

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

RESONANT SYSTEMS, INC.,
Patent Owner.

IPR2024-00808
Patent 9,941,830 B2

Before KARL D. EASTHOM, NORMAN H. BEAMER, and
BRIAN D. RANGE, *Administrative Patent Judges*.

BEAMER, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Apple Inc., Petitioner, filed a Petition (Paper 3, “Pet.”) requesting an *inter partes* review of claims 1–8, 14–17, 19, and 20 of U.S. Patent No. 9,941,830 B2 (Ex. 1001, the “’830 patent”). Pet. 1. Petitioner also contemporaneously filed a parallel petition in another proceeding requesting an *inter partes* review of the same claims of the ’830 patent on different asserted grounds. *Apple Inc. v. Resonant Systems, Inc.*, Paper 3, IPR2024-00806 (PTAB April 12, 2024) (“IPR806”). Additionally, Petitioner filed Petitioner’s Notice Ranking And Explaining Material Differences Between Petitions For *Inter Partes* Review Of U.S. Patent No. 9,941,830. (Paper 2, “Notice”). Petitioner requests that we institute *inter partes* review based on the petition in IPR806 as well as the Petition in this proceeding, but prioritizes the petition in IPR806 ahead of the one in this proceeding. Notice 1.

Resonant Systems, Inc., Patent Owner, filed a Preliminary Response (Paper 7, “Prelim. Resp.”) which disputes the need for parallel petitions (*id.* at 2–15). With the Board’s authorization, Petitioner filed a Preliminary Reply and Patent Owner a Preliminary Sur-Reply directed to claim construction. Papers 9 (“Reply”); 10 (“Sur-Reply”).

We are granting the petition in IPR806 and instituting an *inter partes* review of claims 1–8, 14–17, 19, and 20 of the ’830 patent. For the reasons provided below, and based on the circumstances present here, we find Petitioner has not shown in this proceeding that a parallel petition challenging the same claims of the ’830 patent at issue in IPR806 is warranted, and we exercise discretion under 35 U.S.C. §314(a) to deny institution of an *inter partes* review of the ’830 patent in this proceeding.

II. BACKGROUND

A. *Real Parties in Interest*

Each party identifies itself as the real parties in interest. Pet. 83; Paper 5, 1.

B. *Related Matters*

The parties identify the following district three court proceedings as related matters: *Resonant Systems, Inc. d/b/a Revel HMI v. Apple, Inc.*, No. 7:23-cv-00077 (W.D. Tex.) (the “Apple Litigation”); *Resonant Systems, Inc. v. Samsung Electronics Co., Ltd.*, No. 2:22-cv-00423 (E.D. Tex.); *Resonant Systems, Inc. v. Sony Group Corp.*, No. 2:22-cv-00424 (E.D. Tex.). Pet. 83; Paper 5, 2.

In addition to IPR806, the parties identify the following PTAB proceedings also involving the ’830 patent: IPR2023-00993, IPR2023-01025, and IPR2024-00570. Pet. 83; Paper 5. *See Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. v. Resonant Systems, Inc.*, Paper 17, IPR2023-00993 (PTAB Jan. 10, 2024) (granting institution, declining at institution to determine if the claims recite means plus function limitations, pending final written decision); *Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. v. Resonant Systems, Inc.*, Paper 16, IPR2023-01025 (PTAB Jan. 10, 2024) (denying institution); *Sony Interactive Entertainment Inc. et al. v. Resonant Systems, Inc.*, Paper 9, IPR2024-00570 (PTAB Aug. 26, 2024) (denying institution).

Other PTAB proceedings challenging related patents that may involve similar claim construction issues include the following: IPR2023-00992, IPR2024-00568, IPR2024-00569, IPR2024-00697, IPR2024-00698, IPR2024-00807, and IPR2024-00983.

C. The '830 Patent

The '830 patent relates to “vibration-generating devices and, in particular, to vibration modules that can be incorporated into a wide variety of different types of electromechanical devices and systems to produce vibrations of selected amplitudes and frequencies over a wide range of amplitude/frequency space.” Ex. 1001, 1:16–21; *see also id.* at 3:11–25, code (57). The vibration generating devices include linear vibration modules (LVMs) and linear-resonant vibration modules (LRVMs). *Id.* at 4:17–21, code (57). LVMs and LRVMs “are linear in the sense that the vibrational forces are produced by a linear oscillation of a weight or component within the LVM or LRVM.” *Id.* at 4:21–25.

