmable processing device"	Invokes 112(f)
Dare	2014-002373	27-Mar-2017	"a link connecting..."	Invokes 112(f)
Tuchman	2014-009779	21-Mar-2017	"a guided support identification system"	Invokes 112(f)
Sankaralingham	2016-007877	21-Mar-2017	1. "soft-overlay keyboard generator" 2. "application disabling engine" 3. "identification requestor" 4. "application restrictor" 5. "image retriever"	All invoke 112(f)
Lee	2014-003450	16-Mar-2017	"unit"	Invokes 112(f)
<i>Inter Partes</i> Reexamination: 7896248	2017-001184	27-Feb-2017	"rectifier"	Does not invoke 112(f)
Jung	2016-001017	27-Feb-2017	"display unit"	Invokes 112(f)
Schwarze	2016-001479	7-Feb-2017	"unit"	Invokes 112(f)
Ishikawa	2012-008962	6-Feb-2017	"circuitry for"	Invokes 112(f)
Abrahamsson	2016-001206	3-Feb-2017	"processing unit"	Invokes 112(f)
Liesche	2016-004145	31-Jan-2017	"context launch transformation module"	Invokes 112(f)
Nakamura	2016-005253	31-Jan-2017	"clock controller"	Invokes 112(f)
Burris	2016-001122	30-Jan-2017	"processor"	Invokes 112(f)
Malchow	2015-005241	23-Jan-2017	"tissue removal control module"	Invokes 112(f)
Ranjan	2016-000718	27-Dec-2016	"privacy management module"	Invokes 112(f)
Benno	2016-002606	22-Dec-2016	"processor"	Invokes 112(f)
Yeakley	2016-004882	22-Dec-2016	"lateral positioning actuator"	Does not invoke 112(f)
Kasahara	2015-006189	29-Nov-2016	"display control unit"	Invokes 112(f)
Glaw	2014-006464	28-Nov-2016	"respiratory process initiating device"	Invokes 112(f)
Rose	2015-003066	23-Nov-2016	"encoder"	Does not invoke 112(f)
Ko	2014-009519	25-Oct-2016	1. "demodulator" 2. "symbol demapper" 3. "frame parser" 4. "low density parity check decoder"	1. Does not invoke 112(f); 2. Invokes 112(f); 3. Invokes 112(f); 4. Invokes 112(f)

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<i>PTAB Cites to 792 F.3d 1339</i>				
<i>Ex Parte :</i>	Appeal No.	Date	Disputed Claim Term(s)	Determination
Haley	2013-000411	24-Oct-2016	"harvester"	Invokes 112(f)
Al-Kofahi	2015-005761	21-Oct-2016	"server"	Does not invoke 112(f)
Bianchi	2014-009975	19-Oct-2016	1. "source of sizer image data" 2. "scaler" 3. "interference fit highlighter" 4. "user control"	All invoke 112(f)
Boenke	2015-005374	14-Sep-2016	1. "central unit" 2. "component"	Both invoke 112(f)
Castano	2015-005368	14-Sep-2016	1. "interpretation module" 2. "control signal communication module" 3. "interface module"	All invoke 112(f)
Rothenberger	2015-002109	27-Jul-2016	"evaluation unit"	Invokes 112(f)
Schindler	2014-007006	12-Jul-2016	1. "transmitter" 2. "verifier"	1. Does not invoke 112(f); 2. Invokes 112(f)
Dwivedula	2014-008243	18-May-2016	"one or more processors, one or more circuits, or any combination thereof"	Does not invoke 112(f)
Kloppers	2013-009035	22-Apr-2016	"manager"	Invokes 112(f)
Cho	2014-003854	19-Apr-2016	"NAT module"	Invokes 112(f)
Matsumoto	2014-003541	19-Apr-2016	1. "computing device" 2. "power correcting device" 3. "controller"	All invoke 112(f)
Rabin	2014-004701	12-Apr-2016	1. "statistical sampler section" 2. "analyzer section"	Both invoke 112(f)
Provencher	2014-006167	30-Mar-2016	"file type association module"	Invokes 112(f)
Na	2014-001481	10-Feb-2016	1. "channel change control unit" 2. "channel configuration module" 3. "channel generation message module"	All invoke 112(f)
Klassen	2014-002796	28-Jan-2016	1. "encryptor" 2. "detector" 3. "operator"	All invoke 112(f)