

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SEMICONDUCTOR COMPONENTS INDUSTRIES, LLC  
(d/b/a ON SEMICONDUCTOR),  
Petitioner,

v.

POWER INTEGRATIONS, INC.,  
Patent Owner.

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Case IPR2016-00995  
Patent 6,538,908 B2

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Before THOMAS L. GIANNETTI, DANIEL N. FISHMAN, and  
KERRY BEGLEY, *Administrative Patent Judges*.

FISHMAN, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*35 U.S.C. § 318(a) and 37 C.F.R. § 42.73*

## I. INTRODUCTION

Semiconductor Components Industries, LLC, d/b/a On Semiconductor (“Petitioner”) filed a Petition (Paper 1, “Pet.”) for *inter partes* review of claims 26 and 27 (hereinafter the “challenged claims”)<sup>1</sup> of U.S. Patent No. 6,538,908 B2 (Ex. 1001, “the ’908 patent”) pursuant to 35 U.S.C. §§ 311–319. Power Integrations, Inc. (“Patent Owner”) filed a Patent Owner Preliminary Response (Paper 7, “Prelim. Resp.”). On October 31, 2016, based on the record before us at that time, we instituted an *inter partes* review of the challenged claims (Paper 11, “Dec.”). We instituted review of claims 26 and 27 under 35 U.S.C. § 103(a) as anticipated by HIGH VOLTAGE SWITCHING REGULATOR (Motorola 1996) (Ex. 1005, “MC33362”). Dec. 22.

Patent Owner filed a Patent Owner Response (Paper 15, “PO Resp.”) and Petitioner filed a Reply (Paper 17, “Pet. Reply”). Petitioner relies on the expert Declarations of Dr. Vijay Madiseti (Exs. 1003 and 1024).

An Oral Hearing was conducted on June 30, 2017. The record contains a transcript of the hearing (Paper 22, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6. The Petitioner has the burden of proving unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e); *see also* 37 C.F.R. § 42.1(d). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons expressed below, we conclude that Petitioner has met its burden to show, by a preponderance of the evidence, that claims 26 and 27 of the ’908 patent are unpatentable as anticipated by MC33362.

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<sup>1</sup> Patentability of all challenged claims was confirmed in Reexamination Certificate US 6,538,908 C1 resulting from merged *Ex Parte* Reexamination Request Nos. 90/007,790 and 90/008,363. Ex. 1002.

A. *The '908 Patent*

According to the '908 patent, electronic devices use power supplies to provide operating power, and a switched mode power supply is a type of supply that is commonly used “due to [its] high efficiency and good output regulation.” Ex. 1001, 1:16–18. In general, such switched mode power supplies convert a high voltage alternating current (“AC”) to a lower voltage direct current (“DC”), often utilizing a transformer in the conversion circuitry. *See id.* at 1:19–32. The transformer output is regulated by control circuits sensing the transformer output to generate a feedback signal and to control the output of the transformer in a closed loop fashion based on the feedback value. *See id.* at 1:30–51.

According to the '908 patent, it may be desirable to configure a switched mode power supply to operate in a variety of manners depending on its intended application. *Id.* at 1:52–63. Furthermore, according to the '908 patent, it is known in the prior art that “additional pins or electrical terminals are added for each function.” *Id.* at 1:65–66. The '908 patent explains that the requirement to add additional pins/terminals results in additional costs, additional components external to the power supply control integrated circuit, and additional power consumption. *Id.* at 1:67–2:7.

The '908 patent purports to resolve these problems by providing a switched power supply controller capable of performing a plurality of functions to customize the operation of the power supply (*id.* at 3:40–4:7) and allows some or all of the illustrative functions to be provided through a single multi-function terminal (*id.* at 4:7–27).

Figure 1 of the '908 patent is reproduced below.

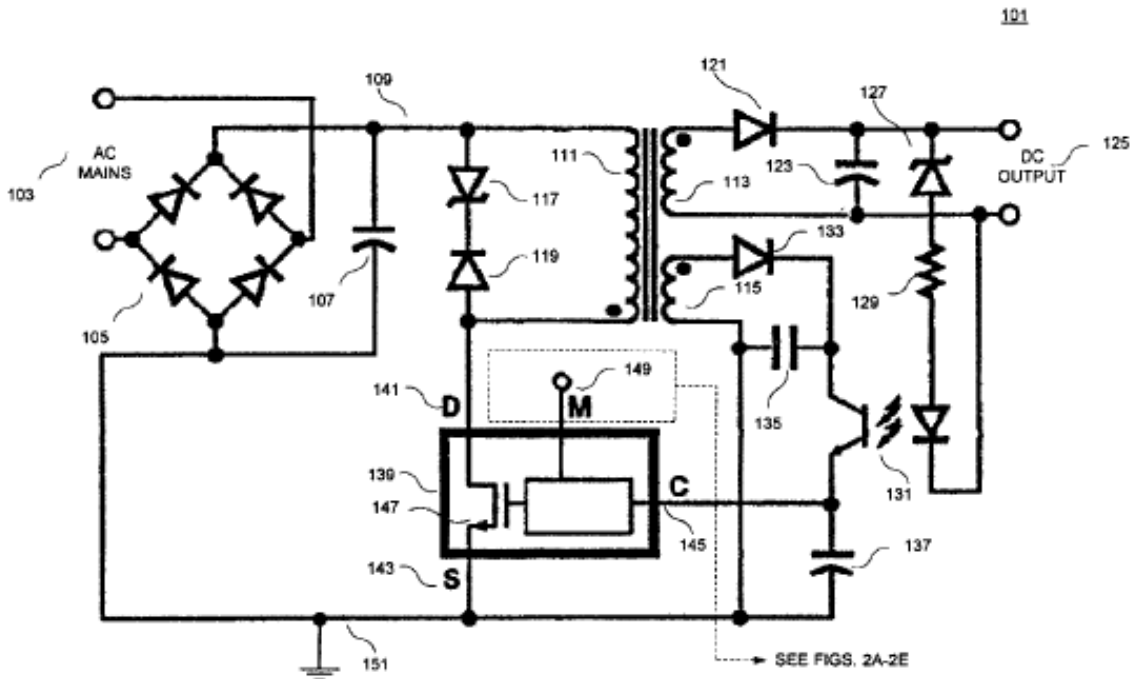


Figure 1 above depicts power supply 101 comprising controller 139 for controlling conversion of AC mains input voltage 103 to a desired DC output voltage at DC output 125. *See id.* at 4:28–65. Multi-function terminal 149 provides a signal to controller 139 to provide “one or a plurality of different functions, depending on how multi-function terminal 149 is configured.” *Id.* at 4:66–5:3. Figures 2A through 2F of the '908 patent show various configurations of signals applied to multi-function terminal 149 to provide various corresponding functions. *See id.* at 5:6–8:12.

Figure 3 of the '908 patent, depicting additional details of controller 139, is reproduced below.