Figure 4A follows:

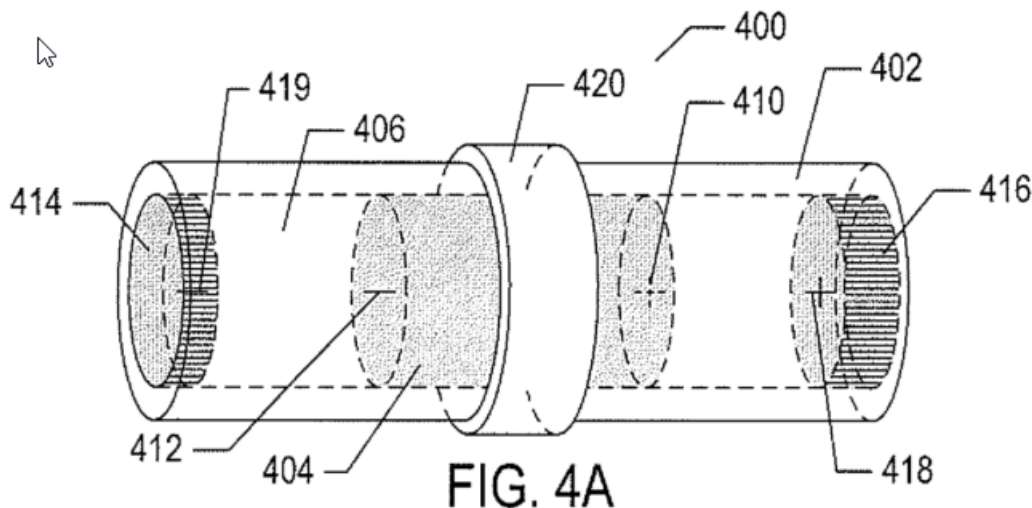


Figure 4A depicts LVRM 400, which includes cylindrical housing or tube 402 forming cylindrical chamber 406, disk-like magnets 414 (left) and 416 (right) with negative and positive polarity, respectively, and conductive coil 420 encircling tube 402. Ex. 1001, 4:49–5:10, Fig. 4A.

Disk-like magnets 414 and 416 repel magnet 404 when it moves to the extreme right or left according to a current supplied to coil 420 from a

power source. Ex. 1001, 4:62–5:7. This current oscillates with an amplitude and frequency to create a changing magnetic field via coil 420, which in turn causes magnet 404 to change its direction and length of travel according to a user-specified amplitude and frequency of movement. *See id.* at 4:49–5:41, 6:33–44, Figs. 4B–4G.

Figure 6, a block diagram of the LRVM, follows:

