

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONOS, INC.,
Petitioner,

v.

GOOGLE LLC,
Patent Owner.

Case No. IPR2023-01288
U.S. Patent No. 9,632,748

**PETITIONER SONOS, INC.'S REPLY TO
PATENT OWNER'S PRELIMINARY RESPONSE**

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EXHIBIT LIST

Exhibit	Description
1001	U.S. Patent No. 9,632,748
1002	Declaration of Dr. Michael T. Johnson
1003	U.S. Patent No. 8,340,975 (“Rosenberger”)
1004	U.S. Patent Publication 2013/0073293 (“Jang”)
1005	<i>Certain Audio Players and Components Thereof</i> , Inv. No. 337-TA-1330 (“1330 Investigation”), Order No. 14
1006	1330 Investigation, Order No. 16
1007	Redacted excerpt of Google’s Suppl. Infringement Claim Chart for U.S. Patent No. 9,632,748 (Jan. 31, 2023) in the 1330 Investigation
1008	Redacted excerpt of Dr. Mark Mahon’s Evidentiary Hearing Testimony in the 1330 Investigation
1009	Redacted excerpt of Google’s 6 th Suppl. Obj. & Resp. to Sonos’s 1 st Set of Interrogatories (Nos. 1-44) in the 1330 Investigation
1010	Google’s Initial <i>Markman</i> Brief in the 1330 Investigation (Dec. 12, 2022)
1011	U.S. Patent Publication 2010/0088100 (“Lindahl”)
1012	Excerpts from <i>Techopedia.com</i> , “Microcontroller” (Sept. 15, 2014)
1013	Excerpts from <i>Merriam-Webster Dictionary</i> (Jan. 28, 2012)
1014	Excerpts from <i>Dictionary of Computer and Internet Terms</i> (10th ed. 2009)
1015	Excerpts from <i>Microsoft Computer Dictionary</i> (5th ed. 2002)
1016	NLP-5x Natural Language Processor Data Sheet (2009)
1017	Sonos’s Opening Claim Construction Brief in the 1330 Investigation

Exhibit	Description
	(Dec. 12, 2022)
1018	Public Version of Sonos’s Rebuttal Claim Construction Brief in the 1330 Investigation (Dec. 21, 2022)
1019	Google’s Rebuttal <i>Markman</i> Brief in the 1330 Investigation (Dec. 12, 2022)
1020	Public Version of Google’s ITC Complaint (Aug. 9, 2022)
1021	Exhibit 33 (Infringement Claim Chart for the ’748 Patent) to Google’s ITC Complaint (Aug. 9, 2022)
1022	Redacted excerpts of Expert Report of Dr. Michael T. Johnson Regarding Noninfringement & Lack of Domestic Industry in the 1330 Investigation (Mar. 31, 2023) [Sealed]
1023	Redacted excerpts of Sonos’s 4 th Suppl. Resp. & Obj. to Google’s 1 st Set of Interrogatories (Nos. 1-100) in the 1330 Investigation [Sealed]
1024	Email exchange between Petitioner’s and Patent Owner’s Counsel (Jan. 2-4, 2024)
1025	Excerpts of Public Transcript of Dr. Alex Gruenstein’s Evidentiary Hearing Testimony in the 1330 Investigation

I. Introduction

In an email dated December 27, 2023, the Board authorized Petitioner, Sonos, Inc. (“Sonos”), to file this Reply to address arguments raised by Patent Owner, Google LLC (“Google”), in its Patent Owner’s Preliminary Response (“POPR”).

The Petition challenges claims of U.S. Patent 9,632,748 (the “’748 Patent”) as anticipated by U.S. Patent 8,340,975 (“Rosenberger”). Independent claim 7 is representative of the independent claims of the ’748 Patent and requires a *first computing device* operable to *determine, based at least in part on information received from the one or more additional computing devices, whether the first computing device should perform speech recognition on the spoken audio input.*¹

Google contends “Petitioner has failed to establish that Rosenberger anticipates” this “determine element.” POPR, p.1. In particular, Google makes at least two arguments as to why Rosenberger’s “control device” serving as the “coordinating controller” (*first computing device*)² does not satisfy this element:

¹ Claim language is italicized throughout.