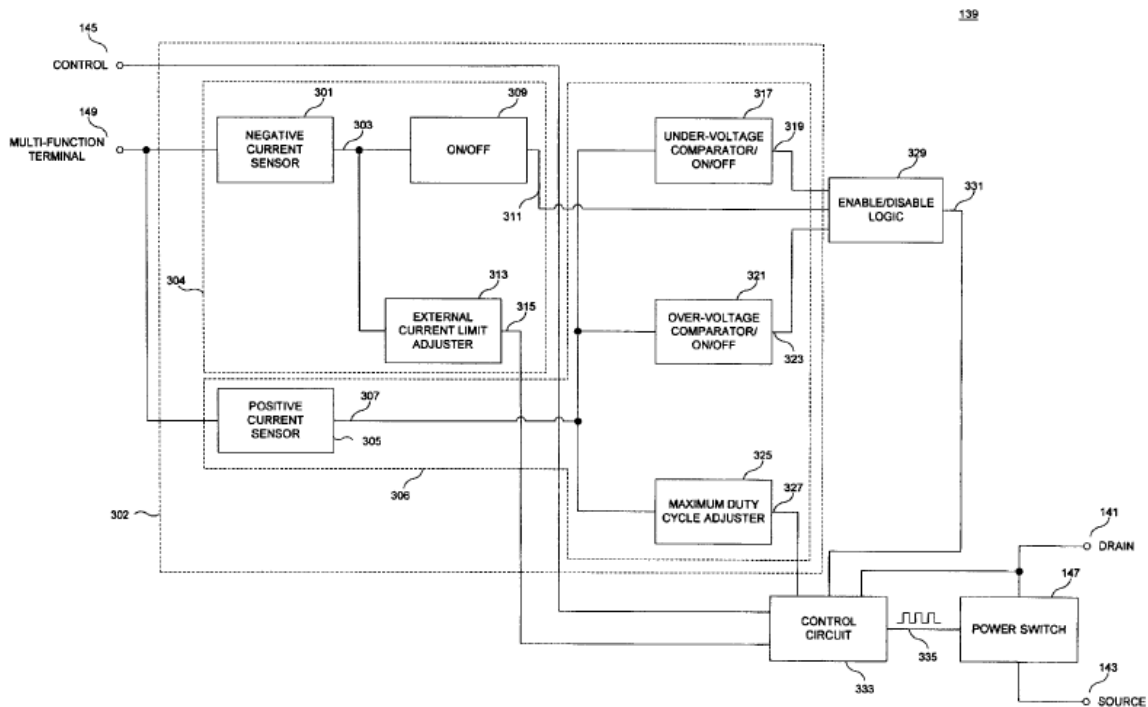


Figure 3 above depicts power supply controller 139 comprising multi-function terminal 149, multi-function circuit 302, and control circuit 333. Multi-function terminal 149 provides an input signal to both negative current sensor 301 and positive current sensor 305. *Id.* at 8:42–44. External current limit adjuster 313 receives a signal from negative current sensor 301 (*id.* at 8:52–54) and generates a signal to limit the current flowing through switch 147 (*see id.* at 10:8–32). On/off circuitry 309 also is coupled to negative current sensor 301 to provide another function to turn the power supply on or off. *See id.* at 9:62–10:7. Maximum duty cycle adjuster 325, under-voltage comparator on/off 317, and over-voltage comparator on/off 321 are coupled with positive current sensor 305 to provide other functions of multi-function circuit 302 responsive to a signal on multi-function terminal 149. *See id.* at 8:55–61; *see also id.* at 11:34–12:16. Control circuit 333 is coupled to receive a signal from control terminal 145 used as a feedback signal to adjust the generated pulse

waveform applied to power switch 147. *Id.* at 12:49–54. Control circuit 333 is coupled to receive a signal from maximum duty cycle adjuster 325 and from external current limit adjuster 313 to control the generated waveform. *Id.*

### *B. Real Parties in Interest*

According to Petitioner, effective September 19, 2016, a planned merger between ON Semiconductor Corporation and Fairchild Semiconductor International, Inc. was completed such that the real parties in interest now consist of: ON Semiconductor Corporation; Semiconductor Components Industries, LLC (doing business as ON Semiconductor); Fairchild Semiconductor International, Inc.; Fairchild Semiconductor Corporation; Fairchild (Taiwan) Corporation, and System-General Corporation. Paper 9, 2–4.

### *C. Related Matters*

Both parties identify a related litigation involving the '908 patent captioned *Power Integrations, Inc. v. Fairchild Semiconductor International, Inc. et. al.*, No. 3:09-cv-05235, in the U.S. District Court for the Northern District of California. Pet. 2; Paper 5, 2. Petitioner also identifies another litigation related to the '908 patent captioned *Power Integrations, Inc. v. System General Corp.*, No. 5:04-cv-02851, also in the U.S. District Court for the Northern District of California. Pet. 2. Petitioner further identifies as related matters involving the '908 patent: an International Trade Commission action entitled *In the Matter of Certain Power Supply Controllers and Products Containing the Same*, Inv. No.

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337-TA-541; and two *Ex Parte* Reexamination proceedings (Nos. 90/007,790 and 90/008,363). *Id.*

Petitioner further identifies the following additional petitions for *inter partes* review it has filed challenging related patents owned by Patent Owner: IPR2016-00809<sup>2</sup>, IPR2016-01588, IPR2016-01589, IPR2016-01590, IPR2016-01592, IPR2016-01594, IPR2016-01595, IPR2016-00995, IPR2016-01597, IPR2016-01598, IPR2016-01599, and IPR2016-01600. Pet. 2; Paper 9, 5.

#### *D. Challenged Claims*

The challenged claims, independent claim 26 and claim 27 dependent therefrom, are reproduced below.

26. A power supply controller circuit, comprising:

a multi-function circuit coupled to receive a signal at a multi-function terminal for adjusting a current limit of a power switch, the multi-function circuit to generate a current limit adjustment signal in response to the signal; and

a control circuit coupled to receive the current limit adjustment signal, the control circuit coupled to adjust the current limit of a current through the power switch in response to the current limit adjustment signal.

27. The power supply controller circuit of claim 26 wherein the control circuit is further coupled to an output of a power supply through a control terminal of the power supply controller circuit, the control circuit adapted to control a

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<sup>2</sup> *Semiconductor Components Industries, LLC, d/b/a ON Semiconductor v. Power Integrations, Inc.*, Case IPR2016-00809 (PTAB Sept. 22, 2017) (Paper 67).

switching of the power switch in response to the output of the power supply.

## II. ANALYSIS

### A. *Statutory Bar Under 35 U.S.C. § 315(b)*

Section 315(b) of Title 35 of the U.S. Code provides that “[a]n *inter partes* review may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, real party in interest, or privy of the petitioner is served with a complaint alleging infringement of the patent.” Our rules implementing this statutory requirement provide that:

A person who is not the owner of a patent may file with the Office a petition to institute an *inter partes* review of the patent unless: . . . (b) The petition requesting the proceeding is filed more than one year after the date on which the petitioner, the petitioner’s real party-in-interest, or a privy of the petitioner is served with a complaint alleging infringement of the patent.

37 C.F.R. § 42.101.

Patent Owner argues institution of *inter partes* review of this Petition was barred because Fairchild Semiconductor International, Inc. (“Fairchild”), now a real party in interest having merged with ON Semiconductor, was served with a complaint more than one year prior to *institution* of this Petition. PO Resp. 56–64.

Petitioner replies that Patent Owner raises no new arguments or evidence not previously considered in our Decision on Institution and, thus, Patent Owner’s arguments that this Petition should be time barred under Section 315(b) should be rejected for the same reasons as in our Decision on Institution. Pet. Reply 28–29.



In our Decision on Institution, we considered the evidence of record regarding the alleged time bar under § 315(b). Petitioner acknowledges the existence of an Agreement and Plan of Merger (“Merger Agreement”) dated November 18, 2015 between Petitioner and Fairchild Semiconductor International, Inc. (“Fairchild”). Pet. 1. The Merger Agreement generally calls for Falcon Operations Sub, Inc. (“Acquisition Sub”), a wholly owned subsidiary of Petitioner, to acquire Fairchild. Ex. 2018, 5.<sup>3</sup> The Merger Agreement recites a number of conditions precedent to completion of the merger including, *inter alia*, regulatory approvals. *See, e.g., id.* at 6, 84–85.