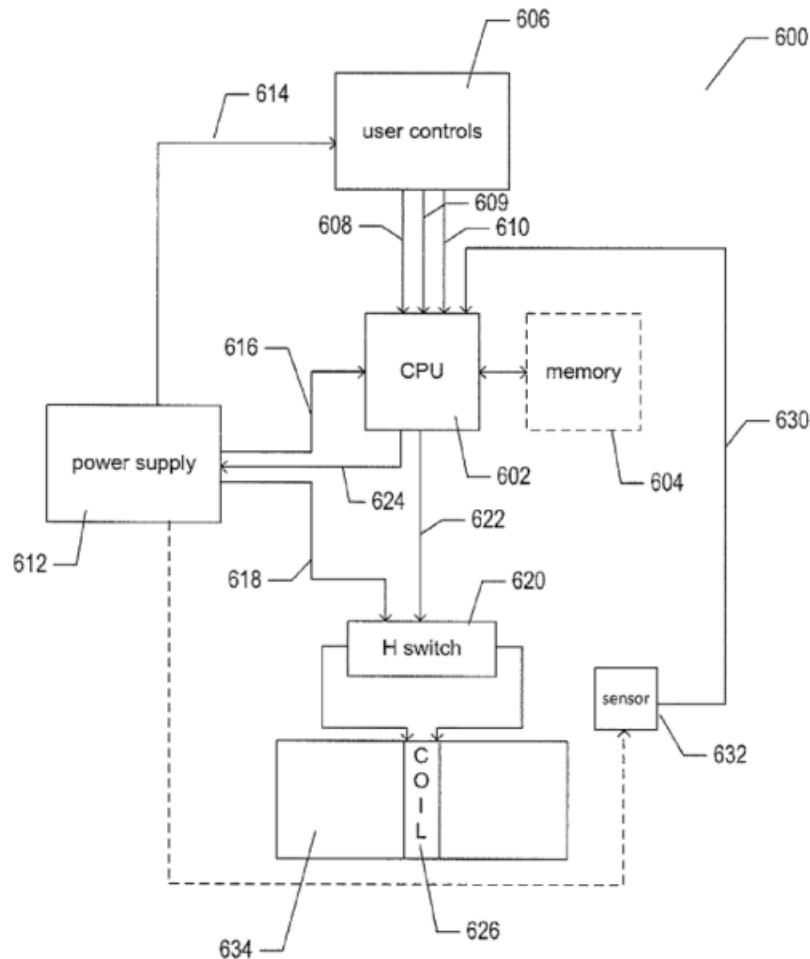


FIG. 6

Figure 6 illustrates LRVM 600, which includes the following: microprocessor (CPU) 602 executing a control program; memory chip 604 storing the control program; user controls 606 that may include “any of various dials, pushbuttons, switches, or other electromechanical-control

devices,” such as “a dial to select a strength of vibration, which corresponds to the current applied to the coil,” “a switch to select one of various different operational modes,” and “a power button”; power supply 612; coil 626; magnet 634; H-bridge switch 620 that “receives a control-signal input” from microprocessor (CPU) 602, which together control the direction and frequency of current supplied to coil 626. *See* Ex. 1001, 6:19–51, Fig. 6.

The H-bridge switch “change[s] the direction of current applied to the coil that drives linear oscillation within” the LRVM. Ex. 1001, 5:52–56; *see also id.* at 3:40–44, Figs. 5A–5B. The H-bridge switch “is but one example of various different types of electrical and electromechanical switches that can be used to rapidly alternate the direction of current within the coil of an LRVM.” *Id.* at 6:2–5.

D. Illustrative Claim

Independent claim 1 is illustrative of the challenged claims, and follows:

1. [pre] A vibration module comprising:
 - [a] a housing;
 - [b] a moveable component;
 - [c] a power supply;
 - [d] user-input features;
 - [e] a driving component that drives the moveable component to oscillate within the housing; and
 - [f] a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by one or more stored values.

Pet. vii (bracketed information by Petitioner).

E. Asserted Grounds of Unpatentability

Petitioner contends that claims 1–8, 11, 15–17, and 20 are unpatentable as follows:¹

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–4, 7, 8, 14, 15–17, 19, 20	103(a)	Wakuda, ² Ramsay ³
2–6	103(a)	Wakuda, Ramsay, Amaya ⁴
15, 16, 20	103(a)	Wakuda, Ramsay, Tierling ⁵
1–8, 14, 15–17, 19, 20	103(a)	Wakuda, Ramsay, Rossi, ⁶ Aldrich ⁷
15, 16, 20	103(a)	Wakuda, Ramsay, Rossi, Aldrich, Tierling

Pet. 1. Petitioner supports its Petition with a Declaration of Dr. Blake Hannaford. Ex. 1003.

III. DISCRETIONARY DENIAL

The Petition seeks *inter partes* review of the same claims of the '830 patent that Petitioner requested review of in IPR806. Notice 1. At

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. §§ 102, 103 effective March 16, 2013, which is after the '830 patent's effective filing date. *See* Ex. 1001, code (63). Therefore, the pre-AIA version of § 103 applies.

² Wakuda et al., US 7,005,811 B2, issued Feb. 28, 2006. Ex. 1005.

³ Ramsay et al., US 2008/0294984 A1, published Nov. 27, 2008. Ex. 1006.

⁴ Amaya et al., US 5,955,799, issued Sep. 21, 1999. Ex. 1025

⁵ Tierling et al., US 2005/0134561 A1, published June 23, 2005. Ex. 1008.

⁶ Rossi et al., US 4,879,641, issued Nov. 7, 1989. Ex. 1020.

⁷ Aldrich et al, *Controller for Driving a Piezoelectric Actuator at Resonance*, NASA Tech Briefs, April 2008. Ex. 1021.