² Google’s contentions that the Petition is “unclear” and Rosenberger’s FIGs. 5A-5B relate only to implementations involving “an ‘independent’ coordination controller..., not a control device *serving as a coordination controller*” (POPR, p.3 (emphasis Google’s)) strain credibility. The paragraph that introduces FIG. 5A

(1) “nothing in the description of the coordination method of Figures 5A-5B describes a coordinating controller performing coordination [the claimed *determin[ation]*] **prior to** performing speech recognition on the received trigger phrase or command...” *Id.*, p.13 (emphasis added); *see also, id.*, p.2-3;

(2) the other “control devices” (*one or more additional computing devices*) engage in speech recognition **before** they calculate and send their respective “weighted signals” (*information*) to the “control device” serving as the “coordinating controller.” *See, e.g., id.*, p.6 (“This sequence—in which speech recognition precedes weighted signal (‘information’) transmission or receipt—is illustrated... below[.]”); *id.*, p.5-13.

In so doing, Google attempts to disclaim from the “determine element” situations where the *first computing device* engages in speech recognition **before** the *determin[ation]* is made and situations where the *one or more additional computing devices* engage in speech recognition **before** they calculate and send their *information* to the *first computing device*. This attempted disclaimer is directly contrary to positions that Google took in the related ITC Investigation. As such, the Board should disregard it.³

unambiguously states “[t]he coordinating controller can be implemented on... another... control device.” Ex.1003, 12:42-44; Petition, p.20, 25.

³ *CUPP Computing AS v. Trend Micro Inc.*, 53 F.4th 1376, 1383 (Fed. Cir. 2022) (“[A] disclaimer is not binding on the PTO in the very IPR proceeding in which it is made....”).

II. Google's Prior Positions in the ITC Investigation Contradict Its Attempted Disclaimer

In arguing in its POPR that the “determine element” cannot be satisfied if a device engages in speech recognition before the *determin[ation]* is made, Google does a complete about-face compared to positions it took before the ITC, involving the same patent. There, Google interpreted the claims broadly for infringement and domestic industry (DI) by contending the '748 Patent covers devices that engage in speech recognition before the *determin[ation]* is made. But it is black letter law that a patentee must interpret its claims the same for infringement as for validity. *See, e.g., Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1449 (Fed. Cir. 1984). Thus, Google's broad interpretation of the '748 Patent claims in the ITC must be applied here for purposes of invalidity and the Board should reject Google's attempt to now narrow the claims. *See Nintendo Co. v. Gamevice, Inc.*, IPR2018-01521, Paper 7, at 7, n.5 (P.T.A.B. Mar. 11, 2019) (“[P]recluding [Petitioner] from relying on [Patent Owner's] arguably inconsistent constructions would usurp the Board's rule obligating parties to disclose ‘information that is inconsistent with a position advanced by the party during the proceeding.’”).

Google failed to apprise the Board – and failed to serve material on Sonos in this proceeding so that Sonos's counsel could cite it in this paper – that Google took an inconsistent position just months ago in the ITC Investigation. Google has thus violated its obligation to comply with routine discovery afforded Sonos and the

Board under 37 C.F.R. § 42.51(b). 37 C.F.R. § 42.51(b)(1)(iii) (“[A] party must serve relevant information that is inconsistent with a position advanced by the party during the proceeding concurrent with the filing of the documents or things that contains the inconsistency.”).

A. Google’s *Markman* Positions Contradict Its Attempted Disclaimer

Ironically, during *Markman* in the ITC Investigation, it was ***Sonos*** – ***not Google*** – that argued no speech recognition could occur before the *determin[ation]* is made. Indeed, in its opening brief, Sonos explained its position as follows: “[T]he determination as to whether speech recognition ***should be performed*** obviously cannot be made by ***performing*** speech recognition. Any other interpretation for the language used in this claim term would be illogical, and thus, inappropriate.” Ex.1017, p.20 (emphasis original); *see also id.*, p.21-22. And in its rebuttal brief, Sonos framed the parties dispute as follows: “The real dispute between the parties centers on whether speech recognition can be performed ***before*** a determination is made as to whether the first computing device should perform speech recognition.” Ex.1018, p.10-11 (emphasis original).

For its part, Google refuted Sonos’s position and successfully convinced the ALJ that speech recognition could be performed before the *determin[ation]* is made. *See, e.g.*, Ex.1019, p.14-17; Ex.1005, p.31 (ALJ Elliot rejecting Sonos’s position). According to Google, the specification and claims leave “[the] question open” as to

whether speech recognition is performed before the *determin[ation]* is made. Ex.1019, p.17 (“[N]othing in the claim language requires that the determination whether to perform speech recognition involves performing speech recognition in the first place.... The specification is therefore consistent with the claims in leaving this question open.”).

Google further repeatedly argued that nothing in the intrinsic evidence precludes a situation where the *one or more additional computing devices* begin speech recognition before the *first computing device* makes the *determin[ation]*. See, e.g., Ex.1010, p.28 (“[N]othing in the intrinsic evidence precludes the non-designated computing devices from beginning speech recognition before a first computing device determines that it should do so[.]”); p.28-29 (“Nor does the specification foreclose speech recognition from initiating at other devices before they receive an instruction from the first computing device to refrain from doing so after the first computing device determines that it will perform speech recognition.”).