Petitioner argues that at the time of filing this Petition, May 2, 2016, the merger was not yet completed and it was, at that time, “uncertain when or whether the merger will close.” Pet. 1. The Petition does not specify precisely which conditions to complete the merger had not been met at the timing of filing. Petitioner further argues “Fairchild has had no role in the decision to file this Petition, the content of this Petition, or the preparation of this Petition [and] did not contribute in any manner to the funding for this Petition.” *Id.* at 1–2. Thus, Petitioner contends that, at the time of filing this Petition, “Fairchild is not a real party in interest or a privy of any petitioner.” *Id.* at 2.

Petitioner asserts the planned merger was completed on September 19, 2016 after receiving regulatory approval from the United States on August 25, 2016 and from China on September 16, 2016. Paper 9, 2–3. Therefore, Fairchild was effectively merged with ON Semiconductor on September 19,

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<sup>3</sup> Patent Owner entered the Merger Agreement into the record as Exhibit 2018.

2016 (or at the earliest, September 16, 2016), thus, becoming a real party in interest in this review as of that date. *Id.*

Panels of the Board have interpreted 315(b) (and our associated rule 37 C.F.R. § 42.101(b)) to mean “it is only privity relationships up until the time a petition is filed that matter.” *Synopsys, Inc. v. Mentor Graphics Corp.*, Case IPR2012-00042, slip op. at 12 (PTAB Feb. 19, 2014) (Paper 60); *see also* *ARRIS Group, Inc. v. TQ Delta LLC*, Case IPR2016-00430, slip op. at 6 (PTAB July 1, 2016) (Paper 9). Although not the exclusive factor for establishing privity, control of the requested review procedure is an important factor to establish privity in this context. Our *Office Patent Trial Practice Guide* explains that “[w]hether a party who is not a named participant in a given proceeding nonetheless constitutes a . . . ‘privity’ to that proceeding is a highly fact-dependent question.” 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012). “There are multiple factors relevant to the question of whether a non-party may be recognized as a . . . ‘privity.’” *Id.* “A common consideration is whether the non-party exercised or could have exercised control over a party’s participation in a proceeding.” *Id.* However, it is recognized that there is no definitive test regarding the degree of participation required to establish such control and, hence, to establish a privity relationship. *Id.*

In *ARRIS*, the panel determined that patent owner’s evidence of an agreement of a future merger was insufficient to show any degree of control over the requested review procedure or even the opportunity to do so. IPR2016-00430, slip op. at 7 (Paper 9). Here, as in *ARRIS*, we are not persuaded that the Merger Agreement detailing a future merger, which was not yet completed at the time of filing this Petition, is sufficient to

demonstrate the opportunity for control over *this* proceeding by Fairchild. Here, the merger was not complete as of the filing of the Petition on May 2, 2016 but was completed on September 19, 2016. Paper 9, 2–3.

Similarly, Patent Owner’s arguments regarding the Confidentiality Agreement (Ex. 2026) are insufficient to demonstrate that Fairchild exercised, or could have exercised, any control over *this* proceeding. PO Resp. 63. The mere exchange of unidentified confidential information and recitations of the Confidentiality Agreement that the parties *could be* joint defendants in the future, without more, do not provide sufficient evidence that Fairchild has exercised, or could have exercised, any control over *this* proceeding. Thus, the record lacks sufficient evidence to demonstrate even the opportunity to control this review and, thus, to establish privity between Petitioner and Fairchild.

Patent Owner asserts our Decision on Institution relied on an incorrect interpretation of § 315(b). PO Resp. 56–58. Specifically, Patent Owner argues nothing in the statute “implies when privity/RPI status must exist, and general rules of statutory construction indicate that the present includes the future.” *Id.* at 57. According to Patent Owner, “the decision point is [the date of] institution, not [the date of] filing.” *Id.* Under Patent Owner’s interpretation, we should have denied institution of this Petition because Fairchild, barred under § 315(b), became a real party in interest on September 19, 2016 — over a month before our Decision on Institution entered on October 31, 2016. *Id.* at 56–57.

We disagree with Patent Owner’s proposed interpretation of the statute. The statute clearly defines the relevant event in the bar date determination as the *filing of the petition* more than one year after service of

a complaint. The evidence of record is insufficient to show that Fairchild was a privy of Petitioner or a real party in interest either at the time of service of a complaint or more than a year later at the time of filing of this Petition.

Patent Owner acknowledges that there is no decision of this Board in support of its argument. *Id.* at 58. Patent Owner argues prior decisions of the Board in accord with our Decision on Institution regarding the § 315(b) time bar were all decided incorrectly in view of various federal court decisions based on equitable principles of claim preclusion and issue preclusion. *Id.* at 58–61. Patent Owner specifically asserts “prior panels have not considered the interaction of federal preclusion principles with the timing issue: as noted by the Federal Circuit in *Kloster Speedsteel*, preclusion can arise after a complaint is filed.” *Id.* at 61 (citing *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1583 (Fed. Cir. 1986)). Patent Owner concludes, “[t]his strongly supports that preclusion under 35 U.S.C. § 315(b) should not be limited to the filing date of the petition. Since barred party Fairchild is now an admitted RPI, and was so before institution, this action should be dismissed.” *Id.*

*Kloster* is inapposite because, at least, it does not directly address the language in Section 315(b) — namely that the determination of the time bar is based on the relationship of the parties to an action up to the date of filing of a petition. Instead, in *Kloster*, Kloster was seeking relief from the scope of an injunction resulting from a judgment of infringement entered against a company it acquired. *Kloster*, 793 F.2d at 1583. By contrast, here, Petitioner seeks a decision from the Board regarding patentability of certain

claims of the '908 patent based on a combination of references not previously considered in the earlier litigation involving Fairchild.

Furthermore, we disagree with Patent Owner's argument that "Fairchild is now an admitted RPI, and *was so before institution.*" PO Resp. 61 (emphasis added). Although we agree that Fairchild is a real party in interest as of September 19, 2016 (or possibly September 16, 2016), we do not agree with the significance that Patent Owner seeks to place on Fairchild's status "before institution" — because it rests on Patent Owner's proposed interpretation of the relevant time period for § 315(b), which we find to be unsupported and contrary to our interpretation of § 315(b) as well as that in other decisions of the Board.

Lastly, Patent Owner argues ON Semiconductor filed this Petition acting as a proxy for Fairchild. PO Resp. 61–64. Patent Owner submits it was "handicapped" by our rejection of Patent Owner's request in a related case for authorization to file a motion for additional discovery on the issue of privity between ON Semiconductor and Fairchild. *Id.* at 61–62 (citing IPR2016-00809, slip op. at 2–4 (Paper 24); Ex. 2043). No similar request was made in this case. Therefore, Patent Owner points to "public facts" as evidence of such a proxy relationship. *Id.* at 62. The "public evidence" Patent Owner refers to is the number of related Petitions filed by Petitioner prior to the merger closing. Patent Owner argues:

Indeed, ON filed a total of **12 IPR petitions** after its merger with Fairchild was announced and before the merger's closing. *See* IPR2016-00809, Paper 10 at 3-4. Every one of those petitions relates to a Power Integrations' patent Fairchild was found to infringe, or was accused of infringing, but where Fairchild was barred from seeking IPR. None of the filings involved a patent being litigated with ON when the filings were

made. Also, ON has filed other IPRs for Fairchild. *See* IPR2016-01833 (petition filed against In-Depth Test LLC as proxy for Fairchild that was barred from filing an IPR). ON is gaming the system, and that should not be allowed to happen.