Petitioner's request, we prioritized the petition filed by Petitioner in IPR806. *Id.* We are instituting an *inter partes* review in IPR806 for the reasons discussed in the institution decision. We now turn in this proceeding to consider whether Petitioner has shown a parallel petition challenging the same claims of the '830 patent at issue in IPR806 is warranted. Specifically, because Petitioner filed this second petition before Patent Owner's preliminary response in IPR806 and challenges the same claims of the same patent at issue in IPR806, we consider whether we should exercise discretion to deny the parallel petition. *See* 35 U.S.C. § 314(a); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (explaining that section "314(a) invests the Director with discretion on the question *whether* to institute review"); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) ("[T]he PTO is permitted, but never compelled, to institute an IPR proceeding").

The Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019) ("Practice Guide")⁸ states that "one petition should be sufficient to challenge the claims of a patent in most situations" and that "multiple petitions by a petitioner are not necessary in the vast majority of cases." Practice Guide 59. The Practice Guide further states that "[t]wo or more petitions filed against the same patent at or about the same time (e.g., before the first preliminary response by the patent owner) may place a substantial and unnecessary burden on the Board and the patent owner and could raise fairness, timing, and efficiency concerns." *Id.* (citing 35 U.S.C. § 316(b)). The Practice Guide provides the following guidance:

⁸ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

To aid the Board in determining whether more than one petition is necessary, if a petitioner files two or more petitions challenging the same patent, then the petitioner should, in its petitions or in a separate paper filed with the petitions, identify: (1) a ranking of the petitions in the order in which it wishes the Board to consider the merits, if the Board uses its discretion to institute any of the petitions, and (2) a succinct explanation of the differences between the petitions, why the issues addressed by the differences are material, and why the Board should exercise its discretion to institute additional petitions if it identifies one petition that satisfies petitioner's burden under 35 U.S.C. § 314(a).

Practice Guide 59–60 (footnote omitted).

Petitioner notes that the Board has recognized “that there may be circumstances in which more than one petition may be necessary,” including if there is a “dispute about priority date.” Notice 1 (citing Practice Guide 59). Here, Petitioner asserts that the priority date of the '830 patent is “potentially in dispute,” because Patent Owner stated in its Preliminary Infringement Contentions in the Apple Litigation that the priority date of the '830 patent is “at least as early” as May 18, 2009, which is the date of the earliest provisional application related to the patent. *Id.* at 1–2 (citing Ex. 1044, 2). Petitioner explains that IPR806 is grounded on a primary reference filed less than five months before the May 18, 2009 priority date of the '830 patent, and thus may be subject to Patent Owner's swearing behind that reference. *Id.* at 2. For this Petition, Patent Owner relies on a different primary reference that qualifies as prior art under Pre-AIA §102(b), and thus cannot be sworn behind. *Id.* Thus, argues Petitioner, this Petition should be allowed given the possibility that Patent Owner may assert an earlier priority date. *Id.* at 2–3.

Petitioner also argues that instituting both proceedings would not be an undue burden on the Board, because it relies on substantially the same secondary references in the same manner with respect to the same claims in the both Petitions. Notice 4. Petitioner further argues that “the strong merits justify institution of both IPR Petitions.” *Id.* at 5.

However, Patent Owner has stipulated that if IPR806 is instituted and the instant proceeding is denied institution, it will not dispute that the primary reference asserted in IPR806 qualifies as prior art to the ’830 patent under Pre-AIA § 102(e), for the purposes of IPR806. Prelim. Resp. 28.

Given Patent Owner’s stipulation, we see little justification for instituting both IPRs. In addition, we note that the primary reference asserted here is also asserted as a secondary reference in IPR806. IPR806, Paper 3, 1. Moreover, there are 14 claims of the ’830 patent are at issue, and the Board has previously held that a “Petitioner’s contention that 20 claims is a quantum of claims that could not addressed in a single petition strains credulity.” *Apple, Inc. v. Koss Corp.*, IPR2021-00686, Paper 12 at 13 (PTAB Oct. 12, 2021).

Therefore, based on these circumstances, we find that the reasons provided by Petitioner do not show that a parallel petition is warranted.

IV. CONCLUSION

For the foregoing reasons, we exercise our discretion under 35 U.S.C. § 314(a) and deny the Petition seeking *inter partes* review of the ’830 patent in this proceeding.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied* and no trial is instituted in this proceeding.

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