In this way, Google successfully convinced the ALJ during *Markman* that the ’748 Patent was broad enough to cover situations where the *first computing device* engages in speech recognition ***before*** the *determin[ation]* is made and where the *one or more additional computing devices* engage in speech recognition ***before*** they calculate and send their *information* to the *first computing device*.

B. Google's Infringement & Domestic Industry Positions Also Contradict Its Attempted Disclaimer

Google's *Markman* positions in the 1330 Investigation were driven by its desire to establish that both Sonos's and Google's products practice the '748 Patent – a requirement for Google to establish a violation of the '748 Patent before the ITC. In this regard, Google contended that Sonos's voice-enabled products and certain of Google's "Nest" branded products practice, *inter alia*, the independent claims of the '748 Patent. *See, e.g.*, Ex.1020, p.19-20, ¶2-3, p.42-43, ¶82-83.

As to Google's infringement contentions, Google contended that Sonos's voice-enabled products satisfy the "determine element" by virtue of an "arbitration" decision made based on the exchange of "arbitration_metric" values (accused *information*) where the arbitration decision dictates which one of multiple products that heard a user's spoken request should interact with the user and handle the request. *See, e.g.*, Ex.1021, p.11, 15.

Yet, there was no dispute that Sonos's voice-enabled products were operable to engage in speech recognition before the arbitration decision was made. *See, e.g.*, Ex.1022, ¶120, 153-55, 159, 364. Indeed, Google knew this as early as January 2023 but nevertheless maintained its infringement assertion against Sonos, arguing for a broad interpretation of the "determine element." *See, e.g.*, Ex.1023, p.5-6, 11.

Google's domestic industry (DI) contentions from the 1330 Investigation are marked confidential and subject to an ITC protective order. Google failed to serve

them in this proceeding as routine discovery required by Rule 42.51(b)(1)(iii). Sonos’s counsel sought Google’s consent to submit this material under a protective order in this proceeding and advised Google that this material was, nevertheless, Google’s obligation to submit as routine discovery under Rule 42.51. Google has inexplicably rejected this request, offering no explanation. *See* Ex.1024. Google’s failure to serve this material under Rule 42.51, and its continued objection to Sonos’s counsel citing it under a protective order, frustrates the Board’s ability to assess Google’s contrary claim interpretations, usurps the routine discovery function, and constitutes a violation of Google’s Duty of Candor and Good Faith required by Rules 1.56, 42.11, and 11.303. *See, e.g., Spectrum Solutions LLC v. Longhorn Vaccines & Diagnostics, LLC*, IPR2021-00847, Paper 107 (P.T.A.B. May 3, 2023) (“This misconduct begins with the intentional failure of Patent Owner to serve or inform the Board of relevant information that is inconsistent with a position advanced by Patent Owner....”).

Google’s publicly-available material suggests that Google’s products operate similar to Sonos’s products and engage in speech recognition before completing arbitration. For example, during the hearing in the ITC Investigation, a Google employee testified publicly that Google’s “multi-device arbitration functionality” would use “the contents of the [user’s spoken] query” –which would be derived from completing speech recognition– to make the arbitration decision. *See* Ex.1025, p.13-

14, 42:18-43:25. Basic operation of Google’s products also suggests that they engage in speech recognition before completing arbitration. For instance, certain of Google’s products (called Nest “Hubs”) include a touchscreen that displays a transcription of a user’s spoken request as the product performs speech recognition on the speech. In circumstances where multiple Google products including a Hub hear the same user speech, the Hub will initially display a transcription of the user’s spoken request and then replace the transcription with a message that another device is responding to the user when the other device wins arbitration.

Thus, for purposes of establishing infringement and DI in the ITC, Google contended the ’748 Patent is broad enough to cover devices that engage in speech recognition *before* the claimed *determin[ation]* is made – the exact opposite position it now takes here before the Board. As such, the Board should reject Google’s invitation now to narrow the scope of the “determine element.”

III. Conclusion

Google’s interpretation of the “determine element” for purposes of arguing against invalidity in this IPR is directly at odds with the prior interpretation it took before the ITC. Under Google’s broader interpretation, there can be no doubt that Rosenberger anticipates the “determine element,” as explained in Sonos’s Petition. *See* Petition, p.31-34. As such, the Board should reject Google’s attempted disclaimer and institute Sonos’s Petition.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby confirms that the foregoing Petitioner's Reply was served on January 5, 2024 via email directed to counsel of record for the Patent Owner at the following:

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