*Id.*

Patent Owner's Response is the first time Patent Owner has argued that there was a *proxy* relationship between ON and Fairchild at the time of filing this Petition. Patent Owner's earlier request in the related case IPR2016-00809 for additional discovery related to an alleged *privity* between ON and Fairchild and did not raise the issue of a *proxy* relationship. *See* IPR2016-00809, Ex. 2034. Furthermore, that request was denied because, *inter alia*, Patent Owner failed to provide any evidence, other than mere speculation, that privity existed. IPR2016-00809 Paper 24, 4. Here, in the Patent Owner's Response, as in the earlier request for additional discovery, Patent Owner still provides nothing more than mere speculation that ON Semiconductor filed this Petition merely as a proxy for Fairchild — a party barred under 315(b). The *Garmin* factors require a showing of more than such speculation before additional discovery is granted. *See Garmin Int'l, Inc. v. Cuozzo Speed Techs. LLC*, Case IPR2012-00001, 2013 WL 11311697, at \*3–4 (PTAB Mar. 5, 2013) (precedential).

The *Office Patent Trial Practice Guide* cites *Taylor v. Sturgell*, 553 U.S. 880 (2008), as informing real party-in-interest determinations. 77 Fed. Reg. at 48,759–60. *Taylor* lists six categories that may create an exception to the common law rule that normally forbids nonparty preclusion in litigation. *Taylor*, 553 U.S. at 893–95. One such category applicable here holds, “a party bound by a judgment may not avoid its preclusive force by relitigating through a proxy.” *Id.* at 895. *Taylor* refers to a proxy as a

“representative or agent of a party who is bound by the prior adjudication.” *Id.* at 905. Another panel of the Board has applied this holding of *Taylor* to determine a proxy to be a “nominal plaintiff” with “no substantial interest” in the IPR proceeding other than that of its proxy “client.” *RPX Corp. v. VirnetX, Inc.*, Case IPR2014-00171, slip op. at 9 (PTAB July 14, 2014) (Paper 57). In *RPX*, it was clear that RPX had no interest in that IPR proceeding other than the interests of its underlying proxy client (Apple). *See id.* at 4–11. Although the record does not indicate Petitioner had been sued for infringement of the ’908 patent up to the date of filing this Petition, ON Semiconductor, with a multi-billion dollar merger pending at the time of filing this Petition, has a clear interest in this Petition beyond the relatively smaller interest of Fairchild wishing to avoid a \$140 million judgment. On this record, the “public evidence” relied upon by Patent Owner is insufficient to demonstrate a proxy relationship such that Fairchild should be found to be a real party in interest using Petitioner as a mere proxy.<sup>4</sup>

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<sup>4</sup> Patent Owner, citing IPR2016-01833, argues that another panel of the Board denied institution of a petition based on a finding that Petitioner was acting as a proxy for Fairchild. PO Resp. 62. In that preliminary proceeding, the patent owner, In-Depth Test, LLC, argued that Fairchild and ON Semiconductor (Petitioner) were in privity on September 16, 2016—the date on which all conditions for completion of the merger were satisfied. *See Semiconductor Components Industries, LLC (d/b/a/ ON Semiconductor) v. In-Depth Test, LLC*, Case IPR2016-01833 (PTAB July 14, 2014) (Paper 17). The panel of the Board concluded that In-Depth Test persuasively argued that ON Semiconductor and Fairchild were in privity as of that date and, thus, institution was barred because the petition in that case was filed on the same date, September 16, 2016. By contrast, the Petition in this case was filed on July 8, 2016—well before September 16, 2016.

Accordingly, we determine that, based on the evidence of record in this proceeding, 35 U.S.C. § 315(b) does not bar this Petition from institution of *inter partes* review.

### *B. Claim Construction*

In an *inter partes* review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.100(b); *see also Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142–46 (2016) (upholding the use of the broadest reasonable interpretation standard).

Under the broadest reasonable construction standard, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). “[A] claim construction analysis must begin and remain centered on the claim language itself.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). “Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.” *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). Only terms that are in controversy need to be construed and only to the extent necessary to resolve the controversy. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011); *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).



1. “*Multi-function Circuit*”

The challenged claims include a “multi-function circuit” and a “control circuit” and further recite that the “multi-function circuit” receives a signal at a “multi-function terminal” and generates a current limit adjustment signal applied to the “control circuit.”

Petitioner argues that “multi-function circuit” means “a circuit capable of performing multiple functions.” Pet. 21. Petitioner acknowledges that the claim requires that one of the functions the multi-function circuit must perform is generating a signal to adjust a current limit of the power supply controller but argues there is no limitation on what other functions the multi-function circuit may perform. *Id.* at 22. Petitioner asserts the Specification of the ’908 patent, as well as Patent Owner’s arguments in related proceedings, make clear that the other functions performed by the multi-function circuit discussed in the ’908 patent Specification are merely exemplary and non-exclusive. *Id.* (citing Ex. 1001, 23:28–35; Ex. 1020, 118:11–24). Petitioner identifies exemplary functions of the multi-function circuit disclosed in the ’908 patent Specification. *Id.* at 21–22 (citing Ex. 1001, 3:41–42, 3:44–45, 3:53–54, 3:57–58, 6:38–41, 12:56–58).

Although it provides only minimal insight to interpreting “multi-function circuit,” we accept Petitioner’s proposed interpretation of “multi-function circuit” to mean “a circuit capable of performing multiple functions.” However, this is merely a starting point for fully understanding the term as used in the ’908 patent.

Patent Owner does not propose a specific interpretation of “multi-function circuit,” but, instead, identifies a number of distinctions that

Patent Owner asserts characterize such a circuit. We address each of Patent Owner's characterization below.

*a. Separate and Distinct Circuits*

Patent Owner asserts the multi-function circuit must be separate and distinct from the control circuit. PO Resp. 22–28. In particular, Patent Owner argues the claim language requires that the two circuits are separate and distinct components because claim 26 “recites that the multi-function circuit generates a signal, and recites that the control circuit is coupled to receive that generated signal.” *Id.* at 22. Petitioner does not respond to or contest Patent Owner's assertions in this regard. *See generally* Pet. Reply.

We agree with Patent Owner that the power supply controller circuit of the challenged claims is clearly recited as comprising two distinct elements — a multi-function circuit and a control circuit. *See Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (noting where a claim lists elements separately, “the clear implication of the claim language” is that those elements are “distinct components” of the patented invention).

Thus, a multi-function circuit is a circuit that is separate and distinct from the recited control circuit and that is capable of performing multiple functions.

*b. Receives a Signal Over a Single Multi-Function Terminal*

Patent Owner also asserts the multi-function circuit must receive a signal over a single multi-function terminal to perform its multiple functions. PO Resp. 30–37. Patent Owner asserts the claims require this limitation

because claim 26 recites that the multi-function circuit is “coupled to receive *a signal* at a multi-function terminal” and that the multi-function circuit’s function to generate a current limit adjustment signal is in response to that single received signal. *Id.* at 31.

Patent Owner further argues that use of more than a single multi-function terminal to direct performance of the multi-function circuit’s functions is contrary to the ’908 patent Specification, which disclaims power supply controllers requiring multiple additional terminals to implement multiple additional functions. *Id.* at 32 (citing Ex. 1001, 1:64–2:3, 4:8–12). Patent Owner asserts the ’908 patent Specification describes only embodiments with a single multi-function terminal providing a signal to the multi-function circuit. *Id.* at 33. Patent Owner also contends the reexamination prosecution history similarly supports its interpretation that the multi-function circuit is coupled to only one multi-function terminal to receive a signal directing its functionality. *Id.* at 33–36.

Petitioner replies that the claims do not preclude the possibility that functions of the multi-function circuit also are affected by a signal received at an additional pin of the power supply controller, observing that claim 26 uses the open-ended preamble language of “comprising.” Pet. Reply 12. Petitioner argues that the ’908 patent Specification describes only exemplary embodiments using a single multi-function terminal to signal the multi-function circuit and contends that it is improper to import such exemplary embodiments into the claims. *Id.*

We agree with Petitioner that it is improper to import embodiments of the specification into the claims. *SuperGuide*, 358 F.3d at 875. We disagree with Patent Owner that the claim recitation “coupled to receive a signal at a

multi-function terminal” necessarily limits the claim to a single terminal providing a single signal for each function of the multi-function circuit. Recitation of *a* signal and *a* terminal does not preclude multiple signals received over multiple terminals. “[A]n indefinite article ‘a’ or ‘an’ in patent parlance carries the meaning of ‘one or more’ in open-ended claims containing the transitional phrase ‘comprising.’” *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000) (citing *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 977 (Fed. Cir. 1999); *Abtox, Inc. v. Exitron Corp.*, 122 F.3d 1019, 1023 (Fed. Cir. 1997); *North Am. Vaccine, Inc. v. Am. Cyanamid Co.*, 7 F.3d 1571, 1575–76 (Fed. Cir. 1993)). “Unless the claim is specific as to the number of elements, the article ‘a’ receives a singular interpretation only in rare circumstances when the patentee evinces a clear intent to so limit the article.” *KCJ*, 223 F.3d at 1356 (citing *Abtox*, 122 F.3d at 1023).

However, claims must be construed in light of the total disclosure of the patent. *See Translogic*, 504 F.3d at 1908. It is sufficiently clear in the ’908 patent Specification that the claimed invention is intended to solve a problem in the prior art in which, for each additional function of a power supply controller, an additional terminal is added to the circuit, increasing cost and giving rise to other problems. Ex. 1001, 1:64–2:7. The invention purports to solve this problem by providing a single terminal (the multi-function terminal) coupled to provide a signal to the multi-function circuit. *Id.* at 4:7–13.

Thus, construing the claims in view of the total disclosure of the ’908 patent, we agree with Patent Owner that the multi-function circuit is coupled to a single multi-function terminal to receive a signal that directs the

circuit to perform multiple functions. Accordingly, “multi-function circuit” means a circuit that is separate and distinct from the control circuit, is capable of performing multiple functions, and is coupled to a single multi-function terminal to receive a signal that directs the circuit to perform multiple functions.<sup>5</sup>

*c. Separate and Distinct Functions*

Patent Owner asserts the functions performed by the multi-function circuit must be distinct from the power supply regulation function performed by the control circuit. PO Resp. 28–30. Patent Owner argues the multi-function terminal must supply a signal to perform multiple functions that are distinct from the power supply regulation function. *Id.* at 37–39. Patent Owner further argues the control circuit, distinct from the multi-function circuit, “means a circuit, distinct from the claimed ‘multi-function circuit,’ that carries electrical signals which direct the power supply regulation.” *Id.* at 39–40.

In essence, Patent Owner asserts that the multi-function circuit and the control circuit are not only separate components, as discussed *supra*, but also must perform functions that are separate and distinct within the power supply controller. Patent Owner relies substantially on remarks presented in the prosecution history of the ’908 patent in *Ex Parte* Reexamination Serial

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<sup>5</sup> Even if we were to adopt Petitioner’s assertions that, under the broadest reasonable interpretation standard, the ’908 patent Specification and claims do not require only a single multi-function terminal coupled with a multi-function circuit, we would still find the challenged claims unpatentable because, as discussed below, MC33362 meets the narrower interpretation proposed by Patent Owner.

Number 90/007,790<sup>6</sup> in which Patent Owner emphasized the separate and distinct structure and functions of the recited multi-function circuit and the control circuit. *See id.* at 20–21, 25–30, 38, 41–42 (citing various portions of Ex. 2029). In particular, Patent Owner identifies remarks in reexamination that “functions performed by the multi-function circuit must be ‘functions other than those performed by the control circuitry’” and that “the multifunction circuitry is served with circuitry coupled to the multi-function terminal 149 to perform different functions than the control circuitry.” *Id.* at 38–39 (quoting Ex. 2029, 246, 275). Patent Owner asserts these remarks constitute a clear and unmistakable disavowal during prosecution that must be considered in claim construction. *Id.* Similarly, Patent Owner argues another remark in reexamination that the multi-function circuit and the control circuit are separate and distinct constitutes a clear and unmistakable disavowal during prosecution that must be considered in claim construction. *Id.* at 42 (citing Ex. 2029, 243, 365, 275).

Although we agree with Patent Owner, as discussed *supra*, that the multi-function circuit and the control circuit are separate and distinct components in the claims, the claim language does not require that the functions performed by the two distinct circuits must be similarly separate and distinct. We have reviewed Patent Owner’s cited remarks in reexamination that it characterizes as “clear and unmistakable disavowal” that the multi-function circuit and the control circuit provide separate and distinct functions. We discern in these remarks no limitations that the

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<sup>6</sup> *Ex Parte* Reexaminations 90/007,790 and 90/008,363 were merged.

functions of the multi-function circuit are to be distinguished from what Patent Owner suggests are *core regulation functions* of the control circuit. For example, at page 246 of Exhibit 2029, the file history of *Ex Parte* Reexamination Serial Number 90/007,790, Patent Owner remarked during prosecution:

Continuing with the examples illustrated and described in the specification of the [']908 patent, the multi-function circuit is comprised of circuitry coupled to the multi-function terminal 149 to perform functions other than those performed by the control circuitry in response to the values of the signals received at the multi-function terminal 149.

We do not find this remark as a clear disavowal of any scope of the claims. This remark provides no further insight as to where the ordinarily skilled artisan would draw a distinction between functions that are *core regulatory functions* of the control circuit and functions of the multi-function circuit. Furthermore, Patent Owner's remark is prefaced earlier in the same paragraph by the phrase, "[t]o illustrate by way of example, *not limitation*." Ex. 2029, 246 (emphasis added). This remark clearly emphasizes that the rest of the paragraph is not intended as a limitation of the claims. Another cited portion of reexamination prosecution history states "the examples illustrated described in the specification of the [']908 patent, the multifunction circuitry is served with circuitry coupled to the *multi-function terminal 149 to perform different functions than the control circuitry in response to the values of the signals received at the multi-function terminal 149*." *Id.* at 275. Again, this remark provides no further clarity to the ordinarily skilled artisan regarding which functions are solely the responsibility of a control circuit as distinct from functions of the multi-function circuit.

Furthermore, we find no support in the '908 patent Specification for requiring such separation of the functions of the two distinct circuits. Patent Owner points to column 4, line 10 of Exhibit 1001, the '908 patent, as supporting such separate and distinct functions by reciting “additional” functions of the multi-function circuit and argues this means “that the functions performed by the multi-function circuit are functions *in addition to* the core regulation function performed by the power supply controller circuit.” PO Resp. 22–23. Patent Owner further argues, “[a]rchitecturally, the '908 patent discloses embodiments where the multi-function circuit in essence ‘sits on top of’ the control circuit, or in other words, adds to the way that the control circuit would otherwise operate.” *Id.* at 23 (citing Ex. 1001, Fig. 3).

We disagree with Patent Owner’s interpretation of “additional” functions as requiring separation of, or distinction between, the functions of the multi-function circuit and the control circuit. Patent Owner’s arguments in its Response generally characterize this *core regulation function* as a function that regulates the output voltage to ensure the power supply is being properly regulated. *See id.* at 28 (“the core regulation function of *ensuring that the power supply output is being properly maintained*, or in other words ‘regulated,’ to meet the demands of the load connected at the power supply output” (emphasis added)); *see also id.* at 38, 39. However, the '908 patent Specification and claims make no reference to *core regulation function*.<sup>7</sup> Contrary to Patent Owner’s argument, the text preceding that cited by Patent Owner in column 4 of the '908 patent Specification provides examples of

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<sup>7</sup> The word “core” appears in the '908 patent Specification only in reference to the windings of the “transformer core.” Ex. 1001, 12:1–3.



the additional functions including shutting down the power supply when under-voltage or over-voltage conditions are detected and limiting the duty cycle of a switching waveform to reduce saturation of the transformer of the power supply. *See* Ex. 1001, 3:40–4:7. We discern no basis for distinguishing the “additional function” of, for example, limiting the waveform pulse duty cycle from the *core regulation function* of ensuring that the power supply output is being properly regulated. Thus, at least this exemplary additional function is closely related to the regulation of the power supply output rather than separate and distinct therefrom.

As discussed in our Decision on Institution, the claims require only that one of the multiple functions of the multi-function circuit is generating the current limit adjustment signal (in response to a signal received on the multi-function terminal). Dec. 16. The one or more other functions of the multi-function circuit need not be separate or distinct from the functions of the control circuit. Thus, we are not persuaded that the functions provided by the multi-function circuit must be separate and distinct from the functions provided by the control circuit of the claimed power supply controller.

*d. Conclusion Regarding Construction of “Multi-Function Circuit”*

In our Decision on Institution, based on the preliminary record at that stage, we determined the plain meaning of the recited “multi-function circuit” is “a circuit that performs a plurality of functions, one of which is generation of a current limit adjustment signal in response to a signal received from a multi-function terminal.” Dec. 16. In view of Patent Owner’s and Petitioner’s arguments directed to the construction of this term after institution and the record further developed through trial, we refine our

interpretation of the term and interpret “multi-function circuit” to mean — *a circuit in a power supply controller that is capable of performing multiple functions in response to a signal applied to a single multi-function terminal coupled with the multi-function circuit, one of the functions performed by the multi-function circuit is generation of a current limit adjustment signal applied to a control circuit of the power supply controller, wherein the multi-function circuit and the control circuit of the power supply controller are separate and distinct components of the power supply controller.* We emphasize that our interpretation does not limit what other functions are performed by the multi-function circuit beyond the one recited function of generating a current limit adjustment signal applied to the control circuit.

*C. Prior Art Relied Upon (MC33362, Ex. 1005)*

*1. Printed Publication*

Petitioner asserts Motorola data sheet MC33362 is a printed publication “published to Motorola’s website no later than March 29, 1997.” Pet. 15. In support of this contention, Petitioner provides a printout of a document retrieved from the “Wayback Machine”<sup>8</sup> (Ex. 1007), and proffers a Declaration of Mr. Chris Butler to authenticate the Motorola document within Exhibit 1007 and establish its publication date on the Internet (Ex. 1006). Petitioner identifies pages 46–58 of Exhibit 1007 as the relevant portions of the retrieved document representing the MC33362 data sheet as published on Motorola’s website. Pet. 15. However, the Petition applies Exhibit 1005 in its analysis of the challenged claims. Therefore, we noted in

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<sup>8</sup> INTERNET ARCHIVE WAYBACK MACHINE, <https://web.archive.org/web/19970328211020/http://mot-sps.com:80/analog/lit/literature.html>.

our Decision on Institution that Exhibit 1005 and pages 46–58 of Exhibit 1007 appear substantively and syntactically similar and further observed that Petitioner had not asserted specifically that Exhibit 1005 is identical to Exhibit 1007 or that Exhibit 1005 was published no later than March 29, 1997. Dec. 17.

Petitioner’s Reply argues that Exhibit 1005 is identical to the Motorola document at pages 46–58 of Exhibit 1007 and, thus, asserts Mr. Butler’s affidavit also authenticates Exhibit 1005 as a printed publication publicly accessible as of March 29, 1997. Pet. Reply 1 n.1.

Patent Owner’s Response does not address this issue.

Accordingly, for the reasons given, we determine that Petitioner has shown by a preponderance of the evidence that Exhibit 1005 qualifies as a printed publication that was publicly accessible to interested persons in the art at least as early as March 29, 1997.

## 2. *Disclosures of MC33362*

MC33362 discloses an integrated circuit to provide switching regulation of a source voltage. Ex. 1005, 1. Reproduced below is Figure 17 of MC33362 (*id.* at 7) as annotated by Petitioner (Pet. 17) to identify key components of the circuit.

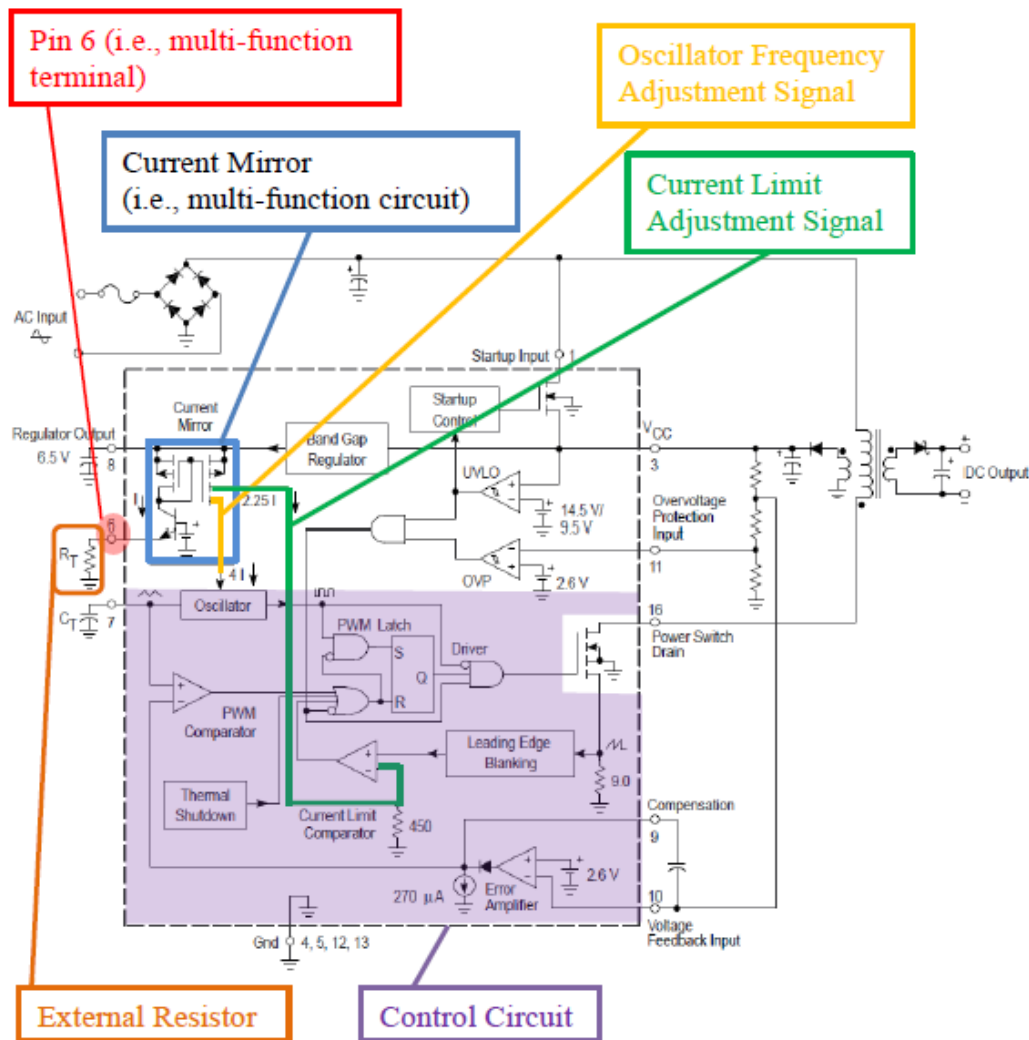


Figure 17 above, as annotated by Petitioner, depicts an integrated circuit (dashed line box) comprising current mirror (denoted in blue), identified by Petitioner as the recited “multi-function circuit,” and another portion of the integrated circuit that Petitioner identifies as the recited “control circuit” (denoted in purple). *See* Ex. 1005, 8–9; Pet. 17. Current mirror is coupled to receive an input signal on pin 6 (denoted in red), which Petitioner identifies as the recited “multi-function terminal.” *See id.* at 8–9; Pet. 17. Responsive to an input signal at pin 6, the multi-function terminal, current mirror is configured to generate an output signal (“ $2.25 I$ ” denoted in green)

applied to current limit comparator to adjust a current limit for the switching function of the integrated circuit. *See id.* at 8–9. Responsive to the signal received on pin 6, current mirror also generates an output signal (“4 I” denoted in yellow) applied to an oscillator (within the identified control circuit portion) to set/adjust the pulse frequency of the switching function of the integrated circuit. *See id.*

Figure 19 of MC33362 is reproduced below providing an expanded view to provide detail of the current mirror (identified by Petitioner as the recited multi-function circuit) and the oscillator (identified by Petitioner as a component of the recited control circuit).<sup>9</sup>

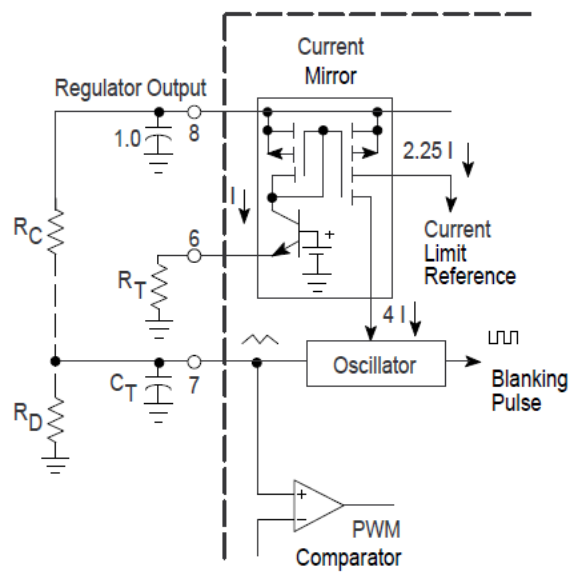


Figure 19 of MC33362 depicts pin 6 of the MC33362 integrated circuit coupled to ground through resistor  $R_T$ . *Id.* at 6. The resistor value also

<sup>9</sup> We recognize that Figure 19 is presented in MC33362 to depict an alternative configuration to modify the maximum duty cycle limit of the circuit by providing an additional path for charge and discharge or capacitor  $C_T$  coupled to pin 7. Ex. 1005, 8. We rely on the figure here only to provide more detail of the connection of the current mirror with pin 6 and its generation of the “2.25 I” and “4 I” signals.

affects the frequency generated by the oscillator. *Id.* Pin 7 of MC33362 is coupled to ground through capacitor  $C_T$ , the value of which, in conjunction with resistor  $R_T$ , programs the oscillator frequency via the “4 I” signal generated by the current mirror. *Id.* The selected resistor value ( $R_T$ ) coupled at pin 6 also determines the signal “2.25 I” generated by current mirror, which, in turn, programs a current limit comparator threshold of the control circuit. *Id.* at 8 (“Note that resistor  $R_T$  also programs the Current Limit Comparator threshold. . . . The current limit reference level is generated by the 2.25 I output of the Current Mirror.”).

#### *D. Asserted Anticipation by MC33362*

Petitioner identifies the recited multi-function terminal, multi-function circuit, and control circuit of each challenged claim in features of MC33362. Pet. 24–41. As discussed *supra*, according to Petitioner’s annotations, Figure 17 of MC33362 depicts a multi-function circuit (current mirror) coupled with a multi-function terminal (pin 6). In particular, Petitioner argues MC33362 discloses that the value of an external resistor coupled between pin 6 and ground “programs, *inter alia*, the current limit threshold for MC33362’s power switch.” *Id.* at 27. Petitioner asserts this current limit adjustment signal in MC33362 (“2.25 I”) is similar to that of the ’908 patent by changing the resistance applied to a terminal of the integrated circuit. *Id.* Petitioner further contends the current mirror of MC33362 performs a second function, in addition to adjusting the current limit, by “generating an oscillator frequency adjustment signal.” *Id.* at 31. Specifically, Petitioner contends a signal (“4 I”) generated by the current mirror is applied to the oscillator to affect the oscillator’s frequency of oscillation. *Id.* Thus,

according to Petitioner, the current mirror of MC33362 is a multi-function circuit that performs two functions in response to receipt of a signal from a multi-function terminal (i.e., pin 6). *Id.* Specifically, Petitioner asserts the current mirror generates a current limit adjustment signal (as required by the claims) and performs the additional function of adjusting the oscillator frequency — both functions performed in response to a signal applied to pin 6 (a multi-function terminal coupled with the multi-function circuit). *Id.* at 31–32.

Patent Owner argues MC33362 fails to anticipate the claims for three reasons — (1) setting the oscillator frequency requires two pins coupled with the current mirror not a single multi-function terminal (PO Resp. 51–53), (2) setting oscillator frequency is not an additional function but rather is a core regulation function (*id.* at 53–54), and (3) pin 6 is not a multi-function terminal because it is not in addition to the terminals required to perform the core regulation function (*id.* at 55–56). We address these arguments below.

1. *Patent Owner’s Assertion that MC3362 Lacks a Single Multi-function Terminal*

Patent Owner asserts MC33362 fails to anticipate because “the two functions that Petitioner alleges correspond to the claimed functions of the multi-function circuit **require two IC terminals – pin 6 and pin 7 – to be implemented**, not just one.” PO Resp. 51. Specifically, Patent Owner argues that setting the frequency of the oscillator of the MC33362 controller requires both a selected resistor value on pin 6 and a selected capacitor value on pin 7 of the circuit. *Id.* at 51–52. Patent Owner argues the use of a single multi-function terminal for the additional functions is a fundamental aspect of the ’908 patent. *Id.* at 52–53.

Petitioner replies that setting oscillator frequency is not the second function identified by the Petition but, instead, argues the second function is “*generating* the ‘4 I’ signal that Petitioner has referred to as the oscillator frequency adjustment signal.” Pet. Reply 6; *see* Pet. 31. Therefore, Petitioner asserts the two functions performed by the current mirror of MC33362 are the generation of the “2.25 I” and the generation of the “4 I” signals — the “2.25 I” signal being the claimed current limit adjustment signal and the “4 I” signal being another signal generated by the current mirror — both generated as a function of the resistor value applied to pin 6 (read as the recited multi-function terminal). *Id.*

We agree with, and adopt as our own, Petitioner’s reasoning. As discussed *supra*, we agree with Patent Owner that, in view of the totality of the disclosure of the ’908 patent and the problem addressed thereby, the broadest reasonable interpretation of “multi-function circuit” includes connection to a single multi-function terminal that causes it to perform multiple functions. However, we agree with Petitioner that MC33362 meets this requirement. The circuit mirror of MC33362 performs two functions (generating the “4 I” signal and generating the “2.25 I” signal) in response to a signal received over a single terminal (a signal applied to pin 6 in proportion to the value of resistor  $R_T$ ). One of the two functions (generating the “2.25 I” signal) is the claimed current limit adjustment signal and the other function (generating the “4 I” signal) affects the oscillator frequency. Both signals are generated in response to the signal on pin 6 and, thus, pin 6 is a multi-function terminal, a single terminal, coupled with the multi-function circuit, as claimed, that causes the current mirror to perform two functions.



Petitioner also contends that, even accepting Patent Owner's characterization of Petitioner's asserted second function as setting the oscillator frequency, pin 6 is still a single multi-function terminal coupled with the multi-function circuit as claimed. Pet. Reply 7. Petitioner notes that after a selected capacitance is coupled to pin 7, the oscillator frequency is established solely by the resistance coupled to pin 6. *Id.* Thus, Petitioner argues the resistance value applied to pin 6 still causes the power supply controller to perform multiple functions — generating a current limit adjustment signal (“2.25 I”) and generating a signal that solely determines the oscillator frequency for a given capacitance applied to pin 7. *Id.*

Although we do not adopt Patent Owner's characterization of Petitioner's identified second function performed by the current mirror of MC33362, we agree with Petitioner that even applying Patent Owner's interpretation, this aspect of the claims is still met by MC33362. For any given selection of capacitance on pin 7, the signal received on the single multi-function terminal that is pin 6 is the sole determinant for the oscillator frequency.

2. *Patent Owner's Assertion that Oscillator Frequency Is Not an Additional Function*

Patent Owner argues that setting the frequency of the oscillator is not a function (an additional function) of the multi-function circuit as claimed but, instead, is a core regulation function for the power supply controller, i.e., the function of setting oscillator frequency is not separate and distinct from the core regulation functions of the control circuit. PO Resp. 53–54. Patent Owner contends “[w]ithout the oscillator frequency being set – using both pins 6 and 7 as discussed above – the oscillator, and thus the regulator,

would not operate at all.” *Id.* at 54. Therefore, Patent Owner asserts the function provided by pins 6 and 7 — setting the oscillator frequency — must be a core regulation function of the power supply controller and, thus, not an additional function of the multi-function circuit (current mirror). *Id.*

Petitioner replies that Patent Owner’s interpretation of core regulation functions is unduly narrow and inconsistent with the Specification and other claims of the ’908 patent. Pet. Reply 8, 17–20. In particular, Petitioner argues the challenged claims impose no limitations regarding the other functions of the claimed multi-function circuit (other than generating the current limit adjustment signal). *Id.* at 18. By contrast, Petitioner notes that other claims (not at issue here) narrow the scope of the functions encompassed by the second function. *Id.* at 19. Petitioner further argues the claims cannot be construed so narrowly as to exclude disclosed embodiments and asserts that the Specification of the ’908 patent specifically discloses exemplary “additional” functions of the multi-function circuit that directly affect the regulation (i.e., core regulation functions) of the power supply controller. *Id.* at 19–20.

We agree with, and adopt as our own, Petitioner’s reasoning as discussed above. Moreover, as discussed *supra*, we determine the other functions of the multi-function circuit need not be separate or distinct from the functions of the control circuit and we find no support in the claims or Specification of the ’908 patent for distinguishing core regulation functions from other functions of the power supply controller. The Specification of the ’908 patent discloses exemplary *additional* functions of the multi-function circuit as including functions that relate to the *core* function of ensuring regulation of the power supply output. For example, the

'908 patent discloses additional functions of the multi-function circuit as including shutting down the power supply when under-voltage or over-voltage conditions are detected and limiting the duty cycle of a switching waveform to reduce saturation of the transformer of the power supply. *See* Ex. 1001, 3:40–4:7. Thus, we find no basis in the claims or the Specification of the '908 patent for distinguishing the *functions* of the multi-function circuit as identified by Petitioner in MC33362 from the *core regulation functions* of the control circuit as Patent Owner contends.

3. *Patent Owner's Assertion that Pin 6 Is Not a Multi-function Terminal*

Lastly, Patent Owner argues pin 6 of MC33362 cannot be the recited multi-function terminal because it is necessary, along with pin 7, for setting the frequency of the oscillator and, thus, relates to a *core regulation function* of the power supply controller. PO Resp. 55–56. Therefore, Patent Owner contends pin 6 “does not supply a signal to perform multiple additional functions distinct from the core regulation function of the claimed control circuit.” *Id.* at 56.

For the same reasons as above, we discern no basis for distinguishing the functions provided by the current mirror of MC33362 from *core regulation functions*. Furthermore, Petitioner does not assert that “setting the frequency of the oscillator” is one of the functions of the current mirror. Instead, the two functions of the MC33362 current mirror that Petitioner has identified are generating a current limit adjustment signal (“2.25 I”) and generating an oscillator frequency adjustment signal (“4 I”). We discern no basis in the record for identifying these two functions as *core regulation functions* as asserted by Patent Owner.

4. *Conclusion Regarding Anticipation*

We have reviewed Petitioner's arguments and evidence in support of its assertions that MC33362 discloses the remaining limitations of claims 26 and 27. Pet. 24–42. Patent Owner does not contest these assertions regarding the remaining limitations. *See generally* PO Resp. Based on our review of the Petition, we find persuasive Petitioner's reasoning and supporting evidence (*see* Pet. 24–42), including citations to MC33362 and Dr. Madisetti's testimony, and we conclude that Petitioner has established that MC33362 discloses these limitations. Accordingly, based on our review of the arguments of the parties and the record as a whole, we determine by a preponderance of the evidence that all challenged claims (claims 26 and 27 of the '908 patent) are unpatentable as anticipated by MC33362.

III. ORDER

After due consideration of the record before us, and for the foregoing reasons, it is:

ORDERED that claims 26 and 27 of U.S. Patent No. 6,538,908 B2 are held *unpatentable*; and

FURTHER ORDERED that because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2016-00995  
Patent 6,538,908 B2

**PETITIONER:**

Roger Fulghum  
Brett Thompsen  
Brian Oaks  
BAKER BOTTS L.L.P.  
roger.fulghum@bakerbotts.com  
brett.thompsen@bakerbotts.com  
brian.oaks@bakerbotts.com

**PATENT OWNER:**

Neil A. Warren  
John Phillips  
Fish & Richardson P.C.  
warren@fr.com  
phillips@fr.com